REDACTED VERSION

Remedial Investigation Report

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas
EPA Identification No. TXN000606915

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Prepared for

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
405 State Highway 121 (Bypass)
Building C, Suite 100
Lewisville, Texas 75067
(972) 315-3922

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CONTENTS

Page

LIST OF TABLES v

LIST OF FIGURES v

LIST OF ACRONYMS AND ABBREVIATIONS vii

EXECUTIVE SUMMARY 1

1. INTRODUCTION 1-1

1.1 PURPOSE 1-1
1.2 SITE BACKGROUND 1-1

1.2.1 Site Location and Description 1-1
1.2.2 Soil Exposure Area Description 1-2
1.2.3 Groundwater Exposure Area Descriptions 1-2
1.2.4 Site History 1-3
1.2.5 Previous Investigations 1-4

1.1 REPORT ORGANIZATION 1-6

2. EPA REMEDIAL INVESTIGATION ACTIVITIES 2-1

2.1 PROJECT PLANNING 2-1
2.2 DATA ACQUISITION 2-2

2.2.1 March-April 2019 Field Program 2-2
2.2.2 June 2019 Field Program 2-3
2.2.3 September and October 2019 Field Program 2-3
2.2.4 October 2019 Field Program 2-4
2.2.5 December 2019 Field Program 2-4
2.2.6 April 2020 Field Program 2-4
2.2.7 July 2020 Field Program 2-5
2.2.8 Media Characterization 2-5
2.2.9 Borehole Geophysical Logging 2-8
2.2.10 Long-term Water Level Assessment 2-8
2.2.11 Investigation-Derived Waste Disposal 2-8
2.2.12 October 2020 Well Plugging & Abandonment Field Program 2-9
2.2.13 Sustainable Practices 2-9

2.3 DATA EVALUATION 2-9

2.3.1 Data Review Requirements 2-10
2.3.2 Validation and Verification Methods 2-10
2.3.3 Reconciliation with Data Quality Objectives 2-10

3. PHYSICAL CHARACTERISTICS 3-1

3.1 SURFACE FEATURES 3-1
3.2 GEOLOGY 3-1

3.2.1 Austin Chalk 3-2
3.2.2 Eagle Ford Group 3-2
3.2.3 Buda Limestone 3-2
3.2.4 Del Rio Clay 3-3
3.2.5 Georgetown Formation 3-3
3.2.6 Edwards Group 3-3
3.2.7 Local Geology 3-4

3.3 SOIL 3-4

3.3.1 Whitewright-Austin Complex, 1 to 5 % slopes (BsC) 3-5
3.3.2 Whitewright clay loam, 1 to 5 % slopes (BpC) 3-5

3.4 HYDROLOGY 3-5

3.4.1 Surface Water Hydrology 3-5
3.4.2 Groundwater Hydrology 3-5
3.4.3 Depth to Groundwater 3-6
3.4.4 Hydraulic Gradients 3-7
3.4.5 Groundwater Use 3-7

3.5 METEOROLOGY 3-8
3.6 DEMOGRAPHY AND LAND USE/REUSE 3-8

3.6.1 Demographics 3-8
3.6.2 Land Use/Reuse 3-9

4. ANALYTICAL DATA SUMMARY 4-1

4.1 HISTORIC DATA SUMMARY 4-1
4.2 REMEDIAL INVESTIGATION REPORT DATASET SUMMARY 4-1
4.3 POTENTIAL SOURCE AREAS 4-1
4.4 IMPACTS IN SOIL EXPOSURE AREAS 4-1

4.4.1 Surface Soil 4-2
4.4.2 Subsurface Soil 4-3

4.5 IMPACTS IN SURFACE WATER 4-3
4.6 IMPACTS IN GROUNDWATER 4-4

4.6.1 Shallow, Perched Groundwater 4-4
4.6.2 Austin Chalk 4-4
4.6.3 Edwards Aquifer 4-5

4.7 REMEDIAL INVESTIGATION REPORT DATA USABILITY 4-6

5. REMEDIAL INVESTIGATION RESULTS 5-1

5.1 BASIS OF UNDERSTANDING 5-1

5.1.1 Comparison Criteria 5-1
5.1.2 Source Material 5-2
5.1.3 Nature and Extent of Contamination 5-2
5.1.4 Migration Pathways 5-3

5.2 NATURE AND EXENT OF CONTAMINATION 5-3

5.2.1 Distribution of Soil Contamination 5-4
5.2.2 Surface Water Impacts 5-5
5.2.3 Distribution of Groundwater Contamination 5-5

6. HUMAN HEALTH RISK ASSESSMENT 6-1

6.1 POTENTIAL HUMAN HEALTH EXPOSURES 6-1

7. ECOLOGICAL RISK ASSESSMENT 7-1

8. RESULTS AND CONCLUSIONS 8-1

8.1 SITE DATA COLLECTION 8-1
8.2 POTENTIAL SOURCE AREAS 8-1
8.3 NATURE AND EXTENT OF CONTAMINATION 8-1

8.3.1 Surface Soil 8-2
8.3.2 Subsurface Soil 8-2
8.3.3 Surface and Subsurface Soil Summary and Conclusions 8-3
8.3.4 Surface Water 8-3
8.3.5 Groundwater 8-3
8.3.6 Groundwater Summary and Conclusion 8-5

8.4 RISK ASSESSMENT CONCLUSIONS 8-5

8.4.1 Human Health Risk Assessment 8-5
8.4.2 Ecological Risk Assessment 8-6

8.5 DATA GAPS AND RECOMMENDATIONS 8-6

9. REFERENCES 9-1

APPENDIX A SITE PHOTOGRAPHS
APPENDIX B LOGBOOKS AND COMPLETED FIELD FORMS
APPENDIX C SOIL BORING AND MONITORING WELL LOGS
APPENDIX D BOREHOLE GEOPHYSICAL SURVEY RESULTS FOR MW-06, MW-07, AND MW-08
APPENDIX E IDW DISPOSAL DOCUMENTATION
APPENDIX F WELL PLUGGING AND ABANDONMENT TECHNICAL MEMORANDUM
APPENDIX G CUSTOM SOIL RESOURCE REPORT
APPENDIX H LONG-TERM WATER LEVEL MEASUREMENT GRAPHS
APPENDIX I LABORATORY DATABASE (PROVIDED ON CD)
APPENDIX J EDWARDS AQUIFER AUTHORITY HEXAVALENT CHROMIUM ANALYTICAL RESULTS
APPENDIX K TEXAS PARKS AND WILDLIFE EMAIL DATED 31 AUGUST 2020
APPENDIX L RESPONSES TO COMMENTS ON THE REMEDIAL INVESTIGATION REPORT

LIST OF TABLES

Number	Title
2-1	Soil Data Collection Summary
2-2	Groundwater Data Collection Summary
3-1	Monitoring Well Construction and Depth to Water
4-1	Screening Level Exceedances for Surface Soil
4-2	Screening Level Exceedances for Subsurface Soil
4-3	Screening Level Exceedances for Groundwater

LIST OF FIGURES

Number	Title
1-1	Site Location Map
1-2	Site Layout
1-3	Soil Sample Locations
1-4	Monitor Well Location Map
1-5	Off-site Groundwater Sample Locations
2-1	December 2019 Groundwater Potentiometric Surface Map for Austin Chalk Monitoring Wells
2-2	April 2020 Groundwater Potentiometric Surface Map for Austin Chalk Monitoring Wells
3-1	Location of Generalized Regional Hydrogeologic Cross Section
3-2	Generalized Regional Hydrogeologic Cross Section A - A’
3-3	Cross Section Location Map for On-site Monitoring Wells

3-4 Generalized Hydrogeologic Cross Section B - B' with Hexavalent Chromium Concentrations

3-5 Generalized Hydrogeologic Cross Section C - C' with Hexavalent Chromium Concentrations

3-6 Soil Classification Map

3-7 USGS Topographic Map

4-1 Hexavalent Chromium Exceedances in Surface Soil

4-2 Arsenic Exceedances in Surface Soil

4-3 Benzo(a)pyrene Exceedances in Surface Soil

4-4 Hexavalent Chromium Exceedances in Subsurface Soil

4-5 Arsenic Exceedances in Subsurface Soil

4-6 Hexavalent Chromium Exceedances in Groundwater Collected from On-site Monitoring Wells

4-7 Target List Analyte Metals Exceedances in Groundwater Collected from Off-site Public and Private Supply Wells

5-1 Human Health Conceptual Site Model

LIST OF ACRONYMS AND ABBREVIATIONS

ºF	Degrees Fahrenheit
µg/L	Microgram per liter
APAR	Affected Property Assessment Report
bgs	Below ground surface
btoc	Below top of casing
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CLP	Contract Laboratory Program
COPC	Chemical of potential concern
CSM	Conceptual site model
DBS&A	Daniel B. Stephens & Associates, Inc
DETM	Data Evaluation Technical Memorandum
DQO	Data quality objective
EA	EA Engineering, Science, and Technology, Inc., PBC
EAA	Edwards Aquifer Authority
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
FS	Feasibility Study
FSP	Field Sampling Plan
ft	Foot (feet)
HHRA	Human Health Risk Assessment
HRS	Hazard ranking system
IDW	Investigation-derived waste
MCL	Maximum Contaminant Level
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
MW	Monitoring well
OSWER	Office of Solid Waste and Emergency Response
PA	Preliminary Assessment
PAH	Polyaromatic hydrocarbon

PCL	Protective Concentration Limit
PSL	Project screening level
PVC	Polyvinyl chloride
PWS	Public water supply
PWW	Private water well
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
RAC	Remedial Action Contract
RCMF	River City Metal Finishing
RI	Remedial investigation
ROD	Record of Decision
RPD	Relative Percent Difference
RSL	Regional screening level
SAP	Sampling and Analysis Plan
SB	Soil boring
SI	Site inspection
site	River City Metal Finishing Superfund Site
SL	Screening level
SMP	Site Management Plan
SOP	Standard operating procedure
SVOC	Semivolatile organic compound
TAL	Target analyte list
TCEQ	Texas Commission on Environmental Quality
TNRCC	Texas Natural Resource Conservation Commission
TNRIS	Texas Natural Resources Information System
toc	Top of casing
TPH	Total petroleum hydrocarbons
TRRP	Texas Risk Reduction Program
TPWD	Texas Parks and Wildlife Department
USCS	Unified Soil Classification System
USDA	U.S. Department of Agriculture
VOC	Volatile organic compound

EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) authorized EA Engineering, Science, and Technology, Inc., PBC (EA) to conduct Remedial Investigation (RI) activities under Remedial Action Contract (RAC) Number EP-W-06-004, Task Order 68HE0618F0301. This report presents the results of the RI conducted at the River City Metal Finishing (RCMF) Superfund Site (site) in San Antonio, Bexar County, Texas. The purpose of the RI Report is to: (1) summarize site information and data, (2) identify potential source areas, (3) define the nature and extent of contamination, (4) evaluate contaminant migration pathways, and (5) present a summary of human health and ecological risks. These elements provide the basis for the conceptual site model. This RI Report will be used as a foundation for the remedial alternative evaluation in the Feasibility Study and will support remedy selection in the Record of Decision.

SITE BACKGROUND

Background information was compiled from information gathered during the site investigation. Sources of information include, but are not limited to:

- Work Plan and Cost Estimate to prepare an Affected Property Assessment Report (Banester Engineering Consultants, Ltd. 2010)
- Removal Action Report (Daniel B. Stephens & Associates, Inc. [DBS&A] 2014)
- Site Inspection (SI) Report (Texas Commission on Environmental Quality [TCEQ] 2016)
- EPA RAC II Statement of Work for RI (EPA 2018a).
- Hazard Ranking System (HRS) Documentation Record (EPA 2018b)

Site Location and Description

The RCMF site is located at 12040 Potranco Road, in San Antonio, Bexar County, Texas. The location and site layout with surrounding area are depicted on Figures 1-1 and 1-2, respectively. The site is approximately 0.62 acres and generally slopes to the southeast. A chain-link fence surrounds the property, with gates on the north and south sides. The property is bordered by Potranco Road to the north, Tallowood Street to the south, and commercial properties to the east and west. The property to the east contains an automotive repair facility (Potranco Automotive), and the property to the west, which previously contained an automotive repair facility, is a physical fitness facility. The closest residential building is approximately 220 feet south of the site, across Tallowood Street.

The RCMF facility consisted of a main building and external operation areas, including two storage sheds, a paint booth, paint stripping area, a location for drums and recycling, and a septic tank area (Figure 1-2). Three covered areas were also attached to the main building: a wastewater evaporator area, an acid and rinse tank area, and a lacquer application booth. Facility operations were conducted within the main building. At RCMF, decorative items would be dismantled, plated, colored if necessary, polished, and reassembled. The electroplating process involved pretreatment of items with caustic or acidic solutions; followed by immersion in either a chrome, nickel, copper, brass, silver, gold, or aluminum solution; and finishing in a rinse water

solution. The items would then be polished using either buffer wheels or lathes. Over time, the resulting sludge from the plating process was removed and disposed of. Polishing materials and metal shavings were generated as waste; metal shavings were collected into drums and stored for recycling (TCEQ 2008). The former RCMF plating building and other on-site structures have been removed (DBS&A 2014).

The HRS (EPA 2018b) identified one source area associated with the site, contaminated soil (Source 1). Source 1 was identified as an approximately 800 square foot area (depth of impact and volume unknown) of contaminated soils that is acting as source material to shallow groundwater. The identification of this source area is based on investigation activities in this area detecting the presence of elevated metals, chromium, copper, nickel, selenium, and cyanide. The HRS identified other potential sources of contamination including a former waste evaporation area, rinse and process tanks, a chromium contaminated area, various drums, and a break in the foundation of the facility building near the vat room where spills may have occurred (EPA 2018b). These sources were removed as part of the 2013 – 2014 TCEQ Removal Action and are not a continuing source. However, these other potential sources may have contributed contamination to surface and sub-surface soils and groundwater in the past.

According to the HRS Documentation Record for the site (EPA 2018b), an estimated 177,356 residents receive drinking water from wells within a 4-mile radius of the former RCMF facility. This population may potentially be exposed to the contaminants that resulted from historical manufacturing operations at the site.

Exposure areas were identified based on activities at former operational areas, surface features, surface and subsurface soil, and groundwater data, and consist of soil (site wide) and groundwater (off-site private water wells [PWW] and public water supply [PWS] wells completed in the Edwards aquifer).

PROJECT PLANNING

Site-specific plans were prepared to present the overall approach for the RI field program and consist of a Health and Safety Plan (EA 2018c) and a Sampling and Analysis Plan (SAP) (EA 2019a) with two addenda (EA, 2019b and EA2019c).

DATA ACQUISITION

Data acquisition was conducted during a series of field investigations by multiple investigators from 2008 to 2016. These data were used to identify data gaps and prepare plans for the collection of RI data. Data that were collected from April 2019 to July 2020 for use in this RI Report include the following:

- Lithological descriptions of recovered material from soil borings and monitoring wells
- Soil samples
    - 30 surface soil samples
    - 19 subsurface soil samples

- Groundwater samples
  - 23 groundwater samples from on-site monitoring wells
  - 27 groundwater samples from off-site PWW and PWS wells
- Investigation-derived waste (IDW) samples
- Water level elevation measurements
- Borehole geophysical data.

These samples were used to evaluate the nature and extent of the contamination and to assess potential risks to human health and ecological receptors.

PHYSICAL CHARACTERISTICS

The site is located within the northern third of Bexar County, which is considered part of the Edwards Plateau and is separated from the Gulf Coastal Plain by the Balcones Fault Zone, which trends southwestward across the county. The site is located within the Balcones Fault Zone.

The Austin Chalk directly underlies the site and consists of chalk alternating with marl. Below the Austin Chalk is the Eagle Ford Group, which consists of shale, siltstone, and argillaceous limestone that is light yellowish brown to gray. The Eagle Ford Group unconformably overlies the Buda Limestone. The Eagle Ford Group, Buda Limestone, and Del Rio Clay compose the upper confining units to the Edwards aquifer (Stein and Ozuna 1995).

The Edwards Group underlying the site consists of two formations, the Person Formation followed by the Kainer Formation, and together they are further subdivided into seven members. The top of the Edwards Group was encountered at 520 feet bgs in the Coolcrest #2 well, approximately 0.35 mile south-southwest of the site.

Groundwater is encountered in the Austin Chalk at a depth of about 160 feet below ground surface (bgs). Eagle Ford shale is encountered at about 200 feet bgs; therefore, the saturated thickness of groundwater in the Austin Chalk is about 60 feet.

The site is located within the artesian zone of the Edwards aquifer, the principal water-bearing rock in Bexar County, Texas. The Edwards aquifer, which is one of the most productive carbonate aquifers in the nation, is the sole source of public water supply for the City of San Antonio and also supplies large quantities of water to agriculture, industry, and major springs. During the RI, groundwater samples were collected from newly installed monitoring wells in the Austin Group and existing PWW and PWS wells completed in the Edwards aquifer.

ANALYTICAL DATA USABILITY

Analytical data collected during the RI were validated in accordance with USEPA guidelines. A summary of the data validation process and findings are available in the Data Evaluation Technical Memorandum (DETM) (EA, 2020a). The DETM concludes that data used in this RI Report are considered sufficient for source identification, nature and extent determination, migration pathway evaluation, background contribution, and risk characterization.

REMEDIAL INVESTIGATION RESULTS

NATURE AND EXTENT OF CONTAMINATION

Surface Soil

Thirty surface soil samples were collected from both monitoring well borings (prior to drilling) and from soil boring locations. Two metals (arsenic and hexavalent chromium) and one semivolatile organic compound (SVOC) (benzo(a)pyrene) exceeded Residential Soil Regional Screening Levels (RSLs) in the 0.0 to 2.0 foot interval, which is designated as surface soil (Figures 4-1 through 4-7). There were no pesticides, herbicides, volatile organic compounds (VOCs), cyanide, or total petroleum hydrocarbons (TPH) detections that exceeded Residential Soil RSLs for the surface soil interval.

Subsurface Soil

Nineteen subsurface soil samples were collected from both monitoring well borings and soil borings. Two metals, arsenic, and hexavalent chromium exceeded Residential Soil RSLs for subsurface soil. There were no pesticides, herbicides, VOCs, cyanide, or TPH detections that exceeded Residential Soil RSLs for subsurface soil.

Surface Water

The closest surface water body, Medio Creek, is approximately one-half mile from the site. The portion of this creek nearest the site was observed to be dry and is assumed to flow with surface water following precipitation events. Other than intermittent drainage features, there are no major surface water features in the immediate vicinity of the site, and no opportunities arose to collect surface water sample during the RI.

Shallow, Perched Groundwater

A zone of shallow perched water is present in the area immediately surrounding the MW-01 well screen. During the early phases of the RI in April 2019, the surface completion for MW-01 was observed to be inadequate and was subsequently repaired to eliminate precipitation run-off into the well boring. MW-01 did not recharge following multiple low flow groundwater sampling events and monitoring wells MW-02, MW-03, MW-04, and MW-05 were installed north, east, south and west and at the same depth as MW-01 and did not yield any groundwater.

Three groundwater samples (including one duplicate sample) were collected from MW-01 during the RI. Total and dissolved chromium and dissolved hexavalent chromium were detected in exceedance of the EPA Maximum Contaminant Level (MCL) and EPA tap water RSL, respectively. There were no exceedances of pesticides, herbicides, VOCs, SVOCs, TPH, or cyanide.

Austin Chalk

Dissolved hexavalent chromium was the only analyte detected in exceedance of project screening levels in groundwater collected from Austin Chalk monitoring wells. Exceedances of dissolved hexavalent chromium were carried forward for further evaluation under the Human Health Risk Assessment (HHRA).

Edwards Aquifer

Fourteen groundwater samples were collected from off-site PWW and PWS wells completed in the Edwards aquifer. The following analytes were detected in exceedance of the project screening level in these samples: total antimony, total and dissolved iron, total lead, dissolved hexavalent chromium, and dissolved thallium. Of these exceedances, dissolved thallium exceeded the EPA MCL, and total antimony, total and dissolved iron, total lead, and dissolved hexavalent chromium exceeded the Tap Water RSL.

RESULTS AND CONCLUSIONS

SOIL

Laterally, soil samples collected north, south, and east (downgradient) had no detections of hexavalent chromium. No soil samples were collected to the west of SB-05 (Figure 1-3).

Vertically, the exceedance at SB-01 was detected between 13 and 15 feet bgs. Hexavalent chromium was not detected in the shallower intervals from this location. At location SB-05, hexavalent chromium concentrations exceeded in each interval sampled from 0 to 5 feet bgs. The varied concentrations of hexavalent chromium at different depths are likely the result of areas that were not fully remediated during the 2013 to 2014 TCEQ removal actions.

Detections of site-related contaminants are limited to areas near the former RCMF facility. None of the analytical results from the collected surface or subsurface soil samples suggest migration of contaminants off-site. Arsenic concentrations that exceed the Residential RSL for soil are within the same range of concentrations of background soil samples.

SURFACE WATER

The opportunity to collect surface water did not occur during any of the field mobilizations and therefore no surface water samples were collected during the RI.

GROUNDWATER

The highest concentrations of site contaminants were detected in one on-site monitoring well, MW-01. The groundwater in MW-01 is limited to a discrete zone of perched groundwater that has not recharged following sampling events. During the early phases of the RI in April 2019, the surface completion for MW-01 was observed to be inadequate and was subsequently repaired

to eliminate precipitation run-off into the well boring. Site-related contaminants have been detected in groundwater collected from deeper monitoring wells completed in the Austin Chalk, but at lower concentrations. Lastly, nearby PWW and PWS wells completed in the Edwards aquifer have not exhibited elevated concentrations of contaminants. Concentrations of hexavalent chromium in these PWW and PWS wells are consistent with concentrations in samples collected by the Edwards Aquifer Authority during the same timeframe as the RI.

HUMAN HEALTH RISK ASSESSMENT

The HHRA (EA 2020) concluded non-carcinogenic hazards for receptors' exposure to surface soil and subsurface soil were below the acceptable level of 1. Carcinogenic risks for receptors' exposure to surface soil and subsurface soil were within the EPA acceptable cancer risk range of 10^{-6} to 10^{-4}. Potential risks from exposure to groundwater are present due to high concentrations of hexavalent chromium. The non-carcinogenic hazards for hexavalent chromium in groundwater for the child and adult resident were 3 and 22, respectively.

Soil

The HHRA did not reveal potential concerns for any receptor's exposure to soil. Soil results were evaluated as on exposure area, even though samples were collected on-site and just slightly south of the site boundary line. Sample results were reviewed to determine if "hot spots" exist and would change the conclusions of the HHRA. No potential "hot spots" were identified for soil both within on-site and slightly off-site samples.

VOCs were detected in subsurface soil but were not considered chemicals of potential concern (COPCs) for direct contact based upon a comparison to the EPA Residential Soil RSLs. Additionally, VOCs in subsurface soil were compared to the TCEQ PCLs for subsurface soil to ambient air. No COPCs were determined for migration to ambient air. Therefore, there are no potential risk concerns for exposure to soil.

Groundwater

Potential risks from exposure to groundwater are present due to high concentrations of hexavalent chromium. On-site monitoring well results for hexavalent chromium were greater than 0.2 µg/L (Figure 4-6), and monitoring well MW-06 had a hexavalent chromium concentration greater than 20 µg/L. MW-06 is located in the central portion of the site near the footprint of the former RCMF building. The monitoring wells located along the boundaries of the site have hexavalent chromium concentrations near 0.2 µg/L. Additionally, off-site PWW and PWS wells have hexavalent chromium concentrations less than 0.2 µg/L. This indicates that potential risks associated with hexavalent chromium are limited to the immediate area of the former RCMF building and do not represent an area-wide concern.

ECOLOGICAL RISK ASSESSMENT

Threatened, rare and endangered species are present; however, there is no complete ecological pathway. The site is small enough (less than 1 acre) that no terrestrial wildlife receptors would be using it exclusively. It is in an industrial area so unlikely to be attractive to foraging or nesting terrestrial wildlife populations. No surface water or sediment are present on-site, and COPCs are limited to metals, many of which have concentrations in surface soil that are similar to or lower than background.

DATA GAPS AND RECOMMENDATIONS

Data gaps and recommendations for further characterization were identified based on the results of the RI. The recommendations that follow are presented for consideration, and are dependent on the future use of the site:

- Collect one to two surface soil samples west of SB-05 to define nature and extent of hexavalent chromium in this direction
- Collect additional subsurface soil samples in the vicinity of SB-01 and SB-05 to vertically define hexavalent chromium
- Delineate the lateral extent of hexavalent chromium contamination in Austin Chalk groundwater.
- Collect surface water during a precipitation run-off event. Consider deploying a passive event sampler or automatic sampler to collect the surface water sample.

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1. INTRODUCTION

This report presents the results of the Remedial Investigation (RI) conducted at the River City Metal Finishing (RCMF) Superfund Site (site) in San Antonio, Bexar County, Texas. The U.S. Environmental Protection Agency (EPA) authorized EA Engineering, Science, and Technology, Inc., PBC (EA) to conduct RI activities under Remedial Action Contract (RAC) Number EP-W-06-004, Task Order 68HE0618F0301. The framework and requirements are documented in the EPA Statement of Work (EPA 2018a) and EPA-approved EA Work Plan (EA 2018a). The investigation was conducted in accordance with "*Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*" (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA 1988).

1.1 PURPOSE

The purpose of the RI Report is to (1) summarize site information and data, (2) identify potential source areas, (3) define the nature and extent of contamination, (4) evaluate contaminant migration pathways, and (5) present a summary of human health and ecological risks. These elements provide the basis for the conceptual site model (CSM). This RI report will be used as a foundation for the remedial alternative evaluation in the Feasibility Study (FS) and will support remedy selection in the Record of Decision (ROD).

1.2 SITE BACKGROUND

Background information was compiled from information gathered during the site investigation. Sources of information include, but are not limited to:

- Work Plan and Cost Estimate to prepare an Affected Property Assessment Report (APAR) (Banester Engineering Consultants, Ltd. 2010)
- Removal Action Report (Daniel B. Stephens & Associates, Inc. [DBS&A] 2014)
- Site Inspection (SI) Report (Texas Commission on Environmental Quality [TCEQ] 2016)
- EPA RAC II Statement of Work for RI (EPA 2018a)
- Hazard Ranking System (HRS) Documentation Record (EPA 2018b).

1.2.1 Site Location and Description

The RCMF site is located at 12040 Potranco Road, in San Antonio, Bexar County, Texas. The location and site layout with surrounding area are depicted on Figures 1-1 and 1-2, respectively. The site is approximately 0.62 acres and generally slopes to the southeast. A chain-link fence surrounds the property, with gates on the north and south sides. The property is bordered by Potranco Road to the north, Tallowood Street to the south, and commercial properties to the east and west. The property to the east contains an automotive repair facility (Potranco Automotive), and the property to the west, which previously contained an automotive repair facility, is a physical fitness facility. The closest residential building is approximately 220 feet south of the site, across Tallowood Street.

The RCMF facility consisted of a main building and external operation areas, including two storage sheds, a paint booth, paint stripping area, a location for drum storage and recycling, and a septic tank area (Figure 1-2). Three covered areas were attached to the main building: a wastewater evaporator area, an acid and rinse tank area, and a lacquer application booth. Facility operations were conducted within the main building. At RCMF, decorative items would be dismantled, plated, colored if necessary, polished, and reassembled. The electroplating process involved pretreatment of items with caustic or acidic solutions, followed by immersion in either a chrome, nickel, copper, brass, silver, gold, or aluminum solution; and finishing in a rinse water solution. The items would then be polished using either buffer wheels or lathes. Over time, the resulting sludge from the plating process was removed and disposed of. Polishing materials and metal shavings were generated as waste; metal shavings were collected into drums and stored for recycling (TCEQ 2008). The former RCMF plating building and other on-site structures have been removed (DBS&A 2014).

According to the HRS Documentation Record for the site (EPA 2018b), an estimated 177,356 residents receive drinking water from wells within a 4-mile radius of the former RCMF facility. This population may potentially be exposed to the contaminants that resulted from historical manufacturing operations at the site.

The following exposure areas were identified during the early stages of the RI, and are based on activities at former operational areas, surface features, surface and subsurface soil, and groundwater data:

Soil

- Site-wide

Groundwater

- Off-site public water wells (PWW) and private water supply (PWS) wells
- Edwards aquifer.

1.2.2 Soil Exposure Area Description

Soil exposure was evaluated site wide. It was subdivided into surface soil (0 – 2 feet [ft] below ground surface [bgs]) to evaluate human health and ecological exposures, and subsurface soil (greater than 2 ft bgs) to evaluate human health exposures. Soil samples were collected and analyzed to further understand the nature and extent of site-related chemicals of potential concern (COPC). As such, on-site soil samples were biased toward areas where manufacturing operations were known to have occurred, or where potential sources had been previously identified. Figure 1-3 illustrates where the on-site soil samples were collected.

1.2.3 Groundwater Exposure Area Descriptions

Groundwater exposure was evaluated using analytical results from groundwater samples collected from both on and off-site wells. On-site wells consist of monitoring wells installed both before and during the RI; off-site wells consist of various PWW and PWS wells. There are

eight monitoring wells on site, designated as MW-01 through MW-08 (Figure 1-4). Monitoring wells MW-01 through MW-05 are completed in an upper, argillaceous portion of the Austin Chalk, approximately 31 feet bgs. Monitoring well MW-01 is installed in a perched water table, and monitoring wells MW-02 through MW-05 do not yield any water. Monitoring wells MW-06 through MW-08 are installed in the Austin Chalk, at depths of 180, 230, and 220 ft bgs, respectively. The Austin Chalk is a formation within the Austin Group and is separated from the Edwards aquifer by multiple formations that act as confining layers. Section 3 of this document provides additional details on site geology.

Off-site PWW and PWS wells completed in the Edwards aquifer were also sampled during the RI. Figure 1-5 shows the location of the off-site wells that were sampled. The top of the Edwards aquifer was encountered approximately 520 ft bgs at the nearest public water supply (PWS) well, Coolcrest #2, approximately 0.35 mile south-southwest of the site.

1.2.4 Site History

RCMF operated as a metal plating and finishing company from 1994 until approximately 2002 (TCEQ 2008). The facility performed electroplating with various metals including chromium, nickel, copper, brass, silver, gold, and zinc. The process required pre-treatment of an item with a caustic or acidic solution to clean the metal prior to electroplating. Subsequently, an item would go through multiple plating and rinse baths depending upon the desired finish. In addition to metal plating, RCMF also performed aluminum etching, metal polishing, painting, and lacquering services. These operations took place in the primary structure, which was in the middle of the property (Figure 1-2).

While the RCMF facility was active, TCEQ and its predecessor agency, the Texas Natural Resource Conservation Commission (TNRCC), found several instances of improper hazardous waste storage practices, which lead to the issuance of multiple violations and an Agreed Order (EPA 2018b).

During an inspection by TNRCC in 1999, elevated concentrations of chromium, copper, lead, nickel, silver, tin, zinc, and cyanide were found in soil samples taken adjacent to the facility (TNRCC 1999). These elevated concentrations were attributed to either air deposition from the nearby evaporator unit, or by storm water run-off from the evaporator area. Storm water was reportedly allowed to accumulate in a containment area surrounding the evaporator, potentially becoming overfilled and spilling onto surrounding soils. A Notice of Enforcement letter was sent to the facility in August 1999 and resulted in the Agreed Order being issued on 31 May 2000 (TCEQ 2008).

A subsequent Compliance Evaluation Investigation into the facility conducted by TCEQ Region 13 occurred in 2001. RCMF was cited for failure to comply with many provisions of the May 2000 Agreed Order and was referred to the Attorney General of Texas for enforcement of the Agreed Order (TCEQ 2008).

In November 2006 TCEQ Region 13 attempted a Compliance Investigation. The facility appeared abandoned, and the fence was locked. The plating process tanks were observed scattered throughout the RCMF property (TCEQ 2008).

In 2008, TCEQ Region 13 gained access to the property and performed a SI with the property owner. During the inspection, approximately twenty-two 55-gallon drums were identified containing various wastes. Among the drums identified were: (1) nine 55-gallon drums containing "nickel acid plating shop debris," (2) seven 55-gallon drums containing "chrome plating shop debris" labeled as hazardous waste, (3) one 55-gallon drum containing "chrome concrete chip debris" (reportedly from the removal of stained concrete from the metal plating room and east side of the building.), and (4) five 55-gallon drums that reportedly contained soils from the chromium contaminated area along the east side of the building (TCEQ 2008).

1.2.5 Previous Investigations

Previous investigation and associated activities include the following:

- 2008 Pre-Comprehensive Environmental Response, Compensation and Liability Information System Site Investigation (CERCLIS) (Ecology and Environment, Inc., 2008)
- 2009 Preliminary Assessment (PA) (TCEQ, 2009)
- 2010 Banester Engineering Consultants, Ltd., Letter Work Plan and Cost Estimate to prepare an Affected Property Assessment Report (APAR)
- 2013 to 2014 Superfund Site Discovery and Assessment Program Removal Action (DBS&A, 2014)
- 2016 TCEQ SI.

Key findings and elements of each of these investigations are summarized below.

1.2.5.1 2008 Pre-Comprehensive Environmental Response, Comprehensive and Liability Information System Site Inspection (Pre-CERCLIS)

On 23 April 2008, Ecology and Environment, Inc. conducted a Pre-CERCLIS SI. According to the Pre-CERCLIS report, RCMF consisted of one large wood and sheet metal building with a concrete slab and two detached storage sheds. The property appeared to be abandoned at the time of the visit. During the visit, several plastic bulk liquid containers were noted at the property. The inspector could not verify the contents of those containers, or whether additional containers or chemicals were present inside the building. Access to the property was restricted by a chain-link and barbed wire fence, although a gap in the fence suggested transient activity (TCEQ 2016).

1.2.5.2 2009 Preliminary Assessment

In March 2009, TCEQ completed a PA site visit and report in which exposure pathways were evaluated; only the groundwater, surface water, and soil pathways were noted as potentially hazardous to receptors. The breach in the fence surrounding the site (previously noted during the 2008 pre-CERCLIS Inspection) and the presence of containers potentially containing hazardous substances were also noted. Upon receipt of the PA report, EPA recommended No Further Remedial Action Planned for the site (TCEQ 2016).

1.2.5.3 2010 Banester Engineering Consultants, Ltd. Letter Work Plan and Cost Estimate to prepare an APAR

A letter submitted to the TCEQ Corrective Action Section from Banester Engineering Consultants, Ltd. suggests that a contractor for the site owners completed a work plan and cost estimate to prepare an APAR as a result of litigation with the Texas Attorney General's Office and the TCEQ Enforcement office (Banester Engineering Consultants, Ltd. 2010). However, a report was never submitted to TCEQ.

The contractor installed one monitoring well (MW-01) to a depth of approximately 25 ft bgs, in an area of localized, perched groundwater. This well was installed near the north side of the former main building. One groundwater sample was collected in May 2010 to assess the possible presence of contamination in shallow groundwater. Chromium was detected at a concentration of 17.1 milligrams per liter (mg/L), which exceeds the Texas Risk Reduction Program (TRRP) Residential 0.5-acre source Groundwater Ingestion Protective Concentration Limit (PCL) and the Superfund Chemical Data Matrix Maximum Contaminant Level (MCL) for chromium of 0.1 mg/L. Other metals, including arsenic, aluminum, barium, copper, lead, nickel, selenium, and zinc, were detected in the sample, but at concentrations below their respective PCLs.

1.2.5.4 2013-2014 TCEQ Superfund Site Discovery and Assessment Program Removal Action

From April 2013 to May 2014, the TCEQ Superfund Site Discovery and Assessment Program performed a removal action consisting of asbestos abatement, drum sampling and disposal, building and foundation demolition and removal, on-site soil assessment, and groundwater sampling.

The on-site soil assessment, which resulted from the observation of stained soils beneath the RCMF facility building's foundation, consisted of field screening soils using X-Ray Fluorescence from 49 individual borings and submitting 7 confirmation soil samples for laboratory analysis. No metals concentrations were found above their respective PCLs. Groundwater samples were collected from seven locations, six of which were PWW and PWS wells completed in the Edwards aquifer. The remaining groundwater sample was collected from on-site monitoring well MW-01, which was completed in a perched water-bearing zone. This

sample contained a concentration of 5.22 mg/L chromium, which exceeds the TRRP PCL and EPA MCL. This was the only exceedance documented (DBS&A 2014).

1.2.5.5 2016 TCEQ Site Inspection

The 2016 TCEQ SI included site reconnaissance, groundwater sampling, and soil sampling. The site was found to be further overgrown with vegetation, and the fence was compromised.

Soil samples were collected from seven locations, including one background sample. The locations were chosen to help evaluate the source area and potential run-off pathways. Only arsenic and nickel were found in excess of TRRP PCLs or EPA Regional Screening Level (RSLs).

Groundwater samples were collected from a total of 13 locations. These locations were from wells completed in the Edwards aquifer, except for on-site monitoring well MW-01. Samples collected from MW-01 contained a reported concentration of 9,310 µg/L of total chromium and 9,280 µg/L of hexavalent chromium, both exceeding their respective TRRP PCLs. This hexavalent chromium sample was re-run after holding time was exceeded and was then reported as an estimated value. No other exceedances of TRRP PCLs were documented. The only other COPCs found to exceed the more conservative EPA tap water RSLs were arsenic and selenium, which were both from on-site monitoring well MW-01.

A comparison of data from parent/duplicate sample pairs collected from MW-01 (TCEQ Sample IDs GW-01 and GW-02) and the Mountain Laurel well (TCEQ Sample IDs GW-06 and GW-07), as part of the TCEQ SI, found that cyanide detections had a very high level of variability. The Relative Percent Difference (RPD) between each of these pairs for cyanide results was 145.7 percent and 146.6 percent, respectively. Typical acceptance criterion used by EA is up to 50 percent RPD. The other analytes were within 50 percent RPD.

1.1 REPORT ORGANIZATION

This RI Report is organized to provide a foundation for the remedial alternative evaluation in a FS and to support remedy selection in the ROD. Section 2 summarizes the RI activities. The physical characteristics (e.g., geology, hydrogeology, etc.) of the site are presented in Section 3. In Section 4, an evaluation of the analytical data from historical and the RI field activities is provided. In Section 5, potential source areas are identified, the nature and extent of contamination is defined, and contaminant migration pathways are evaluated. The Human Health Risk Assessment (HHRA) findings are summarized in Section 6. Section 7 contains a summary of the Ecological Risk Assessment (ERA). The conclusions and recommendations are presented in Section 8. References are contained in Section 9.

2. EPA REMEDIAL INVESTIGATION ACTIVITIES

This section presents a summary of the data collection activities conducted for the RI. Activities can be grouped into three stages (i.e., project planning, data acquisition, and data evaluation) which work interchangeably to ensure that project objectives are satisfied.

2.1 PROJECT PLANNING

The following site-specific plans were prepared to present the overall approach for the RI field program:

- The Health and Safety Plan (EA 2018b) specified employee training, protective equipment, medical surveillance requirements, standard operating procedures (SOPs), and contingency planning procedures.

- The Sampling and Analysis Plan (SAP) (EA 2019a) included the Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP) as well as the Site Management Plan (SMP). The FSP section detailed data collection methods, proposed sample locations and frequency, sampling equipment and procedures, and analytical methods required to collect sufficient data to perform the RI. The QAPP section documented the planning, implementation, and assessment procedures, as well as specific quality assurance (QA)/quality control (QC) activities; and the SMP section addressed site access, security, pollution control, contingency procedures, management responsibilities, data management, air quality monitoring, and waste disposal.

- The Addendum 01 SAP (EA 2019b) revised certain sections of the SAP (EA 2019a) and added specific information to incorporate updated sampling design matrix for field activities. The addendum also contains the proposed locations for soil borings and monitoring wells.

- The Addendum 02 SAP (EA 2019c) revised certain sections of the SAP (EA 2019a) and Addendum 01 SAP (EA 2019b) and was used to address updated sampling design matrix for Phase 2 field activities. This addendum contains locations for the collection of additional groundwater samples along with updated groundwater laboratory reference limits for an EA subcontracted laboratory.

The SAP and subsequent Addendums were prepared in accordance with (1) specifications provided in the EPA Task Order Statement of Work, dated 24 May 2017 (EPA 2018a), (2) the EPA-approved EA Work Plan (EA 2018a), (3) subsequent discussions with EPA, and (4) 40 Code of Federal Regulations 300.415(b)(4)(ii). The SAP and subsequent Addendums described procedures that were used to ensure that the project-specific data quality objectives (DQOs) were met and that the quality of data (represented by precision, accuracy, completeness, comparability, representativeness, and sensitivity) was known and documented. The SAP and subsequent Addendums presented the project description, project organization and responsibilities, and QA objectives associated with the sampling and analytical services to be provided in support of the RI.

The QAPP section of the SAP was prepared in accordance with EA's Quality Management Plan (EA 2014) and met requirements set forth in *EPA Requirements for Quality Assurance Project Plans for Environmental Data Operation (QA/R-5)* (EPA 2001) and *Guidance for Quality Assurance Project Plans (QA/G-5)* (EPA 2002).

2.2 DATA ACQUISITION

A series of historical field investigations by multiple entities occurred from 2008 through 2016. These data formed the basis for the Phase 1 RI field event but were not carried forward for further evaluation as part of the RI. Field sampling activities for the RI were conducted in multiple field events from March 2019 to July 2020. Data collected for use in this RI report include the following:

- Lithological descriptions of recovered material from soil borings and monitoring wells
- Soil samples
  - 30 surface soil samples
  - 19 subsurface soil samples
- Groundwater samples
  - 23 groundwater samples from on-site monitoring wells
  - 27 groundwater samples from off-site PWW and PWS wells
- Investigation-derived waste (IDW) samples
- Water level elevation measurements
- Borehole geophysical data.

As described in the following subsections, groundwater samples were collected during multiple mobilizations and in some instances groundwater analytical results were not used. Site photos documenting the RI field event are included in Appendix A. Copies of Field Activity Reports documenting the RI field activities are included as Appendix B. A summary of the investigation activities is provided in the following subsections.

2.2.1 March-April 2019 Field Program

Three mobilizations occurred from late March to late April 2019. EA first mobilized to the site from 25 March to 3 April 2019 to oversee mowing and clearing, followed by the replacement and repair of portions of the site fence as well as installation of a silt fence along the site perimeter.

A second, overlapping mobilization occurred from 1 to 5 April 2020. EA installed four shallow monitoring wells (MW-02, MW-03, MW-04, and MW-05) to depths of 30 ft bgs more or less and advanced ten soil borings (SB-01 to SB-10) to depths ranging from 5 to 15 ft bgs. EA collected 49 soil samples (including QC samples) and 14 groundwater samples (including QC samples). Soil samples were collected from both soil and monitoring well borings. Soil samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), target analyte list (TAL) metals, hexavalent

chromium, cyanide, pesticides, and herbicides. April 2019 soil samples were analyzed by the following laboratories:

- Hexavalent chromium – TestAmerica in Irvine, California
- Total organic carbon, TAL metals, pesticides, herbicides, volatile organic compounds, SVOCs, cyanide, TPH – TestAmerica in Houston, Texas.

A third mobilization occurred from 15 to 17 April 2020. During this mobilization, EA collected groundwater samples from one on-site monitoring well (MW-01) and thirteen PWW and PWS wells (WW-01, WW-02, WW-4, WW-7, WW-9, WW-10, WW-11, WW-16, WW-17, WW-19, WW-20, WW-21, and WW-22). The four newly installed monitoring wells did not have sufficient groundwater to collect a sample. Groundwater samples were analyzed for TAL metals, hexavalent chromium, and cyanide. Additional analyses at sample location MW-01 included VOCs, SVOCs, TPH, pesticides, and herbicides. April 2019 groundwater samples were analyzed by the following laboratories:

- Hexavalent Chromium – TestAmerica in Irvine, California
- Dissolved Gases – TestAmerica in Pensacola, Florida
- Anions, total dissolved solids, total organic carbon, TAL metals, pesticides, herbicides, volatile organic compounds, SVOCs, cyanide, TPH – TestAmerica in Houston, Texas.

Note that the hexavalent chromium groundwater samples collected in April 2019 were considered unusable and rejected due to being analyzed after the required holding time. Resampling is discussed below (September–October 2019).

2.2.2 June 2019 Field Program

On 20 June 2019, groundwater samples were collected from MW-02, MW-03, MW-04, and MW-05. Groundwater collected from MW-03 was submitted for analysis of VOCs and hexavalent chromium, and the other samples were submitted for analysis of only hexavalent chromium. These samples were deemed unusable following this sampling event and are thus not used in the HHRA.

2.2.3 September and October 2019 Field Program

On 30 September 2019, EA mobilized to the site to re-collect groundwater samples from the April 2019 event that had missed the required holding time. Groundwater samples were collected from one on-site monitoring well (MW-01) and nine PWW and PWS wells (WW-01, WW-02, WW-4, WW-7, WW-9, WW-10, WW-16, WW-17, and WW-20). Four PWWs (WW-11, WW-19, WW-21, and WW-22) could not be sampled due to inaccessibility. The collected samples were submitted for analysis of hexavalent chromium.

In November 2019, it was noted that these recollected samples were unusable due to laboratory error, as the laboratory did not provide the correct detection limits. These wells were subsequently resampled in December 2019, except for WW-03, WW-05, WW-06, WW-11, and WW-12 due to inaccessibility.

2.2.4 October 2019 Field Program

Three monitoring wells (MW-06, MW-07 and MW-08) were installed between 7 and 11 October 2019. These wells were completed in the Austin Chalk at depths of 180, 230, and 220 ft bgs, respectively. These three wells were completed with surface casing from 0-41 feet more or less, and open hole from approximately 41 ft bgs to the bottom of each well. Borehole geophysical surveys were conducted on the completed wells, and included color video, conductivity, gamma, spontaneous potential, and single point resistance.

2.2.5 December 2019 Field Program

EA collected 13 groundwater samples (including QC samples) from 16 through 18 December 2019. Groundwater samples were collected from four on-site monitoring wells (MW-01, MW-06, MW-07, and MW-08) and nine PWW and PWS wells (WW-01, WW-02, WW-4, WW-7, WW-9, WW-10, WW-16, WW-17, and WW-23). EA was refused access to five PWWs (WW-3, WW-5, WW-6, WW-11, and WW-12). Groundwater samples were analyzed for TAL metals (total and dissolved), hexavalent chromium, and cyanide. December 2019 groundwater samples were analyzed by the following laboratories:

- Hexavalent chromium – ALS in Rochester, New York
- TAL metals, cyanide – TestAmerica in Houston, Texas.

2.2.6 April 2020 Field Program

Two mobilizations occurred in April 2020. During the first mobilization between 6 and 9 April 2020, EA conducted oversight of borehole geophysical surveys in monitoring wells MW-06, MW-07, and MW-08. The surveys included color video, conductivity, gamma, temperature, spontaneous potential, single point resistance, and optical televiewer. Following the borehole geophysical surveys, EA surveyed the top of casing elevation for these three monitoring wells, and then deployed water level transducers and dual-membrane samplers in each well. The dual-membrane samplers were deployed in 10-ft intervals within the saturated portion of the open borehole in each monitoring well to assess if variations in hexavalent chromium concentrations were present. Fifteen samplers were deployed in the three monitoring wells as follows: two samplers were deployed in MW-06, seven in MW-07, and six in MW-08.

EA returned to the site on 29 April 2020 and retrieved 15 groundwater samples (including QC samples) from the dual-membrane samplers. Groundwater samples were submitted to ALS in Rochester for analysis of hexavalent chromium.

2.2.7 July 2020 Field Program

On 3 July 2020, EA retrieved transducers placed in monitoring wells MW-06, MW-07 and MW-08. The data downloaded from these transducers were used to create hydrographs, showing changes in water levels between April and July 2020. Section 3.4 presents an interpretation of the results of these measurements.

2.2.8 Media Characterization

Soil and groundwater were sampled and analyzed to characterize chemical and physical characteristics of media. A summary of the media characterization activities that were conducted during the RI is presented in the following subsections. The data quality assessment for the data collected during the RI, was evaluated in the Data Evaluation Summary Report (EA 2020a).

2.2.8.1 Soil Sampling

Surface soil samples (0-2 ft bgs) and subsurface soil samples (greater than 2 ft bgs) were collected during the RI. Thirty surface soil and twenty-four subsurface soil samples, including duplicates, were collected from both soil borings and monitoring well borings. RI soil sample locations are shown on Figure 1-3. Table 2-1 provides a summary of sample depths and analyses. As shown on Table 2-1, the collected soil samples were analyzed for VOCs, SVOCs, TPH, TAL metals, hexavalent chromium, cyanide, pesticides, and herbicides. The associated soil samples were collected from four on-site monitoring well borings (MW-02, MW-03, MW-04, and MW-05), and ten soil borings. Soil samples collected from monitoring well borings (MW-02 through MW-05) were collected from split spoons between hollow-stem auger flights, and soil borings SB-01 through SB-10 were collected from acetate sleeves retrieved from a direct-push technology rig. A field geologist logged soil materials using the Unified Soil Classification System (USCS). Copies of soil boring and well logs are provided in Appendix C.

2.2.8.2 Installation of Groundwater Monitoring Wells

The purpose of the well drilling and installation program during the RI was to evaluate subsurface hydrogeologic conditions and assess vertical and horizontal contaminant distribution. To achieve these objectives, four monitoring wells (MW-02, MW-03, MW-04 and MW-05) were initially installed around the perimeter of the site (Figure 1-4) and were generally constructed with the same depth and screen interval as MW-01. These wells were installed to assess groundwater flow direction and the possible lateral distribution of shallow groundwater contamination; however, groundwater was not encountered at any of these four locations, suggesting that MW-01 is screened in a discrete zone of perched groundwater.

MW-01 was installed to a depth of 27.3 ft bgs with 4-inch diameter polyvinyl chloride (PVC) screen with 10 feet of 0.010-inch slotted screen. The four monitoring wells installed during the RI (MW-02, MW-03, MW-04, and MW-05) were drilled using hollow-stem auger methods and constructed with 4-inch diameter PVC casing with 15 feet of 0.010-inch slotted screen.

Three deeper monitoring wells (MW-06, MW-07, and MW-08) were subsequently installed north and south of MW-01 to assess groundwater in the Austin Chalk. These wells were installed using air rotary methods and completed with 12-inch diameter surface casing from 41 to 42 feet bgs, and open-hole from the bottom of the steel casing to total depth. These three wells were installed in the Austin Chalk, which contains the first encountered shallow water aquifer at the site.

The drilling and installation of monitoring wells were conducted under the supervision of a field geologist with a State of Texas Professional Geoscientist certification. Soil samples and rock cuttings were collected continuously during drilling and lithologically described on boring log forms in accordance with the USCS. The field geologist also identified soil sample intervals based on visual evidence of contamination. Boring logs and well completion diagrams for MW-02 through MW-08 are provided in Appendix C. The depths and screen intervals for each monitoring well installed during the RI are summarized on Table 3-1, and the locations are shown on Figure 1-4.

2.2.8.3 Synoptic Groundwater Elevation Survey

Synoptic water level measurements were recorded nine times in the shallow monitoring wells, MW-01 through MW-05, and two times for the Austin Chalk monitoring wells, MW-06 through MW-08. These measurements are summarized on Table 3-1. The depth to groundwater measurements collected in the field were converted to groundwater elevations using the monitoring well casing elevations. These measurements were then used to prepare potentiometric surface maps for the three wells completed in the Austin Chalk (Figures 2-1 and 2-2). Potentiometric maps could not be prepared for the shallow monitoring wells because MW-02 through MW-05 did not yield water.

2.2.8.4 Groundwater Sampling from Monitoring Wells

Multiple groundwater sampling events occurred between April 2019 and April 2020 and are described in more detail in Section 2.2. Two sampling events, December 2019 and April 2020, resulted in usable groundwater data.

<u>December 2019 Groundwater Sampling Event</u>

During the December 2019 groundwater sampling event, groundwater samples were collected from MW-01, MW-06, MW-07, and MW-08 using EPA's low-flow purging and sample collection method (EPA 2017a). The samples were collected using a decontaminated submersible, 2-inch diameter Grundfos pump with dedicated 3/8-inch inside diameter Teflon-lined polyethylene tubing. The water level, flow rate, and water-quality parameters (temperature, conductivity, dissolved oxygen, pH, oxidation reduction potential, and turbidity) were measured every five minutes during purging. A groundwater sample was collected after water-quality parameters stabilized in accordance with EPA low flow purging and sampling guidelines. The collected samples were labeled following EPA chain-of-custody procedures, placed in an ice-filled cooler, and shipped to ALS in Rochester New York for analysis of

hexavalent chromium and TestAmerica in Houston, Texas for analysis of TAL metals and cyanide, as follows:

- MW-01, MW-06, MW-07, and MW-08
  - Metals (SW6010C, SW6020C, SW7470A, and E218.6)

- Groundwater collected from MW-01 was also submitted for analysis of the following:
  - Pesticides (SW8081B)
  - Herbicides (SW8151A)
  - VOCs (SW8260C)
  - SVOCs (SW8270D)
  - TPHs (TX1005)
  - Anions (E300.0)
  - Fixed Gases (RSK-175)
  - Total Dissolved Solids (SM2540C)
  - Total Activated Carbon (SM5310D)
  - Cyanide (SW9012B).

April 2020 Groundwater Sampling Event

During this event, borehole geophysical logging was conducted within MW-06, MW-07 and MW-08. Following borehole geophysical logging, dual-membrane samplers were deployed in these three monitoring wells. The primary object of conducting the borehole geophysical logging was to assess for the presence of water bearing fractures, and then deploy the passive samplers at those locations. Some fractures were identified; however, it was also determined that the samplers could be deployed in 10-feet intervals across the saturated portion of the borehole while also capturing water flowing through the identified fractures. Therefore, groundwater samples were collected using dual-membrane samplers deployed at 10-ft intervals within the saturated portion of the open hole in each monitoring well. This method was used to assess variations in hexavalent chromium concentrations with depth.

The dual-membrane samplers were deployed on 7 April 2020 in accordance with the manufacturer instructions. On 29 April 2020, the samplers were retrieved, and groundwater samples collected as follows: two samples were collected from MW-06, seven from MW-07, and six from MW-08. The collected samples were labeled following EPA chain-of-custody procedures, placed in an ice-filled cooler, and shipped to ALS in Rochester for analysis of TAL total and dissolved metals using EPA methods SW6010C, SW6020C, SW7470A, and E218.6.

2.2.8.5 Groundwater Sampling from Taps

Twenty-two groundwater samples (and 55 duplicates) were collected from 14 off-site PWW and PWS wells completed in the Edwards aquifer. These samples were collected in accordance with EA SOP 014 in the SAP (EA, 2019a). The groundwater samples collected from taps were analyzed for TAL metals, hexavalent chromium, and cyanide. Table 2-2 provides a summary of

the samples that were collected during the RI field events. Figure 1-5 depicts the locations of the off-site water wells where tap samples were collected.

2.2.9 Borehole Geophysical Logging

Borehole geophysical logging was conducted twice in monitoring wells MW-06, MW-07, and MW-08. The objective of borehole geophysical logging was to evaluate the lithology and structure of the Austin Chalk, identify voids and fractures, and assess if discrete zones should be targeted for vertical profiling. The borehole geophysical logs are included as Appendix D.

The monitoring wells were initially logged in October 2019 following drilling and development. The color video log was generally not usable due to high turbidity in the wells following development. A second mobilization occurred in April 2020 with the objective of recording a clear color video.

In October 2019, Edwards Aquifer Authority (EAA) conducted the borehole geophysical surveys. Geo Cam, Inc. of San Antonio, Texas, conducted the logging in April 2020. The following suite of geophysical tools were used during both mobilizations:

- Color video
- Conductivity
- Gamma
- Spontaneous potential
- Single point resistance.

The following two tools were used during the April 2020 mobilization:

- Fluid temperature
- Optical televiewer.

2.2.10 Long-term Water Level Assessment

EA conducted long-term water level measurements in three monitoring wells on-site. Water level transducers were placed in MW-06, MW-07, and MW-08 between 7 April 2020 and 3 July 2020. The transducers were programmed to take readings every two hours, which resulted in 1,008; 1,009; and 1,010 readings for each monitoring well, respectively. Data collected was initially graphed and compared to the Coolcrest #2 public supply well (PSW), approximately 0.35 mile south-southwest of the site to discern if patterns were present. After the initial graphs were prepared, it was apparent that water levels fluctuate in the Austin Chalk perhaps in response to regional water level fluctuations in the Edwards aquifer.

2.2.11 Investigation-Derived Waste Disposal

During the 2019 RI field activities, 10 drums of soil cuttings were generated and staged in a covered, lined roll-off bin. These soil cuttings were generated during installation of the monitoring wells. Three drums of wastewater were also generated during the RI sampling

activities. The drums were sampled, profiled, and manifested prior to being disposed of at the Tessman Road Landfill on 28 April 2020. Copies of waste disposal documentation for these drums are included in Appendix E.

2.2.12 October 2020 Well Plugging & Abandonment Field Program

Site clearing, well pad repair, and plug and abandonment activities took place in October 2020. The details and results of the field activities are described in the Well Plugging and Abandonment Technical Memorandum in Appendix F of this report.

2.2.13 Sustainable Practices

RI field events have the potential to use substantial resources. There is a balance between collecting a statistically significant number of samples to characterize the nature and extent of contaminants while also reducing the environmental footprint of the investigation. EPA was cognizant of this balance and sought out sustainable practices to reduce the environmental footprint as follows:

- Minimizing field mobilizations by combining investigation tasks
- Using local contractors
- Purchasing materials locally
- Using dual membrane samplers to collect groundwater samples to reduce IDW and the use of powered equipment.

These measures correspond to several of the core areas suggested by EPA's Office of Solid Waste and Emergency Response (OSWER). Combining the investigation tasks, using local contractors, and purchasing local materials helped to minimize air pollution and greenhouse gas emissions by reducing the amount of travel and shipping needed. Waste production was minimized by using sampling methods to minimize IDW.

2.3 DATA EVALUATION

This section describes the procedures that were used to review, verify, and validate field and laboratory data. Procedures for verifying that the data are sufficient to meet DQOs and measurement quality objectives for the project are also discussed.

2.3.1 Data Review Requirements

Data reduction and review are essential functions for preparing data that can be used effectively to support project decisions and DQOs. These functions must be performed accurately and in accordance with EPA-approved procedures and techniques. Data reduction includes computations and data manipulations that produce final results that are used during the investigation. Data review includes procedures that field or laboratory personnel conduct to ensure that measurement results are correct and acceptable in accordance with the QA objectives.

Subcontracted non-contract laboratory program (CLP) laboratories completed data reduction for chemical and physical laboratory measurements and completed an in-house review of laboratory analytical results. The laboratory QA manager was responsible for ensuring that laboratory data reduction and review procedures followed the requirements stated in the SAP (EA 2019a). The laboratory QA manager was also responsible for assessing data quality and for advising the EA QA manager of possible QA/QC problems with laboratory data. Field and laboratory measurement data reduction and review procedures and requirements were summarized in the Data Evaluation Technical Memorandum (EA 2020a).

2.3.2 Validation and Verification Methods

Data collected during the RI field activities were evaluated in accordance with EPA's National Functional Guidelines (EPA 2014). When analytical services were provided by EA-subcontracted laboratories, EA was responsible for data validation. The QA Manager had the primary responsibility for coordinating EA's data validation activities. EA, or its data validation subcontractor, conducted full validation on 10 percent of subcontracted laboratory data for investigation samples, with 90 percent undergoing partial validation. Validation was conducted in accordance with the EPA CLP National Functional Guidelines (EPA 2014). In addition to the EPA validation guidance documents, acceptance criteria presented in the SAP (EA 2019a) and analytical methods were used for the validation. Data validation conducted by EA was detailed in data validation reports, which were then incorporated into the Data Evaluation Technical Memorandum (DETM) (EA 2020a).

Data validation reports were summarized in the Data Evaluation Technical Memorandum (EA 2020a).

2.3.3 Reconciliation with Data Quality Objectives

The main purpose of a QA system is to define a process for collecting data that are of known quality, are scientifically valid, are legally defensible, and fully support decisions that will be based on the data. To achieve this purpose, the SAP (EA 2019a) required that the DQOs be fully defined.

After environmental data were collected, reviewed, and validated, a final evaluation of the data was conducted to determine whether the DQOs specified in the SAP (EA 2019a) were met. This evaluation was conducted in the DETM (EA 2020a) and is summarized in Section 4.

3. PHYSICAL CHARACTERISTICS

Data on the physical characteristics of the site and surrounding areas were collected to establish a basis of understanding for the source, nature and extent, and migration pathway analysis in Section 5. Also, these data were used to identify receptor populations for the HHRA. Finally, the physical characteristics will be used to develop and screen remedial action alternatives in the FS. Information on the following physical characteristics is presented below:

- Surface features
- Geology
- Soils
- Hydrogeology
- Surface water hydrology
- Meteorology
- Demography and land use/reuse.
- Cultural and historical features.

These elements are integral to the development of the CSM, which is presented in Section 5.

3.1 SURFACE FEATURES

The site is approximately 0.62 acres, relatively flat, and gently slopes to the southeast. The RCMF property is usually overgrown with vegetation and must be mowed and/or cleared during the summer months. The former RCMF plating building and other on-site structures have been removed (DBS&A 2014). A chain-link fence surrounds the property on all sides, with gates on the north and south sides.

The property is bordered by Potranco Road to the north, Tallowood Street to the south, and commercial properties to the east and west. The property to the east contains an automotive repair facility, and the property to the west, which previously contained an automotive repair facility, is a physical fitness facility (Figure 1-2). The closest residential building is approximately 220 feet south of the site, across Tallowood Street.

3.2 GEOLOGY

The site is located in western Bexar County, which is considered part of the Edwards Plateau and is separated from the Gulf Coastal Plain by the Balcones Fault Zone, which trends southwestward across the county. The site is located within the Balcones Fault Zone. A cross section location map and generalized regional hydrogeologic cross section are included as Figures 3-1 and 3-2.

The surface outcrop in the vicinity of the 0.62-acre site is the Austin Chalk. The stratigraphically higher Anacacho Limestone and Pecan Gap Chalk may be present where structural off-sets (normal faults or fracture zones) exist south of the former RCMF property (Figure 3-2). These structural off-sets will be referred to as faults for simplicity, with the understanding that the

structure of the subsurface in the vicinity of the site is complex. It is unknown if these faults occur as one or more large faults, sets of smaller faults, or fracture zones. These faults are generalized and represented as dashed lines on Figure 3-2, as the exact location and relationship of these faults are unknown.

The geology comprising the subsurface in the vicinity of the site is discussed below beginning with the surface, and is largely based upon documents from the U. S. Geological Survey (Stein and Ozuna 1995) and Texas Bureau of Economic Geology (Barnes *et al* 1982, Rose 1972).

3.2.1 Austin Chalk

The Austin Chalk directly underlies the site and consists of chalk alternating with marl, and based upon area geology maps, is exposed at the surface in the northern half of the site. The ledge-forming chalk is primarily microgranular calcite, which typically is grayish white to white. The chalk contains minor foraminifera test and *Inoceramus* prisms. The marl portion is typically medium gray, sparsely glauconitic, and may contain weathered pyrite nodules. Regionally, the Austin Chalk is 350 to 580 feet thick, thickening westward.

The Austin Chalk is known to yield small to large amounts of water of good to poor quality. A well located approximately 1.2 mile west of the former RCMF facility yielded an estimated 2 gallons per minute from the Austin Chalk while drilling. Another well belonging to the Coolcrest PWS (State well No. 68-35-402, Coolcrest #2, TCEQ SI sampling ID GW-03) located approximately 0.35-miles west-southwest of the site also encountered water (yield unknown) in the Austin Chalk while drilling. In both examples, the Austin chalk was cased-off before completing the wells in the deeper Edwards aquifer. No wells completed in the Austin Chalk have been identified within a 2-mile radius of the site aside from on-site monitoring well MW-01, which is believed to be completed in an upper, argillaceous portion of the Austin Chalk (EPA 2018b).

3.2.2 Eagle Ford Group

Below the Austin Chalk is the Eagle Ford Group, which consists of shale, siltstone, and argillaceous limestone that is light yellowish brown to gray. The Eagle Ford is recognized by its laminated bedding that is flaggy and somewhat petroliferous. Regionally, the Eagle Ford is 30 to 75 feet thick. In the Coolcrest #2 well, it occurred from 360 to 391 ft bgs. The Eagle Ford Group unconformably overlies the Buda Limestone. The Eagle Ford Group, Buda Limestone, and Del Rio Clay compose the upper confining units to the Edwards aquifer (Stein and Ozuna 1995).

3.2.3 Buda Limestone

The Buda Limestone is a fine-grained, bioclastic, hard, and poorly bedded to nodular porcelaneous limestone, that is light gray to pale orange. The Buda Limestone contains abundant pelecypods and burrows filled with chalky marl. Regionally, the Buda Limestone is 60 to 100 feet thick, thickening westward. In the Coolcrest #2 well, it occurred from 391 to 455 ft bgs.

3.2.4 Del Rio Clay

The Del Rio Clay is a calcareous and gypsiferous clay that becomes more gypsiferous and less calcareous upwards. Commonly blocky and medium gray to yellowish gray, the Del Rio Clay may also be blue green to yellowish brown. Pyrite is common. Abundant marine megafossils include *Llymatogyra arientina* (formerly *Exogyra arietina*) and other pelecypods. Regionally, the Del Rio Clay is 60-120 feet thick, thickening westward. In the Coolcrest #2 well, it occurred from 455 to 501 ft bgs.

3.2.5 Georgetown Formation

The Georgetown Formation, also referred to as the Georgetown Limestone, is a biomicritic, marly limestone that is dark reddish-brown to tannish-yellow. It often contains fossils of the brachiopod *Waconella* wacoensis (formerly *Kingena* wacoensis) along with pectins and other pelecypods. Regionally, the Georgetown Formation is 2 to 20 feet thick, and in the Coolcrest #2 well, it occurred from 501 to 520 ft bgs.

The Georgetown Formation is often not differentiated from the underlying Edwards Group in well reports and is considered part of the Edwards aquifer (Arnow 1963; Stein and Ozuna 1995). However, deposition of the Georgetown Formation occurred on the eroded surface of the underlying Person Formation, and the contact is disconformable.

3.2.6 Edwards Group

The Edwards Group underlying the site consists of two formations, the Person Formation followed by the Kainer Formation (Clark 2016), and together they are further subdivided into seven informal members as discussed below. The top of the Edwards Group was encountered at 520 ft bgs in the Coolcrest #2 well.

The Person Formation is further divided into three members, the uppermost of which is the cyclic and marine member. This member consists of small upward-grading cycles of mudstones to grainstones that may be thin to massively bedded and occasionally cross-bedded. Much of this member may have been removed by erosion prior to deposition of the overlying Georgetown Formation. The middle member is the leached and collapsed member, consisting of a dolomitic biomicrite which may contain collapsed breccias, burrowed mudstones, and stromatolitic limestone. The basal member of the Person Formation consists of dense argillaceous mudstone and is known as the regional dense member. Total thickness of the Person Formation is approximately 170 feet thick and is often not differentiated from adjacent strata (Clark 2016).

The Kainer Formation is subdivided into four members. The uppermost member, and thereby the upper boundary of the Kainer Formation, is typified by a *miliolid* grainstone. This grainstone member is followed by the kirschberg evaporite member, which consists of highly altered crystalline limestone, chalky mudstone, and chert. Following the kirschberg evaporite member is the dolomitic member, which consists of burrowed mudstone to grainstone, along with

crystalline limestone and chert. The basal member of the Kainer Formation is the basal nodular member, which consists of nodular, shaly limestone, mudstone, and *miliolid* grainstone (Clark 2016).

3.2.7 Local Geology

A compilation of site-specific RI data collected from borehole geophysical logs and monitoring well boring logs for MW-06, MW-07, and MW-08 provides a generalized summary of the subsurface lithology present beneath the site:

Formation	Top of Formation (ft bgs)	Bottom of Formation (ft bgs)	Information Source/Comments
Caliche	0	5	MW-06, MW-07, and MW-08 well logs
Silty Clay	5	12	MW-06, MW-07, and MW-08 well logs
Clay/Marl	12	35	MW-06, MW-07, and MW-08 well logs
Limestone	35	80	MW-06, MW-07, and MW-08 well logs
Limestone/Chalk	80	210	MW-06 (to 180-feet), MW-07, and MW-08 well logs
Shale, gray	210	230	MW-07 and MW-08 well logs

NOTE:
bgs = Below ground surface.
ft = Feet/foot.

Cross sections of the site were prepared based upon the lithology encountered during monitoring well installation. A cross section location map is provided in Figure 3-3, and generalized hydrogeologic cross sections are presented in Figures 3-4 and 3-5. Logs for groundwater monitoring wells and soil borings are included in Appendix C.

3.3 SOIL

The Natural Resources Conservation Service Custom Soil Resource Report generated for the site (U.S. Department of Agriculture [USDA] 2018; Appendix G) identifies the following soil series associated with the site:

Map Unit Symbol	Map Unit Name	Site Distribution
BsC	Whitewright-Austin complex, 1 to 5 % slopes	All but the extreme southwest corner of the site; and large portions of the adjacent properties surrounding the site.
BpC	Whitewright clay loam, 1 to 5 % slopes	The extreme southwest portion of the site; and portions of the adjacent properties located southeast, south and southwest of the site.

Figure 3-6 illustrates the distribution of theses soil types at the site and on adjoining properties.

3.3.1 Whitewright-Austin Complex, 1 to 5 % slopes (BsC)

The surface area is typically covered with cobbles, stones, or boulders and is moderately well-drained. The water table is usually located at a depth of more then 80 inches. A representative soil profile includes the following: H1- (0 to 6 inches) clay loam, H2- (6 to 15 inches) silty clay, and H3- (15 to 20 inches) bedrock. It has a very low available water capacity (about 2.6 inches) and a moderately low to high capacity to transmit water (0.06 to 1.98 inches per hour) (USDA 201).

3.3.2 Whitewright clay loam, 1 to 5 % slopes (BpC)

This soil unit is a mixture of 65% Whitewright soils and 35% Austin soils. The Whitewright representative soil profile includes the following: H1- (0 to 6 inches) clay loam, H2- (6 to 15 inches) silty clay, and H3- (15 to 20 inches) bedrock. The Austin representative soil profile includes the following: H81- (0 to 28 inches) silty clay, H2- (28 to 42) silty clay, and H3- (42 to 72 inches) bedrock. Both the Whitewright and Austin soils have a water table that is moderately more than 80 inches. Available water capacity of Whitewright soils is very low (about 2.6 inches), while the available water capacity of Austin soils is moderate (about 7.6 inches) (USDA 2020).

3.4 HYDROLOGY

3.4.1 Surface Water Hydrology

As indicated on Figure 3-7, the site is relatively flat with a slight topographic slope toward the south and southeast. As also indicated on this figure, other than intermittent drainage features, there are no major surface water features in the immediate vicinity of the site.

3.4.2 Groundwater Hydrology

The Pecan Gap Formation, Austin Group, Eagle Ford Group, Buda Limestone, and Del Rio Clay are collectively considered to be the upper confining unit to the Edwards aquifer. These units do not supply appreciable amounts of water to wells in the area, with the exception of the Austin Group (Clark, Golab, et. al. 2016).

The Austin Group supplies water to several springs in northern Bexar and Comal Counties, Texas, as well as to some domestic and irrigation wells. The most prolific wells and springs within the Austin Group likely tap water that moves up faults and fractures under artesian conditions from the underlying Edwards aquifer (Clark, Golab, et. al. 2016). Water entering the Austin Group in Bexar County, Texas, is also derived from other sources, including direct infiltration of precipitation and infiltration along stream channels where the Austin Group outcrops (Banta and Clark 2012).

The site is located within the artesian zone of the Edwards aquifer, the principal water-bearing rock in Bexar County, Texas. The Edwards aquifer, which is one of the most productive carbonate aquifers in the nation, is the major source of PWS for the City of San Antonio and also

supplies large quantities of water to agriculture, industry, and major springs. Most recharge to the Edwards aquifer is from direct infiltration of precipitation and streamflow in the recharge zone located to the northwest of the site. After entering the aquifer, the water generally moves from west to east through Bexar County. In the vicinity of the site, the water contained in the Edwards aquifer is confined by the Del Rio Clay above, and the Glen Rose limestone below. Wells that are completed in the Edwards aquifer are capable of producing significant amounts of water. The top of the Edwards aquifer was encountered approximately 520 feet bgs in the Coolcrest #2 well (well WW-02 on Figure 1-5), and depth to water in the completed well was reported as 241 feet bgs.

The site is within the EAA area of jurisdiction and the EAA Rules Chapter 713 (Water Quality), Subchapter E (Spill Reporting), and Subchapter F (Hazardous Substances Registration, Storage and Planning) are applicable (EAA 2019).

3.4.3 Depth to Groundwater

Depth to groundwater was measurable in four of the on-site wells: MW-01, MW-06, MW-07, and MW-08. Shallow monitoring wells are completed as follows: MW-01 is screened from 17.25 feet to 27.25 feet bgs, and MW-2, MW-3 and MW-4 from 10 to 25 feet bgs. MW-2 through MW-4 have been dry since the installation of the wells, suggesting there is no groundwater within this hydrogeologic interval at the site. Deep monitoring wells are completed with surface casing then open-hole as follows: MW-06 from 42 to 180 feet bgs, MW-07 from 41 to 230 feet bgs, and MW-08 from 42 to 220 feet bgs. Well completion details are provided in Table 3-1.

During the early phases of the RI in April 2019, the surface completion for MW-01 was observed to be inadequate and was subsequently repaired to eliminate precipitation run-off into the well boring. Following this repair, the water level in this well dropped substantially during each groundwater sampling event. The depth to groundwater in MW-01 was 16.55 feet below top of casing (btoc) during the first groundwater sampling event in April 2019. This depth dropped following each sampling event, as the water level in this well either did not recharge at all or did not recharge appreciably. This observation in conjunction with the lack of groundwater in MW-02, MW-03, MW-04, and MW-05 resulted in the conclusion that MW-01 is likely screened within a discrete zone of perched water and not considered a groundwater-bearing unit under the TRRP-8 (TCEQ 2010). Therefore, potentiometric surface maps or calculations of hydraulic gradient have not been completed for this shallow groundwater-bearing zone.

Two rounds of synoptic depth to groundwater measurements were recorded in the three Austin Chalk monitoring wells, MW-06, MW-07, and MW-08. Depth to groundwater was 160.45, 159.67, and 159.00 feet btoc in December 2019, and 167.98, 168.71, and 168.32 feet btoc in April 2020. In addition, over one thousand water level measurements were recorded in each of these three wells between 7 April 2020 and 3 July 2020 via data logger. Groundwater fluctuations might be in response to regional water level fluctuations. Hydrographs are included in Appendix H.

3.4.4 Hydraulic Gradients

Groundwater contours illustrating the hydraulic gradient across the site were developed based on gauging events that occurred in December 2019 and April 2020 and are shown on Figures 2-1 and 2-2. Both data sets include monitoring wells MW-06, MW-07, and MW-08.

As indicated on Figures 2-1 and 2-2, groundwater flow direction is generally to the east and southeast, which is also consistent with local topography. The hydraulic gradient between monitoring wells MW-06 and MW-07 was 0.018 ft/ft during the December 2019 synoptic event and 0.048 ft/ft during the April 2020 synoptic event.

When reviewing Figures 2-1 and 2-2, it is important to understand that groundwater will tend to flow in a direction that is downgradient and orthogonal to the water elevation contours; the presence of fractures, faults, and karst features can significantly alter the specific flow direction. Monitoring wells MW-06, MW-07, and MW-08 are situated within approximately 100 feet of each other, within a 0.62 acre site, so therefore it would not be unexpected for flow within the saturated Austin Chalk to be in a direction that is different from what is depicted on these figures.

3.4.5 Groundwater Use

The Austin Group is considered a confining unit of the Edwards aquifer (Maclay and Small, 1984) and is geologically separate from the Georgetown Formation and the Edwards Group (which comprises the Edwards aquifer). There is historical and anecdotal evidence that the Austin Group might have some hydrogeologic connectivity to the Edwards aquifer through faults, fractures, or caves (Small 1986). In some locations, wells completed in the Austin Group can produce water at rates of more than 500 gallons per minute, whereas at other locations, wells completed in the Austin Group produce only enough water for domestic and livestock needs (Arnow 1963). In 1962, Garza reported that many of the wells completed in the Austin Group yielded only small quantities of water with hydrogen sulfide gas in “objectionable quantities,” but also noted that in some areas, wells completed in the Austin Group may produce moderate quantities of water “similar in chemical quality” to groundwater in the Edwards aquifer (Arnow 1963).

The Edwards aquifer, one of the most productive carbonate aquifers in the nation, is a primary source of PWS for the City of San Antonio and also supplies large quantities of water to agriculture, industry, and major springs. Most recharge to the Edwards aquifer is from direct infiltration of precipitation and streamflow losses in the recharge zone located to the northwest of the site. After entering the aquifer, the water generally moves from west to east through Bexar County, where it is withdrawn by wells and discharged to springs. The karst and fractured limestone conditions associated with the geologic formations of the Edwards aquifer establish effective porosity that provides efficient pathways for contamination to enter the aquifer and migrate through fractures. The site is within the EAA area of jurisdiction and the EAA Rules Chapter 713 (Water Quality), Subchapter E (Spill Reporting), and Subchapter F (Hazardous Substances Registration, Storage and Planning) boundary (EAA 2019).

3.5 METEOROLOGY

The following meteorological data for Bexar County, Texas, was adapted from the following website: https://www.bestplaces.net/climate/county/texas/bexar

- Bexar County, Texas, receives 30-34 inches of rain and 0 inches of snow, on average, per year
- On average, there are 224 sunny days per year
- Bexar County receives precipitation an average of 80 days per year. Precipitation is mostly from rain, with lesser amounts of snow, sleet, or hail.
- The July high temperature is around 94 degrees Fahrenheit (°F), and the January low temperature is 41 °F.

3.6 DEMOGRAPHY AND LAND USE/REUSE

This section provides a description of the demographics and land use/reuse in the vicinity of the site.

3.6.1 Demographics

The following demographics data was adapted from the following website: https://www.census.gov/quickfacts/fact/table/liveoakcitytexas/PST045219

The site is located in the west portion of San Antonio in Bexar County, Texas. According to census records, the total population of Bexar County was 1,714,773 in 2010. Among the Bexar County population, a total of 84.3 percent identified themselves as White, 8.6 percent identified themselves as Black or African-American, 3.3 percent identified themselves as Asian alone, 1.2 percent identified themselves as American Indian and Alaskan Native alone, 0.2 percent identified themselves as Native Hawaiian and other Pacific Native, and 60.7 percent identified themselves as Hispanic or Latino. Of the local population, 2.4 percent of people also identified themselves as two or more races. According to the US Census Bureau, people may choose to report more than one race to indicate their racial mixture, such as "American Indian" and "White." People who identify their origin as Hispanic, Latino, or Spanish may be of any race (US Census Bureau 2020). For these reasons, the total percentages of various races will total over 100 percent.

According to the census data, the median household income in Bexar County, Texas, was $55,456 from 2014 through 2018. This source estimates 17.2 percent of the population were living below the poverty level in Bexar County, Texas.

3.6.2 Land Use/Reuse

Superfund remedy selection determines the extent to which hazardous constituents remain at the site and therefore affect subsequent available land and groundwater uses. Future land use assumptions allow the cleanup alternatives evaluation to be focused on developing practicable and cost-effective remedial alternatives. Land uses that will be available following completion of site cleanup are determined during the remedy selection process. During this process, the goal of realizing reasonably anticipated future land uses is considered along with other factors. Any combination of unrestricted uses, restricted uses, or use for long-term waste management may result.

3.6.2.1 Current Land Use

The site is currently unused and is located in a mixed urban to rural environment with predominately commercial/industrial and residential properties. According to the San Antonio zoning map, the RMCF facility is located outside of the city limits (San Antonio 2020). Therefore, there are no zoning regulations for unincorporated areas of Bexar County (Bexar County 2020). Future use of the property is unknown; however, it is likely to remain a commercial/industrial use. This is primarily due to its location along Potranco Road and other commercial/industrial facilities along this roadway.

3.6.2.2 Reasonably Anticipated Future Land Uses

Based on site status, land use analysis, and stakeholder perspectives, future land uses and reuse considerations for the site are outlined below.

Continued Use

The site is currently used for industrial purposes. The area surrounding the site is a mixture of industrial, commercial, and residential. The site is likely to remain commercial/industrial due to its location along Potranco Road. Due to the current state of the site and the identified future land use for the site, it is likely that construction or maintenance activities may occur. These activities would require excavation, construction, or regrading.

Near-term Reuse Opportunities

In the next 5 to 10 years, future uses for the site are likely to include small light industrial businesses with low demand for truck or vehicle traffic and utility services. Provided that construction or maintenance activities would occur, the site offers approximately 27,000 square feet of open space for future buildings. Future businesses operating at the site are most likely to lease some or all the facility space rather than own the property.

Light Industrial Opportunities

A range of businesses and future use activity types that could be compatible with the existing facilities and may make sense for the area are listed below:

- Storage: Self-storage units, logistics, event staging, large equipment storage or climate-controlled storage
- Vehicle repair/trucking: Repair shop, trucking support service
- Assembly: Light structure manufacturing (tiny house, mobile home, wooden trusses), storage sheds, furniture assembly, engineered timbers, wood shop or machine shop
- Construction/landscape yard: Covered parking for fleet vehicles, construction equipment, maintenance shop
- Parking: Covered and indoor vehicle parking
- Arts: Studio or maker space.

Long-Term Reuse Opportunities

Given zoning, land uses, and community goals, along with improved access and utility infrastructure in the area 10 or more years in the future, site uses could include those listed previously, along with a wider range of uses as described below:

- Professional office or lab space
- Light industrial
- Research and development
- Indoor recreation facilities.

4. ANALYTICAL DATA SUMMARY

This section contains a summary and evaluation of the analytical data collected during the historic assessments and RI field events.

4.1 HISTORIC DATA SUMMARY

Historical data were collected during previous assessment activities that occurred at the site from 2008 through 2016. The historical analytical data for the site were not carried forward for further evaluation as part of the RI due to uncertainties associated with data validation and because no coordinates were available for sample locations. However, this data initially formed the basis for the RI sampling approach and locations, with the remaining RI field events being based on data collected during subsequent RI field events.

4.2 REMEDIAL INVESTIGATION REPORT DATASET SUMMARY

The data collected during the RI field events were used in the evaluations within this report and considered suitable for making remedial decisions. The types of RI collected data were summarized in Section 2, so this information was not repeated in this section.

4.3 POTENTIAL SOURCE AREAS

The HRS (EPA 2018b) identified one source area associated with the site, contaminated soil (Source 1). Source 1 was identified as an approximately 800 square foot area (depth of impact and volume unknown) of contaminated soils that are acting as source material to shallow groundwater. The identification of this source area is based on investigation activities in this area detecting the presence of elevated metals, chromium, copper, nickel, selenium, and cyanide. The HRS identified other potential sources of contamination including a former waste evaporation area, rinse and process tanks, a chromium contaminated area, various drums, and a break in the foundation of the facility building near the vat room where spills may have occurred (EPA 2018b). These sources were removed as part of the 2013 – 2014 TCEQ Removal Action and are not a continuing source. However, these other potential sources may have contributed contamination to surface and sub-surface soils and groundwater in the past.

4.4 IMPACTS IN SOIL EXPOSURE AREAS

The soil exposure area has been designated as site-wide and includes the 0.62-acres site. Only one off-site location (SB-10) had exceedances of the Residential RSL; however, these exceedances are considered background. None of the soil analytical results indicated contamination from an off-site source, nor did the results indicate contamination migrating off-site. Soil sampling locations are depicted on Figure 1-3. The initial screening presented in this section and the HHRA has been conducted on a site-wide basis. The initial screening discussed in this section compared laboratory results to SLs consisting of Residential Soil RSLs (EPA 2020). The primary COPCs for soil include SVOCs, metals, and hexavalent chromium.

Summaries of site wide COPC detections and SL exceedances for surface soil (0.0-2.0 ft bgs) and subsurface soil (greater than 2.0 ft bgs) are presented in Table 4-1. Appendix I contains an electronic copy of the laboratory database (on compact disc). This database was developed as part of the RI and is inclusive of analytical data results used for this RI Report.

4.4.1 Surface Soil

Surface soil samples were collected from both monitoring well borings (prior to drilling) and from soil boring locations labeled with SB. Table 4-1 provides a summary of site-wide soil results/exceedances, which were screened against SLs. Two metals (arsenic and hexavalent chromium) and one SVOC (benzo[a]pyrene) exceeded Residential Soil RSLs in the 0.0 to 2.0 ft interval, which is designated as surface soil. These exceedances were carried forward for further evaluation under the HHRA. There were no pesticides, herbicides, VOCs, cyanide, or TPH detections that exceeded Residential RSLs for the surface soil interval.

Hexavalent chromium was detected in exceedance of the Residential RSL in two surface soil samples collected from SB-05 (Figure 4-1). Hexavalent chromium was detected at a concentration of 0.718 mg/kg and 3.1 mg/kg from the 0 to 0.5 and 0.5 to 2 feet bgs intervals, respectively. As shown on Figure 4-1, SB-05 is located along the west side of the former building and may be coincident with the release of metal plating fluids in this area. Two other surface soil sample locations had detections of hexavalent chromium, although these detections did not exceed the Residential RSL of 0.3 mg/kg. Samples SB-02 (0.5 to 2 ft bgs) and SB-07 (0.5 to 2 ft bgs) had detections of 0.236 mg/kg and 0.123 mg/kg, respectively. Sample location SB-02 is at the southern end of the former building, while sample SB-07 is east, but down slope from the former building. As shown on Figure 4-1, the lack of hexavalent chromium exceedances in surface soil samples collected from MW-04, SB-01, and SB-06 define the lateral extent of hexavalent chromium to the north, east, and south. No surface soil samples are present to the west of SB-05.

Arsenic was detected in exceedance of the Residential RSL of 0.68 mg/kg in each of the 30 surface soil samples collected (Figure 4-2). Concentrations ranged from 2.55 mg/kg in sample SB-03 (0.5 to 2 ft bgs) to 5.89 mg/kg in sample SB-08 (0 to 0.5 ft bgs). The second highest exceedance of 5.26 mg/kg at SB-01 is coincident with the area of stained soil observed prior to demolition of the former RCMF building. No discernable pattern is apparent with the distribution of arsenic concentrations, and exceedances of arsenic were detected in the one off-site location (SB-10). A review of the 2016 TCEQ SI report indicates arsenic was detected at a concentration of 2.6 mg/kg in a background sample collected off-site (TCEQ 2016), suggesting the exceedances at the RCMF site are generally consistent with background concentrations.

Benzo(a)pyrene exceeded the Residential RSL of 0.11 mg/kg in two surface soil samples: SB-07 (0.5 to 2 ft bgs) at a concentration of 0.119 mg/kg and SB-10 (0 to 0.5 ft bgs) at a concentration of 0.305 mg/kg (Figure 4-3). The source of benzo(a)pyrene is not known, however other high molecular weight polyaromatic hydrocarbons (PAH) such as benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, and benzo(k)fluoranthene were detected as well suggesting a past release of petroleum product. The locations of the two exceedances are also at

the downgradient portion of the site along the property boundary shared with an automotive repair shop.

4.4.2 Subsurface Soil

Table 4-2 provides a summary of site-wide soil results/exceedances, which were screened against SLs. Two metals, arsenic and hexavalent chromium, exceeded Residential RSLs for subsurface soil. These exceedances were carried forward for further evaluation under the HHRA. There were no pesticides, herbicides, VOCs, cyanide, or TPH detections that exceeded Residential RSLs for subsurface soil.

Hexavalent chromium was detected in exceedance of the Residential RSL in six subsurface soil samples (including one duplicate) collected from SB-01, SB-02, SB-05 and MW-02 (Figure 4-4). The exceedances range in concentration from 0.35 mg/kg at SB-02 (13 to 15 ft bgs) to 3.05 mg/kg in SB-05 (2 to 5 ft bgs). The two highest exceedances were detected in SB-01 and SB-05 at depths of 13 to 15 ft bgs and 2 to 5 ft bgs. The concentrations at these two locations (2.27 mg/kg and 3.05 mg/kg) are one order of magnitude over the other detections of hexavalent chromium at SB-02 and MW-02, which range from 0.35 mg/kg to 0.379 mg/kg. The presence of hexavalent chromium at SB-01 and SB-05 is more likely due to releases from the former RCMF facility, whereas the exceedances detected in SB-02 and MW-02 are more likely indicative of background concentrations. As shown on Figure 4-4, the lack of hexavalent chromium exceedances in subsurface soil samples collected from MW-04, SB-07, MW-05, and SB-06 define the lateral extent of hexavalent chromium to the north, east, and south (with the exception of SB-02). Laterally, hexavalent chromium has been detected at 13 to 15 ft bgs in SB-01, and as deep as 28 to 30 ft bgs in MW-02.

Arsenic was detected in exceedance of the Residential RSL of 0.68 mg/kg in each of the 24 subsurface soil samples collected (Figure 4-5). Concentrations ranged from 2.17 mg/kg in sample SB-01 (13 to 15 ft bgs) to 4.28 mg/kg in sample SB-08 (2 to 5 ft bgs). Similar to the surface soil samples, there does not appear to be a discernable pattern of the distribution of arsenic concentrations. The concentrations of the exceedances are similar to the concentration of arsenic detected in a background sample collected during the SI (TCEQ 2016).

4.5 IMPACTS IN SURFACE WATER

Water that falls onto the surface at the site may either infiltrate the surface or run-off toward the southeast of the site to a drainage ditch located just off-site to the south and along the north side of Tallowood Street. Water that is contained in this drainage ditch would continue east northeastward until reaching Medio Creek, which is approximately 0.50 miles from the site and drains to the southeast. The portion of Medio Creek near the site appears to be dry, except possibly during rain or storm events. Other than intermittent drainage features, there are no major surface water features in the immediate vicinity of the site.

EA was prepared to collect surface water samples from precipitation run-off during the RI; however, this opportunity did not occur during any of the field mobilizations, and, therefore, no surface water samples were collected during the RI.

4.6 IMPACTS IN GROUNDATER

Groundwater samples were collected from four on-site monitoring wells (MW-01, MW-06, MW-07, and MW-08) and 14 nearby PWW and PWS wells. Of the on-site wells, MW-01 is screened in a discrete zone of perched water, while MW-06, MW-07, and MW-08 are completed within the Austin Chalk. The nearby PWW and PWS wells are completed in the Edwards aquifer. Detections in groundwater were screened against Human Health SLs that include Tap Water RSLs and MCLs. Table 4-3 summarizes detections of organic compounds and metals that exceeded these screening criteria.

4.6.1 Shallow, Perched Groundwater

Three groundwater samples (including one duplicate sample) were collected from MW-01 in April and December 2019 during the RI. Total and dissolved chromium and dissolved hexavalent chromium were detected in exceedance of the EPA MCL and EPA tap water RSL. There were no exceedances of pesticides, herbicides, VOCs, SVOCs, TPH, or cyanide.

In April 2019, total chromium was detected at a concentration of 7,860 µg/L and dissolved chromium at 7,830 µg/L, exceeding the MCL of 100 µg/L. The hexavalent chromium sample result was not usable (see Section 2.2). In December 2019, the total and dissolved concentrations of chromium were 6,100 µg/L and 5,800 µg/L. Dissolved hexavalent chromium was detected at a concentration of 6,140 µg/L, which exceeds the EPA tap water RSL of 0.035 µg/L.

The total and dissolved chromium detections in MW-01 are the only exceedances of these metals in groundwater at the site. The concentrations of total and dissolved chromium in the Austin Chalk wells are over 200 times less than MW-01. MW-01 is also the closest well to the former RCMF building and closest to where stored products and stained soil were observed during previous investigations.

4.6.2 Austin Chalk

Dissolved hexavalent chromium was the only analyte detected in exceedance of project screening levels in groundwater collected from Austin Chalk monitoring wells. Exceedances of dissolved hexavalent chromium were carried forward for further evaluation under the HHRA. Analytical results are provided in Table 4-3, and Figure 4-6 shows the location of the exceedances.

In December 2019, one low-flow groundwater sample was collected each from MW-06, MW-07, and MW-08. In April 2020, dual-membrane samplers were deployed every ten feet across the water column of each open hole to assess if there are vertical stratification of dissolved

hexavalent chromium. Four samples were collected from MW-06, seven samples from MW-07, and six samples from MW-08. Overall, small variations in concentrations were detected in these vertical profiling samples. In monitoring wells MW-07 and MW-08, the highest concentrations are generally between 176 and 186 feet bgs. In MW-06, the highest concentration was from the sample collected at the shallowest interval of 164.5 feet bgs. A review of these analytical results compared to the borehole geophysical survey shows that the highest concentrations are coincident with water-producing fractures. The table below summarizes the range of concentrations of hexavalent chromium detected in each well:

Monitoring Well	Lowest Concentration (µg/L)	Highest Concentration (µg/L)
MW-06	19.5 J	29.3
MW-07	0.541	2.4 J
MW-08	0.022	0.364 J

Monitoring well MW-08 has the lowest range in concentrations and is the closest well to the former building and areas where bulk chemical containers were stored. Monitoring well MW-06 has the highest concentrations and is furthest away from this area and slightly upgradient. This variation is likely due to a reservoir of hexavalent chromium in the shallow subsurface that migrates through high angle fractures in the Austin Chalk, transporting contamination slightly away from the source area.

Groundwater samples were collected from PWW and PWS wells during the RI, and extensive groundwater sampling has historically been conducted by the EAA. As described in the section that follows, the historical concentrations of hexavalent chromium in the Edwards aquifer wells are significantly below the concentrations detected in monitoring wells completed in the Austin Chalk. This indicates that exceedances of hexavalent chromium likely emanate from the release of plating chemicals at the former RCMF.

4.6.3 Edwards Aquifer

Fourteen groundwater samples were collected from off-site PWW and PWS wells completed in the Edwards aquifer. The following analytes were detected in exceedance of the project screening level in these samples: total antimony, total and dissolved iron, total lead, dissolved hexavalent chromium, and dissolved thallium. Of these exceedances, dissolved thallium exceeded the EPA MCL and total antimony, total and dissolved iron, total lead, and dissolved hexavalent chromium exceeded the Tap Water RSL.

Hexavalent chromium was detected in concentrations ranging between 0.065 ug/L to 0.196 ug/L. These exceedances are consistent with historical concentrations of hexavalent chromium collected by EAA (Appendix J) and are thus not considered to be the result of contamination migrating from the RCMF site.

Exceedances of total antimony, total and dissolved iron, and total lead were detected in off-site PWS WW-20, and an exceedance of dissolved thallium was detected in off-site PWS WW-10. PWS WW-20 is located approximately 1 mile south-southwest of the site, and WW-10 is located

approximately 2 miles northwest of the site. The exceedances detected in these wells is unlikely to be attributed to releases from the RCMF site due to their proximity.

4.7 REMEDIAL INVESTIGATION REPORT DATA USABILITY

The RI dataset was evaluated in context with the project specific DQOs in the SAP (EA 2019a) and DETM (EA 2020a). Data were evaluated for acceptable quality and quantity based on the critical indicator parameters, represented by precision, accuracy, completeness, comparability, representativeness, and sensitivity. A summary of this evaluation is presented below.

The DQO process is a series of planning steps designed to ensure that the type, quantity, and quality of environmental data used in decision-making are appropriate for the intended application. The data must be sufficient enough to answer the principal study questions from the DQO process as follows:

- Are there risks to human health associated with PWW and PWS wells as drinking water sources?
- Have vapors impacted commercial and residential properties?
- Where is the source for contamination?
- What is the nature and extent of contamination in soil and groundwater?
- Is there presence of dense non-aqueous phase liquid and if so, what is the extent and volume?
- Are there groundwater impacts to surface water (e.g., complete or potentially complete pathway)?
- Do the COPCs present pose unacceptable human health/ecological risk requiring the evaluation of options and technologies to support future actions?
- What are the aquifer characteristics?

It is important that the data collected during the field investigation is suitable and sufficient to evaluate the following RI components: source identification, nature and extent determination, migration pathway evaluation, background contribution, and risk characterization.

An evaluation of spatial distribution and sample density is an inexact science that is often subject to opinion and conjecture. Datasets inherently have some level of uncertainty with regards to the representativeness of the characterization. Although the level of uncertainty varies from area to area, the acceptable level of uncertainty is often individualistic and subject to interpretation.

Essentially, there is a delicate balance between expending additional effort to characterize an area and the necessity for additional data to reduce uncertainty in the dataset.

To evaluate the robustness of the dataset, two criteria were utilized in a semi-quantitative weight-of-evidence evaluation:

- *Is sampling sufficient to: (1) determine the nature and extent of contamination and (2) calculate an exposure point concentration for risk assessment?* Sufficient samples were collected to determine nature and extent of the soil and groundwater contamination. EPA guidance, including ProUCL 5.1 Technical Guide (USEPA, 2016) recommends six samples are sufficient for a dataset when using a point-by-point observation comparison. The datasets collected during these field activities will be sufficient to meet this criterion.

- *Is the spatial distribution and sample density adequate to evaluate the nature and extent of contamination and complete the migration pathway analyses?* The soil and groundwater samples were collected in areas expected to have the highest concentration of contaminants. This approach introduces bias and potential sampling error; however, the bias is of a conservative nature, the sampling program being more likely to yield higher media concentrations, which in turn will likely result in a more protective remedial decision.

Although there is some inherent uncertainty associated with sample collection and the representativeness of the site characterization, the data are considered sufficient for source identification, nature and extent determination, migration pathway evaluation, background contribution, and risk characterization.

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5. REMEDIAL INVESTIGATION RESULTS

Previous sections of this RI Report provide the foundation for answering the principal study questions presented in Section 4.3, and, as applicable, addressed in this section. After these principal study questions were addressed, the CSM was presented to provide a presentation of the impacts and to form the basis for the risk assessments. The Human Health CSM is illustrated on Figure 5-1. As explained under Section 7, an ecological risk assessment was not conducted during the RI.

5.1 BASIS OF UNDERSTANDING

Sections 1 through 4 provided a summary of the site information and data, which fulfilled the first of four elements of an RI Report (Section 1.1). The remaining elements are: (1) identify potential source areas, (2) define the nature and extent of contamination, and (3) evaluate contaminant migration pathways. The source identification, nature and extent discussion, and migration pathway analyses will be supported by the comparison of data to screening levels (SLs). The following sections to provide a basis of understanding of the sourcing, distribution, and migration of contaminants at the site.

5.1.1 Comparison Criteria

Data acquisition was conducted during a series of field investigations by multiple investigators that began in 2008 and continued through 2016. Following an evaluation of this previous data, EA conducted the RI from April 2019 to July 2020. Data collected for use in this RI report include the following:

- Lithological descriptions of recovered material from soil borings and monitoring wells
- Soil samples
  - 30 surface soil samples
  - 19 subsurface soil samples
- Groundwater samples
  - 23 groundwater samples from on-site monitoring wells
  - 27 groundwater samples from off-site PWW and PWS wells
- IDW samples
- Water level elevation measurements
- Borehole geophysical data.

These samples were used to evaluate the nature and extent of the contamination and to assess potential risks to human health and ecological receptors.

The nature and extent evaluation contained a comparison to applicable SLs. The site has been historically used for commercial and light industrial purposes. The property is approximately 0.62 acres and bordered by Potranco Road to the north, Tallowood Street to the south, and commercial properties to the east and west. The RCMF property is overgrown with vegetation

except occasional bare areas near the center of the site where previous RCMF buildings were located (TCEQ 2016). The former RCMF plating building and other on-site structures have been removed (DBS&A 2014). A chain-link fence surrounds the property on all sides, with gates on the north and south sides.

Although the current or likely future use of the site is commercial/industrial, some portions of the site are located near areas that are undeveloped or used for residences. Therefore, to provide a consistent basis of comparison across exposure areas, the most conservative SLs for the human health risk assessment was used in the nature and extent discussion. The following paragraphs describe screening criteria used for this evaluation, and Sections 5.3 through 5.6 also provide a brief summary of the distribution of chemicals and metals that exceeded the human health SL criteria. Metals detected above the screening level in soil include arsenic, and chromium (hexavalent). SVOCs detected above the screening level in soil included benzo(a)pyrene. Metals detected above the screening level in groundwater include antimony, chromium (total), chromium (dissolved), hexavalent chromium (dissolved), iron, and lead. Detections that exceeded one or more SLs are illustrated in Figures 4-1 through 4-7.

It is noted that the nature and extent discussions presented in Sections 5.3 through 5.7 are based on actual laboratory detections, and do not consider laboratory quantitation limits that were higher than screening criteria used to initially screen this data. This condition has been further evaluated and addressed during the preparation of the HHRA (EA 2020b).

5.1.2 Source Material

Source material is a media that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration to other media or for direct exposure (EPA 1991). EPA identifies source material as either a principal threat waste or a low-level threat waste.

- **Principal Threat Wastes** – Source materials that are considered highly toxic or highly mobile and that generally cannot be reliably contained or would present a significant risk to human health or the environment if exposure were to occur.

- **Low-level Threat Wastes** – Source materials that exhibit low toxicity and low mobility and can be reliably contained or would present only a low risk to human health or the environment if exposure were to occur.

Material that was considered source material was identified as either a principal or low-level threat waste in the sections below.

5.1.3 Nature and Extent of Contamination

An analysis of the data is performed to describe the nature and extent of contamination to soil, sediment, surface water, groundwater, vapor intrusion, and waste materials (EPA 1989).

Chemical concentrations are incorporated with physical characteristics, historical information regarding site activities, and other evidence to evaluate the nature and magnitude of contamination. Similar evidence is used to delineate the extent of contamination both horizontally and vertically. Spatial and temporal trends were evaluated as they may be important in the migration pathway analysis.

5.1.4 Migration Pathways

The nature and extent of contamination is combined with source identification and physical characteristic information to evaluate migration pathways. The following migration pathways are present at the site:

- **Leaching to Groundwater** – As water infiltrates from the surface, through vadose zone soil, to the underlying groundwater, it can dissolve contaminants from impacted soil and leach this solute to groundwater. Additionally, source material in contact with groundwater can leach directly to groundwater.

- **Groundwater Transport** – As groundwater moves downgradient through the saturated zone, it can advect dissolved phase constituents.

- **Surface Water and Sediment Transport** – Contaminated particulates and dissolved phase contaminants may migrate via surface water transport, through ephemeral pathways during precipitation events, toward low-lying areas such as Medio Creek, situated east of the site.

5.2 NATURE AND EXENT OF CONTAMINATION

A conceptual understanding of the site was described in a technical memorandum published in December 2018 (EA 2018c), which provided a CSM using information from the investigations conducted between 2008 and 2016. Data gaps in the understanding of the source, nature, and extent of contamination were identified, and provided the basis for conducting the technical scope of work during the RI. This section provides a discussion of nature and extent of contamination to update the conceptual understanding of the site.

As described under Section 5.2, the HRS (EPA 2018b) identified one source area associated with the site, identified as Source 1, which consists of an approximately 800 square foot area of contaminated soil that is acting as source material to shallow groundwater. Investigations conducted from 2008 to 2016 did not identify the depth of contamination in the subsurface. The source area was identified based on investigation activities in this area detecting the presence of elevated metals, chromium, copper, nickel, selenium, and cyanide.

In addition to Source 1, the HRS identified other potential sources of contamination including a former waste evaporation area, rinse and process tanks, a chromium contaminated area, various drums, and a break in the foundation of the facility building near the vat room where spills may have occurred (EPA 2018b). These sources were removed as part of the 2013 to 2014 TCEQ

Removal Action and are not considered as continuing sources. However, these other potential sources may have contributed contamination to surface and subsurface soils and groundwater in the past.

5.2.1 Distribution of Soil Contamination

Forty-nine surface and subsurface soil samples were collected during the RI from both soil borings and monitoring well borings. Surface soil exceedances included arsenic, hexavalent chromium, and benzo(a)pyrene. Subsurface soil exceedances included arsenic and hexavalent chromium. Arsenic was the most frequently detected metal in both surface and subsurface soil samples. A review of the 2016 TCEQ SI report indicates arsenic was detected at a concentration of 2.6 mg/kg in a background sample collected off-site (TCEQ 2016), suggesting the exceedances at the RCMF site are generally consistent with background concentrations.

Benzo(a)pyrene was detected in two surface soil samples along the eastern edge of the site where the property boundary is shared with Potranco Automotive. Other high molecular weight PAHs were also detected (although did not exceed project screening levels [PSLs]) in the two samples that had exceedances of benzo(a)pyrene, indicating a possible past release of petroleum product. The source of the release is unknown, but the location of the detections and exceedances are next to an automotive repair shop.

Hexavalent chromium exceeded PSLs in four locations. Two locations, SB-01 and SB-05, had similar concentrations of 2.27 mg/kg and 3.05 mg/kg, while the other two locations, SB-02 and MW-02, had exceedances that were only slightly above the reporting limit. The location of SB-01 and SB-05 are either over or next to the former building (Figure 4-4) and likely result from past releases from the former building.

Hexavalent chromium exceedances at SB-02 and MW-02 were slightly above the detection limit. While the exceedance at SB-02 at two intervals (2 to 5 ft bgs and 13 to 15 ft bgs) may be correlated with past releases at the site, the exceedance at MW-02 at 28 to 30 ft bgs is likely a background concentration.

Laterally, soil samples collected north, south, and east (downgradient) had no detections of hexavalent chromium. No soil samples were collected to the west of SB-05.

Vertically, the exceedance at SB-01 was detected between 13 and 15 ft bgs. Hexavalent chromium was not detected in the shallower intervals from this location. At location SB-05, hexavalent chromium concentrations exceeded in each interval sampled from 0 to 5 ft bgs. The varied concentrations of hexavalent chromium at different depths are likely the result of areas that were not fully remediated during the 2013 to 2014 TCEQ removal actions.

In summary, detections of site-related contaminants are limited to areas near the former RCMF facility. None of the analytical results from the collected surface or subsurface soil samples suggest migration of contaminants off-site. Arsenic concentrations that exceed the Residential RSL for soil are within the same range of concentrations of background soil samples.

5.2.2 Surface Water Impacts

Water that falls onto the surface at the site may either infiltrate the surface or run-off toward the southeast of the site to a drainage ditch located just off-site to the south and along the north side of Tallowood Street. Water that is contained in this drainage ditch would continue east-northeastward until reaching Medio Creek, which is approximately one-half-mile from the site and drains to the southeast. The portion of Medio Creek near the site appears to be dry, except possibly during rain or storm events. Other than intermittent drainage features, there are no major surface water features in the immediate vicinity of the site.

EA was prepared to collect surface water samples from precipitation run-off during the RI; however, this opportunity did not occur during any of the field mobilizations and, therefore, no surface water samples were collected during the RI.

5.2.3 Distribution of Groundwater Contamination

Four of the eight on-site monitoring wells (MW-01, MW-06, MW-07, and MW-08) have been used to assess groundwater hydrology and chemistry at the site. Fourteen off-site PWW and PWS wells completed in the Edwards aquifer were also assessed during the RI.

One monitoring well, MW-01, was installed during the 2010 Banester Engineering APAR investigation. When EPA began the RI in April 2019, the water level in MW-01 was measured at 16.55 feet below top of inner casing. At this time, it was also noted that the surface completion of this well was damaged and allowed surface run-off from precipitation to enter around the damaged well annulus. A drilling contractor subsequently repaired the surface completion during the April 2019 field work. Once repaired, MW-01 was sampled using the EPA low-flow purge and sample methodology which purges water between 100 and 200 milliliters per minute. During the first sampling event in April 2019, the water level dropped approximately 2 feet to 19.17 feet below top of inner casing while low-flow sampling. In December 2019, the static water level was 21.75 feet below top of inner casing, indicating that the well had never recharged from the April 2019 sampling event. Low-flow sampling drew the water level down to 22.78 feet in December 2019. The water level was measured twice in April 2019; the first measurement was 26.65 feet below top of inner casing, and the second measurement was 26.86 feet below top of inner casing. The drop in water level with such a low rate of purging, the lack of water level recharge, and the lack of water-bearing zones at MW-02, MW-03, MW-04, and MW-05 indicate that the water in MW-01 is likely the result of run-off from precipitation.

In October 2019, three monitoring wells (MW-06, MW-07, and MW-08) were installed to assess the vertical extent of groundwater contamination at the site. Water-bearing fractures were encountered approximately 160 ft bgs at each of these three locations, and the wells were installed at depths of 180, 230, and 220 feet, respectively, in the Austin Chalk. The saturated thickness of groundwater in the Austin Chalk is therefore about 60 feet. The lack of water-bearing fractures above 160 feet further reinforced the fact that water observed in MW-01 is a

discrete zone of perched groundwater. Borehole geophysical surveys conducted in these three monitoring wells confirmed the presence of high angle fractures and water-bearing fractures.

Groundwater samples were collected from the four on-site monitoring wells: MW-01, MW-06, MW-07, and MW-08, and from 14 off-site PWW and PWS wells during the RI. Only one monitoring well, MW-01, had concentrations of total and dissolved chromium in exceedance of the EPA MCL of 100 µg/L. Total and dissolved chromium were detected in the other three deeper monitoring wells (MW-06, MW-07, and MW-08); however, the highest concentration (total chromium) was 35.6 µg/L, below the MCL of 100 ug/L. As a comparison, the highest concentration of total or dissolved chromium in the PWW and PWS wells completed in the Edwards aquifer was 1.8 µg/L. Figures 5-2 and 5-3 provide cross sectional views of the concentrations of total and dissolved chromium with depths.

Groundwater samples collected from on-site monitoring wells exceeded the EPA Tap Water RSL for hexavalent chromium. The highest concentration of hexavalent chromium was 6,140 µg/L, detected in MW-01, while Austin Chalk monitoring wells MW-06, MW-07, and MW-08 range from 0.022 µg/L to 29.3 µg/L. The highest concentration detected in the off-site PWW and PWS wells completed in the Edwards aquifer is 0.196 µg/L. Similar to total and dissolved chromium, the vertical profile of hexavalent chromium contamination decreases significantly with depth and distance from MW-01. Laterally, hexavalent chromium in the Austin Chalk monitoring wells exceed the EPA Tap Water RSL at higher concentrations than the deeper Edwards aquifer wells. However, the lateral extent of hexavalent chromium contamination has not been defined in the Austin Chalk, as shown on Figure 4-6.

The findings of the RI suggest that surface water from precipitation and run-off infiltrated the surface of the site and was then retained in a perched reservoir situated around the MW-01 well screen from 17.25 to 27.25 feet bgs. This water came into contact with soil contaminated with total, dissolved, and hexavalent chromium, which then migrated vertically through fractures, joints, and bedding planes of the Austin Chalk into the Austin Chalk Aquifer. Groundwater samples collected from nearby and distant (over one mile) PWW and PWS wells completed in the Edwards aquifer have analytical results consistent with historical background concentrations of hexavalent chromium.

The lateral extent of the shallow perched water is limited to the area immediately surrounding the MW-01 well screen, as monitoring wells MW-02, MW-03, MW-04, and MW-05 were installed north, east, south, and west, at the same depth as MW-01, and did not yield any groundwater.

The perched water around MW-01 likely continued to migrate vertically into the Austin Chalk either by seepage through underlying material or by gravity drainage where any potential conduits or preferential pathways may facilitate such migration. The Austin Chalk is known to yield small amounts of water within the vicinity of the site. The Edwards aquifer is located below the Austin Chalk.

Hexavalent chromium exceeded the Tap Water RSL in 12 samples (including 3 duplicates) collected from the PWW and PWS wells in the Edwards aquifer. Other metals (total antimony, total and dissolved iron, total lead, and dissolved thallium) exceeded in two of the off-site PWS wells; however, these wells are upgradient and approximately 1 to 2 miles away from the site, and, therefore, are likely not related to releases from the former facility.

In summary, the highest concentrations of site contaminants were detected in one on-site monitoring well, MW-01. The groundwater in MW-01 is limited to a discrete zone of perched groundwater that has not recharged following sampling events. Total and dissolved chromium were detected below the EPA MCL of 100 µg/L in the Austin Chalk monitoring wells; however, hexavalent chromium was detected above the EPA Tap Water RSL and at higher concentrations than samples collected from deeper Edwards aquifer wells. The lateral extent of hexavalent chromium contamination has not been defined in the Austin Chalk by the on-site monitoring well network. Lastly, nearby PWW and PWS wells completed in the Edwards aquifer have not exhibited elevated concentrations of contaminants. Concentrations of hexavalent chromium in these PWW and PWS wells are consistent with historical detections.

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6. HUMAN HEALTH RISK ASSESSMENT

The purpose of the HHRA is to evaluate potential human health concerns from exposure to environmental media within or near the site that has been affected by past releases. To determine human health concerns, the HHRA evaluates potential sources of contamination and routes of migration based on current and potential future site uses. The HHRA results are based upon exposure pathways that are occurring, can occur, or are reasonably likely to occur in the future. Risks determined in the HHRA are considered baseline risks associated with exposure to media affected by the site. The baseline risk assumes no remedial actions or other means of exposure reduction. The HHRA evaluates the reasonable maximum exposure that has the potential to occur at the site. Therefore, HHRA results are considered potential and should be used as a guideline in making risk management decisions.

The Final HHRA Report was submitted under separate cover in September 2020 (EA 2020b). The following table and text present a summary of the HHRA results.

HHRA Summary of Results

Receptor	Carcinogenic Risks[1]	Non-Carcinogenic Hazards	COPCs Contributing Significantly to Risk Results
Surface Soil			
Child Resident[1]	8×10^{-6}	0.4	NA
Adult Resident[1]	8×10^{-6}	0.03	NA
Construction Worker	2×10^{-7}	0.09	NA
Commercial Worker	1×10^{-6}	0.02	NA
Adolescent Trespasser	6×10^{-7}	0.02	NA
Adult Trespasser	6×10^{-7}	0.01	NA
Subsurface Soil			
Child Resident[1]	9×10^{-6}	0.2	NA
Adult Resident[1]	9×10^{-6}	0.02	NA
Construction Worker	2×10^{-7}	0.04	NA
Groundwater			
Child Resident[1]	**8×10^{-4}**	**3**	Hexavalent chromium
Adult Resident[1]	**8×10^{-4}**	**22**	Hexavalent chromium

1) Carcinogenic risks for the resident adult and child are combined to evaluated cumulative lifetime carcinogenic risks.

Bolded results are greater than the EPA acceptable cancer risk range of 10^{-6} to 10^{-4} or noncarcinogenic hazards of 1.

6.1 POTENTIAL HUMAN HEALTH EXPOSURES

As summarized in the above table, non-carcinogenic hazards for receptors' exposure to surface soil and subsurface soil were below the acceptable level of 1. Carcinogenic risks for receptors' exposure to surface soil and subsurface soil were within the EPA acceptable cancer risk range of 10^{-6} to 10^{-4}. Figures 4-1 and 4-4 present hexavalent chromium exceedances in surface and subsurface soil. The HHRA did identify potential risks from exposure to groundwater as a tap

water source. Figures 4-6 and 4-7 present hexavalent chromium exceedances in groundwater collected from both on-site and off-site wells.

Soil

The HHRA did not reveal potential concerns for any receptor's exposure to soil. Soil results were evaluated as on-exposure area, even though samples were collected on-site and just slightly south of the site boundary line. Sample results were reviewed to determine if "hot spots" exist and would change the conclusions of the HHRA. No potential "hot spots" were identified for soil both within on-site and slightly off-site samples.

VOCs were detected in subsurface soil but were not considered COPCs for direct contact based upon a comparison to the EPA Residential Soil RSLs. Additionally, VOCs in subsurface soil were compared to the TCEQ PCLs for subsurface soil to ambient air. No COPCs were determined for migration to ambient air. Therefore, there are no potential risk concerns for exposure to soil.

Groundwater

Potential risks from exposure to groundwater are present due to high concentrations of hexavalent chromium. On-site monitoring well results for hexavalent chromium were greater than 0.2 µg/L (which is less than an order of magnitude higher than the tap water RSL) (Figure 4-6), and monitoring wells MW-01 and MW-06 had hexavalent chromium concentrations greater than 20 µg/L. Even though monitoring well MW-01 had a maximum hexavalent chromium concentration of 6,140 µg/L, this result is not considered a potential risk since it was collected from a discrete zone of perched water and not considered a groundwater-bearing unit under the TRRP-8 (TCEQ 2010). MW-01 and MW-06 are located in the central portion of the site near the footprint of the former RCMF building. The monitoring wells located along the boundaries of the site have hexavalent chromium concentrations near 0.2 µg/L. Additionally, off-site PWW and PWS wells have hexavalent chromium concentrations less than 0.2 µg/L. This indicates that potential risks associated with hexavalent chromium are limited to the immediate area of the former RCMF building and do not represent an area-wide concern.

7. ECOLOGICAL RISK ASSESSMENT

The purpose of an ERA is to characterize and quantify potential environmental impacts from chemicals in surface soil, sediment, and surface water at the site. Based on a review of the CSM, site conditions, and results of the RI, an ERA is not warranted at the RCMF site. The rationale for not conducing an ERA is based on the fact that the site is less than one acre in size and is in a mixed urban to rural environment with predominantly commercial/industrial and residential properties. Some unoccupied land exists, but it is approximately 0.5 miles from the former RCMF property and is adjacent to Medio Creek. This land may create habitat for ecological receptors; however, to date, no sample results (nor this preliminary CSM) suggest that COPCs exist in these areas, or that complete pathways exist for ecological exposures. Additionally, the SEP-HCP Culebra Karst Zone 1 and Zone 2, which is approximately located across Potranco Road to the north of the site, has been documented to contain threatened, rare, and/or endangered species. The closest identified Critical Habitat (Unit 15) (National Archives and Records Administration 2012) is located approximately 1.35 miles west-northwest of the former RCMF property. If future investigation suggest that site-related contaminants have migrated off-site to these areas, then exposure pathways may be complete for ecological receptors.

Presently, off-site impacted areas and potential ecological receptors have not been identified. therefore, an evaluation of potential ecological receptors was not conducted in this CSM. It is unlikely that ecological receptors will be exposed to groundwater because the depth to groundwater is greater than 4 feet bgs (i.e., the deepest depth of burrowing animals). Should karst features be identified that could be potential habitat, additional investigation may be necessary due to the potential presence of threatened, rare, or endangered species. Pending additional investigation, an ecological CSM will be developed. Further information may be needed regarding potential ecological receptors, a potential data gap to be filled by future investigation.

Lastly, EA submitted a project review request form to Texas Parks and Wildlife Department (TPWD) so that TPWD can conduct an evaluation for impacts to fish and wildlife and their habitats (including threatened, rare, and endangered species) other significant resources and concerns presently known or potentially occurring in the vicinity of the site. Based on a review of the documentation and project description provided, TPWD does not anticipate significant adverse impacts to threatened, rare, or endangered species, or other fish and wildlife resources (TPWD 2020) (Appendix K).

In summary, threatened, rare and endangered species are present; however, there is no complete ecological pathway. The site is small enough (less than 1 acre) that no terrestrial wildlife receptors would be using it exclusively. It is in an industrial area and so is unlikely to be attractive to foraging or nesting terrestrial wildlife populations. No surface water or sediment are present on-site, and COPCs are limited to metals, many of which have concentrations in surface soil that are similar to or lower than background.

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8. RESULTS AND CONCLUSIONS

The purpose of the RI Report is to: (1) summarize site information and data, (2) identify potential source areas, (3) define the nature and extent of contamination, (4) evaluate contaminant migration pathways, and (5) present a summary of human health and ecological risks. These elements also form the CSM. In addition, the HHRA and ERA conclusions are presented along with data gaps, where additional characterization is recommended.

8.1 SITE DATA COLLECTION

Data acquisition was conducted during a series of historical field investigations by multiple investigators occurred from 2008 through 2016. These data formed the basis for the RI field work but were not carried forward for further evaluation as part of the RI. EA conducted the RI from April 2019 to July 2020. Data collected for use in this RI report include the following:

- Lithological descriptions of recovered material from soil borings and monitoring wells
- Soil samples
  - 30 surface soil samples
  - 19 subsurface soil samples
- Groundwater samples
  - 23 groundwater samples from on-site monitoring wells
  - 27 groundwater samples from off-site PWW and PWS wells
- IDW samples
- Water level elevation measurements
- Borehole geophysical data.

8.2 POTENTIAL SOURCE AREAS

The HRS (EPA 2018b) identified one source area associated with the site, contaminated soil (Source 1). Source 1 was identified as an approximately 800 square foot area (depth of impact and volume unknown) of contaminated soils that are acting as source material to shallow groundwater. The identification of this source area is based on investigation activities in this area detecting the presence of elevated metals, chromium, copper, nickel, selenium, and cyanide. The HRS identified other potential sources of contamination including a former waste evaporation area, rinse and process tanks, a chromium contaminated area, various drums, and a break in the foundation of the facility building near the vat room where spills may have occurred (EPA 2018b). These sources were removed as part of the 2013 – 2014 TCEQ Removal Action and are not a continuing source. However, these other potential sources may have contributed contamination to surface and sub-surface soils and groundwater in the past.

8.3 NATURE AND EXTENT OF CONTAMINATION

An analysis of the data is performed to describe the nature and extent of contamination to soil, sediment, surface water, groundwater, vapor intrusion, and waste materials (EPA 1989). Chemical concentrations are incorporated with physical characteristics, historical information

regarding site activities, and other evidence to evaluate the nature and magnitude of contamination. Similar evidence is used to delineate the extent of contamination both horizontally and vertically. Spatial and temporal trends were evaluated as they may be important in the migration pathway analysis.

8.3.1 Surface Soil

Thirty surface soil samples were collected from both monitoring well borings (prior to drilling) and from soil boring locations. Two metals (arsenic and hexavalent chromium) and one SVOC (benzo[a]pyrene) exceeded Residential Soil RSLs in the 0.0 to 2.0 ft interval, which is designated as surface soil. There were no pesticides, herbicides, VOCs, cyanide, or TPH detections that exceeded Residential RSLs for the surface soil interval.

Hexavalent chromium exceeded the Residential RSL in the two surface soil samples collected from SB-05. The presence of hexavalent chromium in these samples is coincident with the location of the former RCMF building, and therefore considered evidence of a past release from the facility.

Arsenic exceeded the Residential RSL in each of the samples collected; however, the analytical results for arsenic were similar to the concentration of arsenic collected in a background soil sample during the SI (TCEQ 2016).

Benzo(a)pyrene was detected in exceedance of the Residential RSL in two surface soil samples along the eastern property boundary shared with Potranco Automotive. Other similar PAHs were detected in these same samples, although below Residential RSL. The presence of benzo(a)pyrene and other PAHs is likely due to a past release of a petroleum substance.

8.3.2 Subsurface Soil

Nineteen subsurface soil samples were collected from both monitoring well borings and soil borings. Two metals, arsenic and hexavalent chromium, exceeded Residential RSLs for subsurface soil. There were no pesticides, herbicides, VOCs, cyanide, or TPH detections that exceeded Residential RSLs for subsurface soil.

Hexavalent chromium was detected in exceedance of the Residential RSL in six subsurface soil samples (including one duplicate) collected from SB-01, SB-02, SB-05, and MW-02. The exceedances range in concentration from 0.35 mg/kg at SB-02 (13 to 15 ft bgs) to 3.05 mg/kg in SB-05 (2 to 5 ft bgs). The two highest exceedances were detected in SB-01 and SB-05 at depths of 13 to 15 ft bgs and 2 to 5 ft bgs, respectively. The concentrations at these two locations (2.27 mg/kg and 3.05 mg/kg) are one order of magnitude over the other detections of hexavalent chromium at SB-02 and MW-02, which range from 0.35 mg/kg to 0.379 mg/kg. The presence of hexavalent chromium at SB-01 and SB-05 is more likely due to releases from the former RCMF facility, whereas the exceedances detected in SB-02 and MW-02 are more likely indicative of background concentrations. As shown on Figure 4-4, the lack of hexavalent chromium exceedances in subsurface soil samples collected from MW-04, SB-07, MW-05, and SB-06

define the lateral extent of hexavalent chromium to the north, east, and south (with the exception of SB-02). Laterally, hexavalent chromium has been detected at 13 to 15 ft bgs in SB-01, and as deep as 28 to 30 ft bgs in MW-02.

Arsenic was detected in exceedance of the Residential RSL of 0.68 mg/kg in each of the 24 subsurface soil samples collected (Figure 4-5). Concentrations ranged from 2.17 mg/kg in sample SB-01 (13 to 15 ft bgs) to 4.28 mg/kg in sample SB-08 (2 to 5 ft bgs). Similar to the surface soil samples, there does not appear to be a discernable pattern of the distribution of arsenic concentrations. The concentrations of the exceedances are similar to the concentration of arsenic detected in a background sample collected during the SI (TCEQ 2016).

8.3.3 Surface and Subsurface Soil Summary and Conclusions

Detections of site-related contaminants are limited to areas near the former RCMF facility. None of the analytical results from the collected surface or subsurface soil samples suggest migration of contaminants off-site. Arsenic concentrations that exceed the Residential RSL for soil are within the same range of concentrations of background soil samples.

8.3.4 Surface Water

The closest surface water body, Medio Creek, is approximately 0.5 miles from the site. The portion of this creek nearest the site was observed to be dry and is assumed to flow with surface water following precipitation events. Other than intermittent drainage features, there are no major surface water features in the immediate vicinity of the site, and no opportunities arose to collect surface water sample during the RI.

8.3.5 Groundwater

8.3.5.1 Shallow, Perched Groundwater

Three groundwater samples (including one duplicate sample) were collected from MW-01 in April and December 2019 during the RI. Total and dissolved chromium and dissolved hexavalent chromium were detected in exceedance of the EPA MCL and EPA tap water RSL, respectively. There were no exceedances of pesticides, herbicides, VOCs, SVOCs, TPH, or cyanide.

In April 2019, total chromium was detected at a concentration of 7,860 µg/L and dissolved chromium at 7,830 µg/L, both exceeding the MCL of 100 µg/L. The hexavalent chromium sample result was not usable. In December 2019, the total and dissolved concentrations of chromium were 6,100 µg/L and 5,800 µg/L, respectively. Dissolved hexavalent chromium was detected at a concentration of 6,140 µg/L, which exceeds the EPA tap water RSL of 0.035 µg/L.

The total and dissolved chromium detections in MW-01 are the only exceedances of these metals in groundwater at the site. The concentrations of total and dissolved chromium in the Austin Chalk wells are over 200 times less than MW-01. MW-01 is also the closest well to the former

RCMF building and closest to where stored products and stained soil were observed during previous investigations.

8.3.5.2 Austin Chalk Groundwater

Dissolved hexavalent chromium was the only analyte detected in exceedance of project screening levels in groundwater collected from Austin Chalk monitoring wells. Exceedances of dissolved hexavalent chromium were carried forward for further evaluation under the HHRA. Analytical results are provided in Table 4-3, and Figure 4-6 shows the location of the exceedances.

In December 2019, one low-flow groundwater sample was collected each from MW-06, MW-07, and MW-08. In April 2020, dual-membrane samplers were deployed every ten feet across the water column of each open hole to assess if there were vertical stratification of dissolved hexavalent chromium. Four samples were collected from MW-06, seven samples from MW-07, and six samples from MW-08. Overall, small variations in concentrations were detected in these vertical profiling samples. In monitoring wells MW-07 and MW-08, the highest concentrations are generally between 176 and 186 feet bgs. In MW-06, the highest concentration was from the sample collected at the shallowest interval of 164.5 feet bgs. A review of these analytical results compared to the borehole geophysical survey shows that the highest concentrations are coincident with water-producing fractures. The table below summarizes the range of concentrations of hexavalent chromium detected in each well:

Monitoring Well	Lowest Concentration (µg/L)	Highest Concentration (µg/L)
MW-06	19.5 J	29.3
MW-07	0.541	2.4 J
MW-08	0.0222	0.364 J

Monitoring well MW-08 has the lowest range in concentrations and is the closest well to the former RCMF building and areas where bulk chemical containers were stored. Monitoring well MW-06 has the highest concentrations and is furthest away from this area and slightly upgradient. This variation is likely due to a reservoir of hexavalent chromium in the shallow subsurface that migrates through high angle fractures in the Austin Chalk, transporting contamination slightly away from the source area.

Groundwater samples were collected from PWW and PWS wells during the RI, and extensive groundwater sampling has historically been conducted by the EAA. As described in the section that follows, the historical concentrations of hexavalent chromium in the Edwards aquifer wells are significantly below the concentrations detected in monitoring wells completed in the Austin Chalk. This indicates that exceedances of hexavalent chromium likely emanate from the release of plating chemicals at the former RCMF.

8.3.5.3 Edwards Aquifer

Fourteen groundwater samples were collected from off-site PWW and PWS wells completed in the Edwards aquifer. The following analytes were detected in exceedance of the project screening level in these samples: total antimony, total and dissolved iron, total lead, dissolved hexavalent chromium, and dissolved thallium. Of these exceedances, dissolved thallium exceeded the EPA MCL, and total antimony, total and dissolved iron, total lead, and dissolved hexavalent chromium exceeded the Tap Water RSL.

Hexavalent chromium was detected in concentrations ranging between 0.065 ug/L to 0.196 ug/L. These exceedances are consistent with historical concentrations of hexavalent chromium collected by EAA (Appendix J) and are thus not considered to be the result of contamination migrating from the RCMF site.

Exceedances of total antimony, total and dissolved iron, and total lead were detected in off-site PWS WW-20, and an exceedance of dissolved thallium was detected in off-site PWS WW-10. PWS WW-20 is located approximately 1 mile south-southwest, and WW-10 is located approximately 2 miles northwest of the site. The exceedances detected in these wells are unlikely to be attributed to releases from the RCMF site due to their proximity.

8.3.6 Groundwater Summary and Conclusion

In summary, the highest concentrations of site contaminants were detected in one on-site monitoring well, MW-01. The groundwater in MW-01 is limited to a discrete zone of perched groundwater that has not recharged following sampling events. Total and dissolved chromium were detected below the EPA MCL of 100 µg/L in the Austin Chalk monitoring wells; however, hexavalent chromium was detected above the EPA Tap Water RSL and at higher concentrations than samples collected from deeper Edwards aquifer wells. The lateral extent of hexavalent chromium contamination has not been defined in the Austin Chalk by the on-site monitoring well network. Lastly, nearby PWS wells and PWW completed in the Edwards aquifer have not exhibited elevated concentrations of contaminants. Concentrations of hexavalent chromium in these PWW and PWS wells are consistent with historical detections.

8.4 RISK ASSESSMENT CONCLUSIONS

The conclusions derived from the HHRA and ERA are presented below.

8.4.1 Human Health Risk Assessment

The HHRA (EA 2020b) concluded non-carcinogenic hazards for receptors' exposure to surface soil and subsurface soil were below the acceptable level of 1. Carcinogenic risks for receptors' exposure to surface soil and subsurface soil were within the EPA acceptable cancer risk range of 10^{-6} to 10^{-4}.

Soil

The HHRA did not reveal potential concerns for any receptor's exposure to soil. Soil results were evaluated as on exposure area, even though samples were collected on-site and just slightly south of the site boundary line. Sample results were reviewed to determine if "hot spots" exist and would change the conclusions of the HHRA. No potential "hot spots" were identified for soil both within on-site and slightly off-site samples.

VOCs were detected in subsurface soil but were not considered COPCs for direct contact based upon a comparison to the EPA Residential Soil RSLs. Additionally, VOCs in subsurface soil were compared to the TCEQ PCLs for subsurface soil to ambient air. No COPCs were determined for migration to ambient air. Therefore, there are no potential risk concerns for exposure to soil.

Groundwater

Potential risks from exposure to groundwater are present due to high concentrations of hexavalent chromium. On-site monitoring well results for hexavalent chromium were greater than 0.2 µg/L (which is less than an order of magnitude higher than the tap water RSL) (Figure 4-6), and monitoring wells MW-01 and MW-06 had hexavalent chromium concentrations greater than 20 µg/L. Even though monitoring well MW-01 had a maximum hexavalent chromium concentration of 6,140 µg/L, this result is not considered a potential risk since it was collected from a discrete zone of perched water and not considered a groundwater-bearing unit under the TRRP-8 (TCEQ 2010). MW-01 and MW-06 are located in the central portion of the site near the footprint of the former RCMF building. The monitoring wells located along the boundaries of the site have hexavalent chromium concentrations near 0.2 µg/L. Additionally, off-site PWW and PWS wells have hexavalent chromium concentrations less than 0.2 µg/L. This indicates that potential risks associated with hexavalent chromium are limited to the immediate area of the former RCMF building and do not represent an area-wide concern.

8.4.2 Ecological Risk Assessment

Threatened, rare and endangered species are present; however, there is no complete ecological pathway. The site is small enough (less than 1 acre) that no terrestrial wildlife receptors would be using it exclusively. It is in an industrial area so unlikely to be attractive to foraging or nesting terrestrial wildlife populations. No surface water or sediment are present on-site, and COPCs are limited to metals, many of which have concentrations in surface soil that are similar to or lower than background.

8.5 DATA GAPS AND RECOMMENDATIONS

RIs have inherent uncertainty. Although the level of uncertainty varies from area to area, the acceptable level of uncertainty is often individualistic and subject to interpretation. Essentially, there is a delicate balance between expending additional effort to characterize the area and the necessity for additional data to reduce uncertainty.

Data gaps and recommendations for further characterization were identified based on the results of the RI. The recommendations that follow are presented for consideration and are dependent on the future use of the site:

- Collect one to two surface soil samples west of SB-05 to define nature and extent of hexavalent chromium in this direction
- Collect additional subsurface soil samples in the vicinity of SB-01 and SB-05 to vertically define hexavalent chromium
- Delineate the lateral extent of hexavalent chromium contamination in Austin Chalk groundwater
- Collect surface water during a precipitation run-off event. Consider deploying a passive event sampler or automatic sampler to collect the surface water sample.

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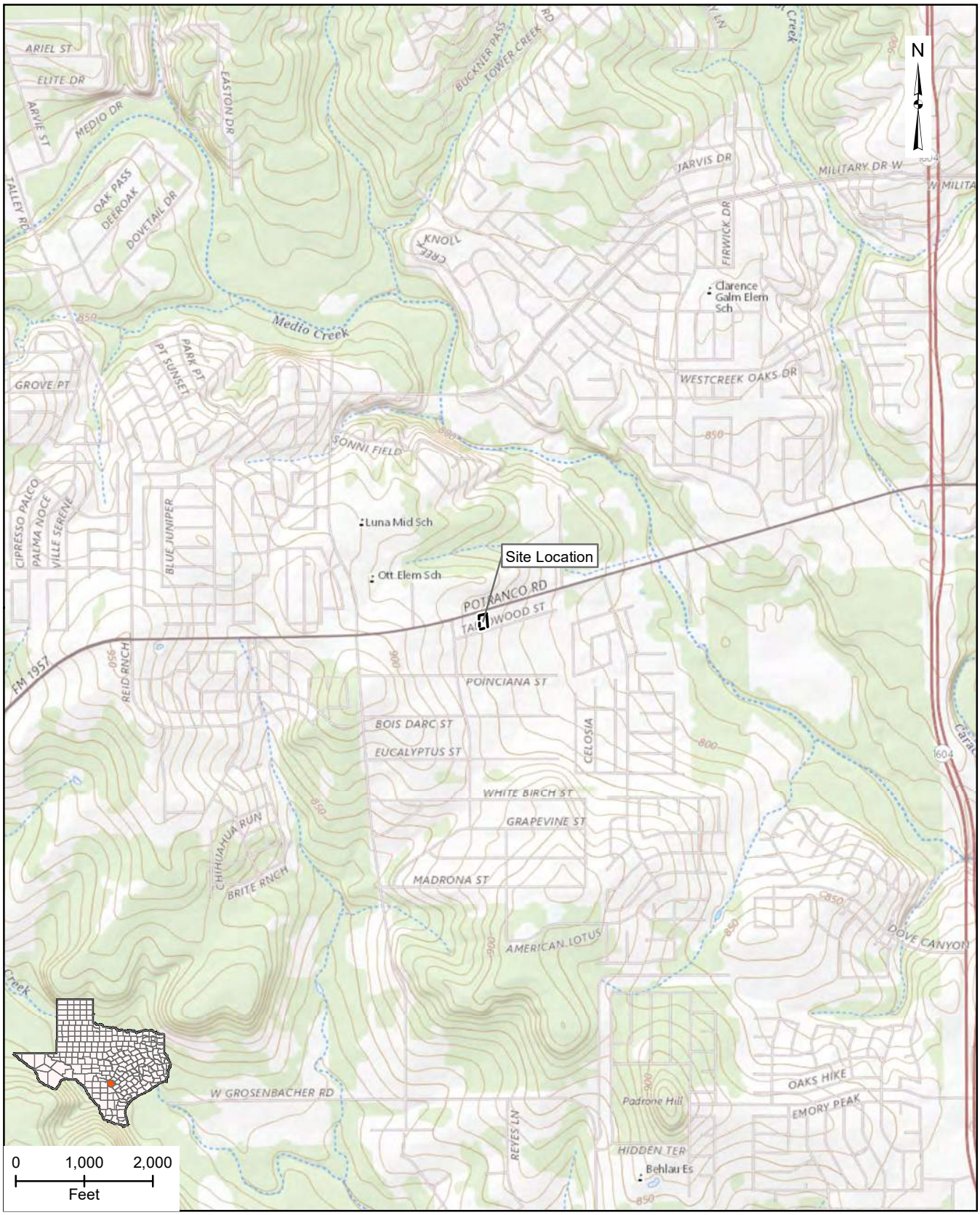
Figures



River City Metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line

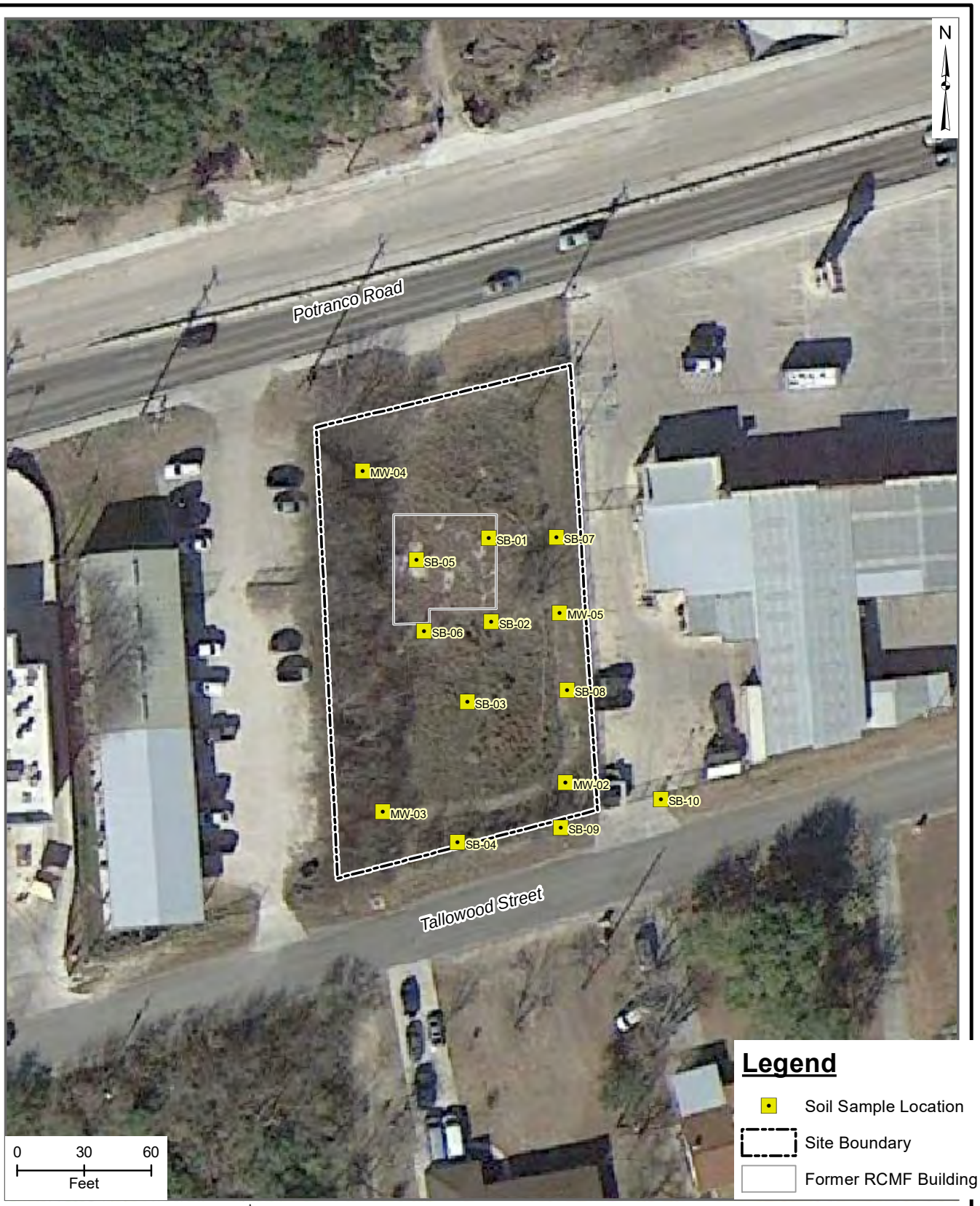
Figure 1-1
Site Location Map

2020-07-17 M:\Federal\EPA\RAC II\0165-River City RI-FS\GIS\MXDs\RC_SiteLoc.mxd EA-Dallas jschwertz

River City Metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Figure 1-2
Site Layout

2020 -10-02 C:\Data\River City\RC_SiteLayout.mxd EA-Dallas jbarnett



River City Metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 1-3
Soil Sample Locations

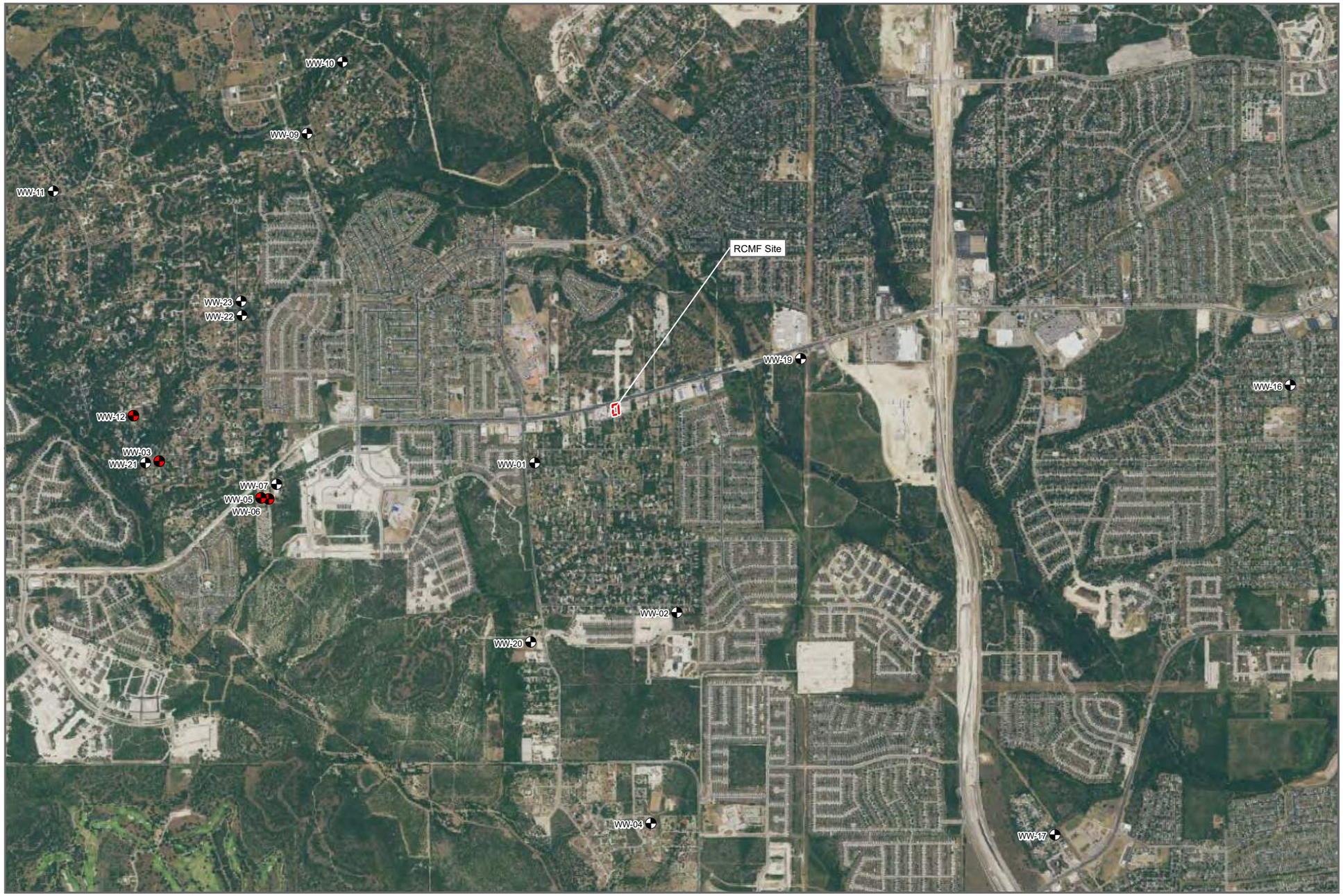
2020 -10-05 C:\Data\River City\RC_SoilSamp.mxd EA-Dallas jbarnett

River City Metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 1-4
Monitoring Well
Location Map

2020-10-09 C:\Data\River City\RC_MWonsite.mxd EA-Dallas jbarnett



N

0 1,000 2,000
Feet

Legend

- Groundwater Sample Location
- Not Sampled
- River City Metal Superfund Site Approximate Boundary

Imagery Source:
Texas Orthoimagery Program
2018 0.6 Meter, Texas
Strategic Mapping Program, 2018

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Figure 1-5
Off-site Groundwater Sample Locations

2020-10-02 C:\Data\River City\RC_WWoffsite.mxd EA-Dallas jbarnett

River City Metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 2-1
December 2019 Groundwater Potentiometric Surface map for Austin Chalk Monitoring Wells

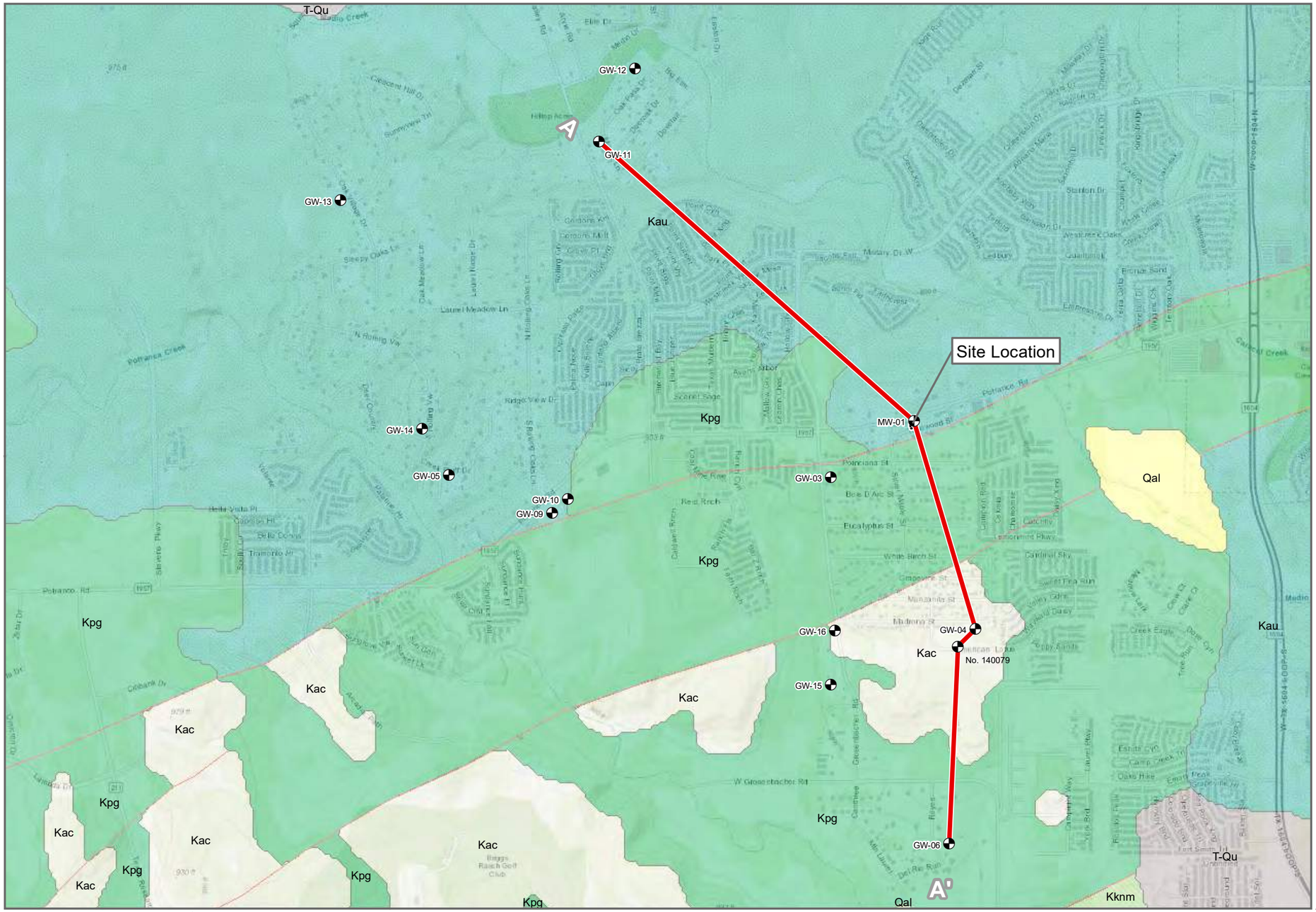
2020 -10-14 C:\Data\River City\RC_MWonsite_201912.mxd EA-Dallas jbarnett

River City Metal Finishing
Superfund Site San Antonio,
Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 2-2
April 2020 Groundwater
Potentiometric Surface Map for
Austin Chalk Monitoring Wells

2020 -10-05 C:\Data\River City\RC_MWonsite_202004.mxd EA-Dallas jbarnett



N

0 1,000 2,000
Feet

Legend

- Groundwater Sample Location
- Cross-Section A-A'
- Site Boundary

Geologic Fault

- Unspecified
- Normal

Geologic Rock Unit

- Kac= Anacacho Lime
- Kau= Austin Chalk
- Kknm= Navarro Group/Marlbrook Marl
- Kpg= Pecan Gap Chalk
- Qal= Quaternary Alluvium
- Qle= Leona Formation
- T-Qu= Uvalde Gravel

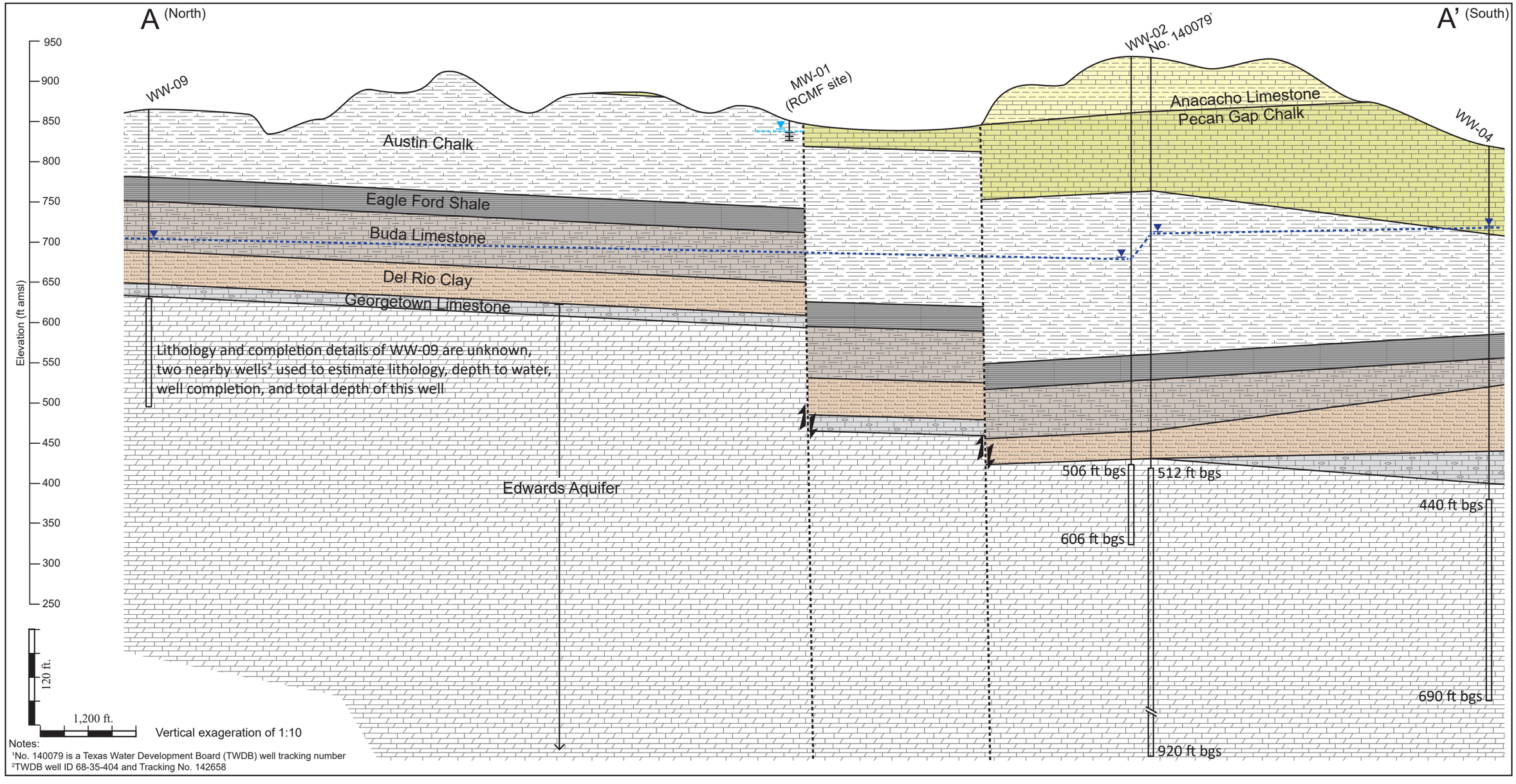
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Hydrogeology Source:
Geologic Database of Texas, Version III, December 28, 2007, Texas Natural Resources Information System (TNRIS, 2007).

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Figure 3-1
Location of Generalized Regional Hydrogeologic Cross-Section

2020-09-29 C:\Data\River City\RC_GeoXsectLoc.mxd EA-Dallas jbarnett



Notes:
[1]No. 140079 is a Texas Water Development Board (TWDB) well tracking number
[2]TWDB well ID 68-35-404 and Tracking No. 142658

LEGEND

- Anacacho Limestone
- Pecan Gap Chalk
- Austin Chalk
- Eagle Ford Group
- Buda Limestone
- Del Rio Clay
- Georgetown
- Edwards Grp

- Shallow Perched Zone Potentiometric Surface (Depth-to-water data from 2016 TCEQ SI Report)
- Edwards Aquifer Potentiometric Surface (Depth-to-water data from TWDB well reports, and may vary from current conditions)
- Well Screen / Open Hole Interval
- Fault, indicated by dashed line(s) Upthrown side (up arrow, left of dashed line) Downthrown side (down arrow, right of dashed line)

EA Engineering, Science, and Technology, Inc., PBC

Figure 3-2
Generalized Regional Hydrogeologic Cross Section A - A'

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

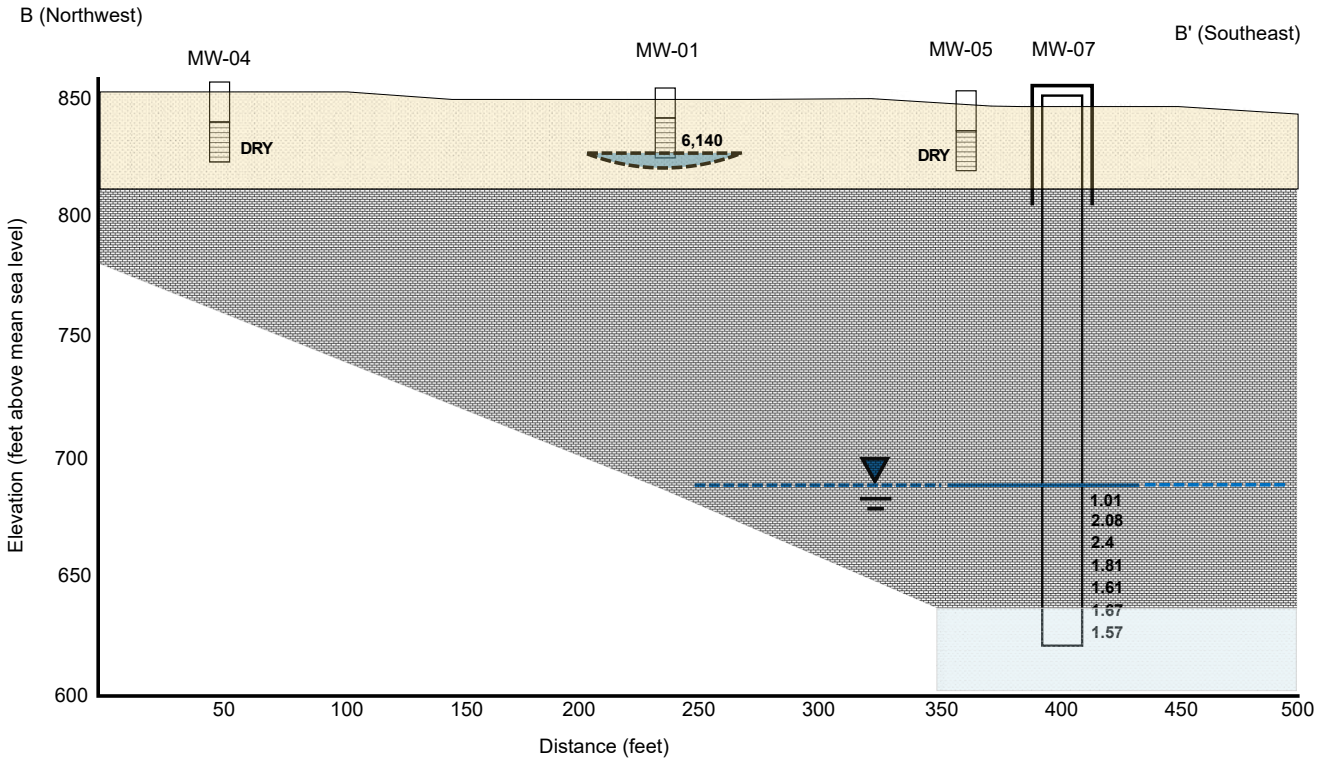
November 2020

River City Metal Finishing
Superfund Site San Antonio,
Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 3-3
Cross Section Location Map
for On-site Monitoring Wells

2020 -10-02 C:\Data\River City\RC_CrossSection.mxd EA-Dallas jbarnett



Overburden/Pecan Gap Chalk

Austin Chalk

Eagleford Shale

Perched water table, approximate

Water table, approximate (measurement date 4/29/2020)

Shallow Monitoring Well

Deep Monitoring Well Surface Casing

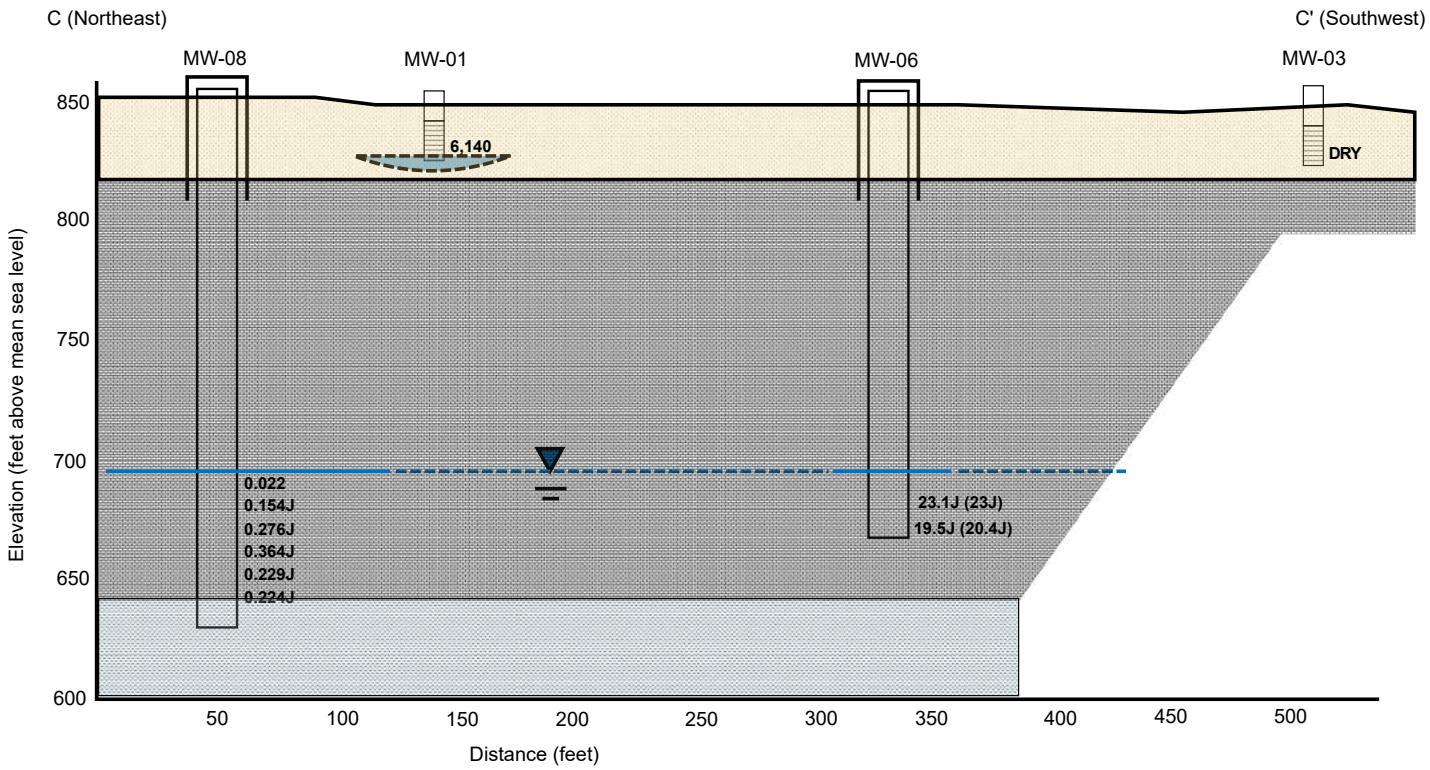
Deep Monitoring Well

19.5J Hexavalent chromium concentration micrograms per liter (sample date 4/29/2020)

Groundwater samples collected from MW-07 were collected using passive samplers (dual-membrane samplers)

Figure 3-4
Generalized Hydrogeologic Cross Section B - B' with Hexavalent Chromium Concentrations in Groundwater

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas



Overburden/Pecan Gap Chalk

Austin Chalk

Eagleford Shale

Perched water table, approximate

Water table, approximate (measurement date 4/29/2020)

Groundwater samples collected from MW-07 were collected using passive samplers (dual-membrane samplers)

Shallow Monitoring Well

Deep Monitoring Well Surface Casing

Deep Monitoring Well

19.5J (20.4J) Hexavalent chromium concentration micrograms per liter
Duplicate sample in (),
Sample date-4/29/2020

J = Estimated Value

Figure 3-5
Generalized Hydrogeologic Cross Section C - C' with Hexavalent Chromium Concentrations in Groundwater

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

N

Legend

- River City Metal Finishing Superfund Site
- Whitewright Clay Loam
- Whitewright- Austin Complex

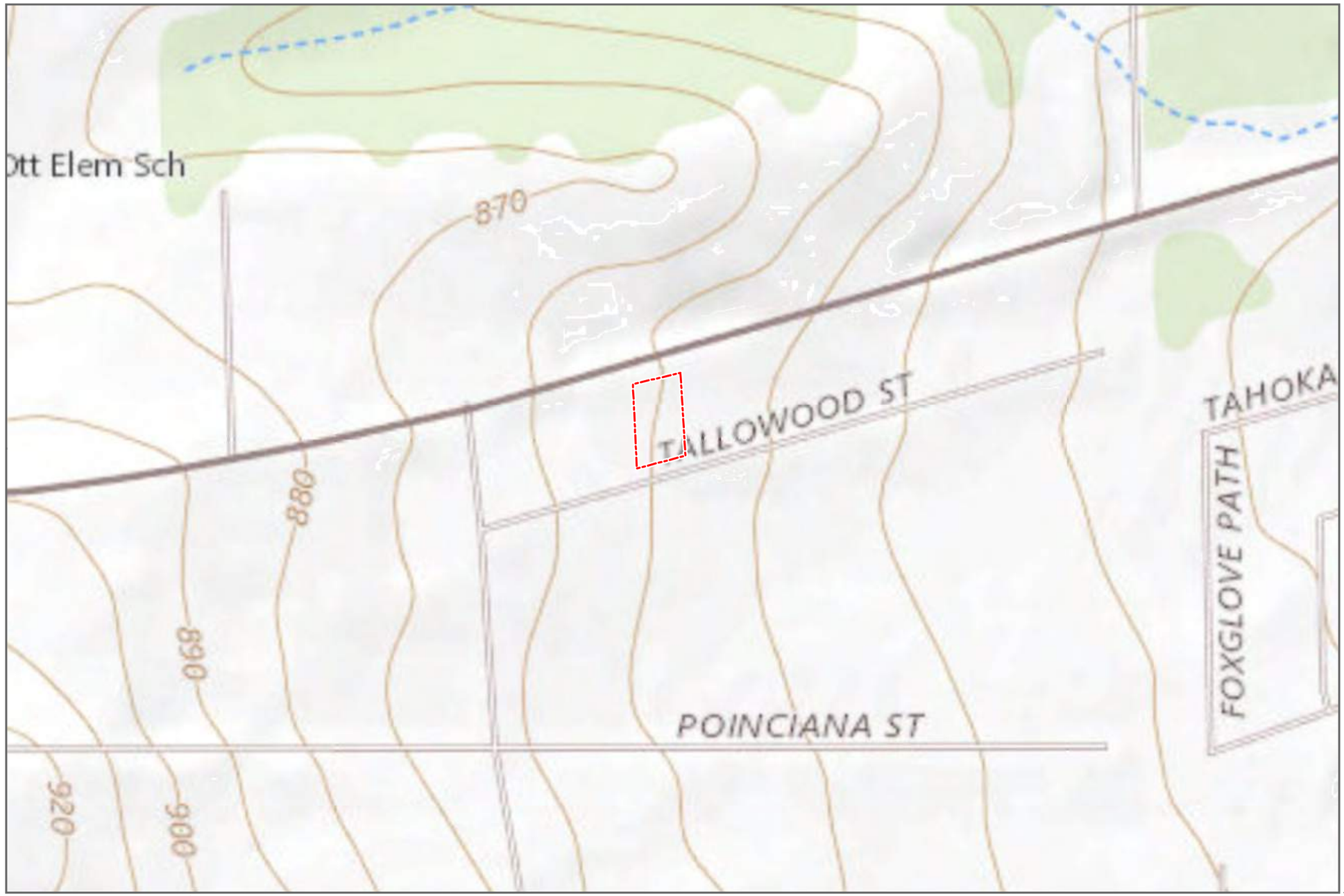
Imagery Source:
Texas Orthoimagery Program
2018 0.6 Meter, Texas
Strategic Mapping Program, 2018

U.S. Department of Agriculture, Natural Resources Conservation Service
Publication_Date: 20200611

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Figure 3-6
Soil Classification Map

2020 -10-02 C:\Data\River City\RC_SoilType.mxd EA-Dallas jbarnett



N

0 205 410 Feet

Legend

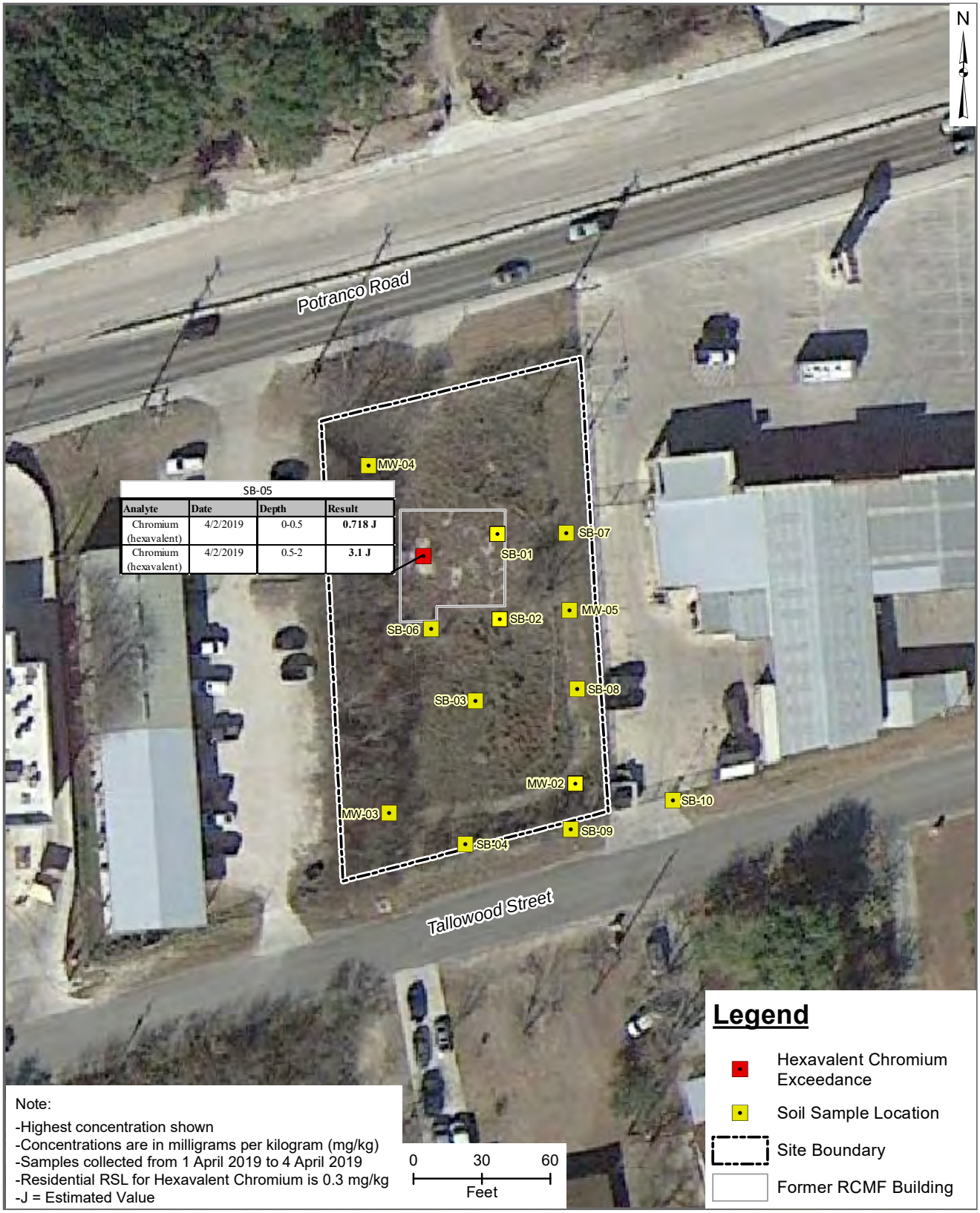
River City Metal Superfund Site Approximate Boundary

Imagery Source:
Texas Orthoimagery Program
2018 0.6 Meter, Texas
Strategic Mapping Program, 2018

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Figure 3-7
USGS Topographic Map

2020-10-02 C:\Data\River City\RC_Topo.mxd EA-Dallas jbarnett



SB-05			
Analyte	Date	Depth	Result
Chromium (hexavalent)	4/2/2019	0-0.5	**0.718 J**
Chromium (hexavalent)	4/2/2019	0.5-2	**3.1 J**

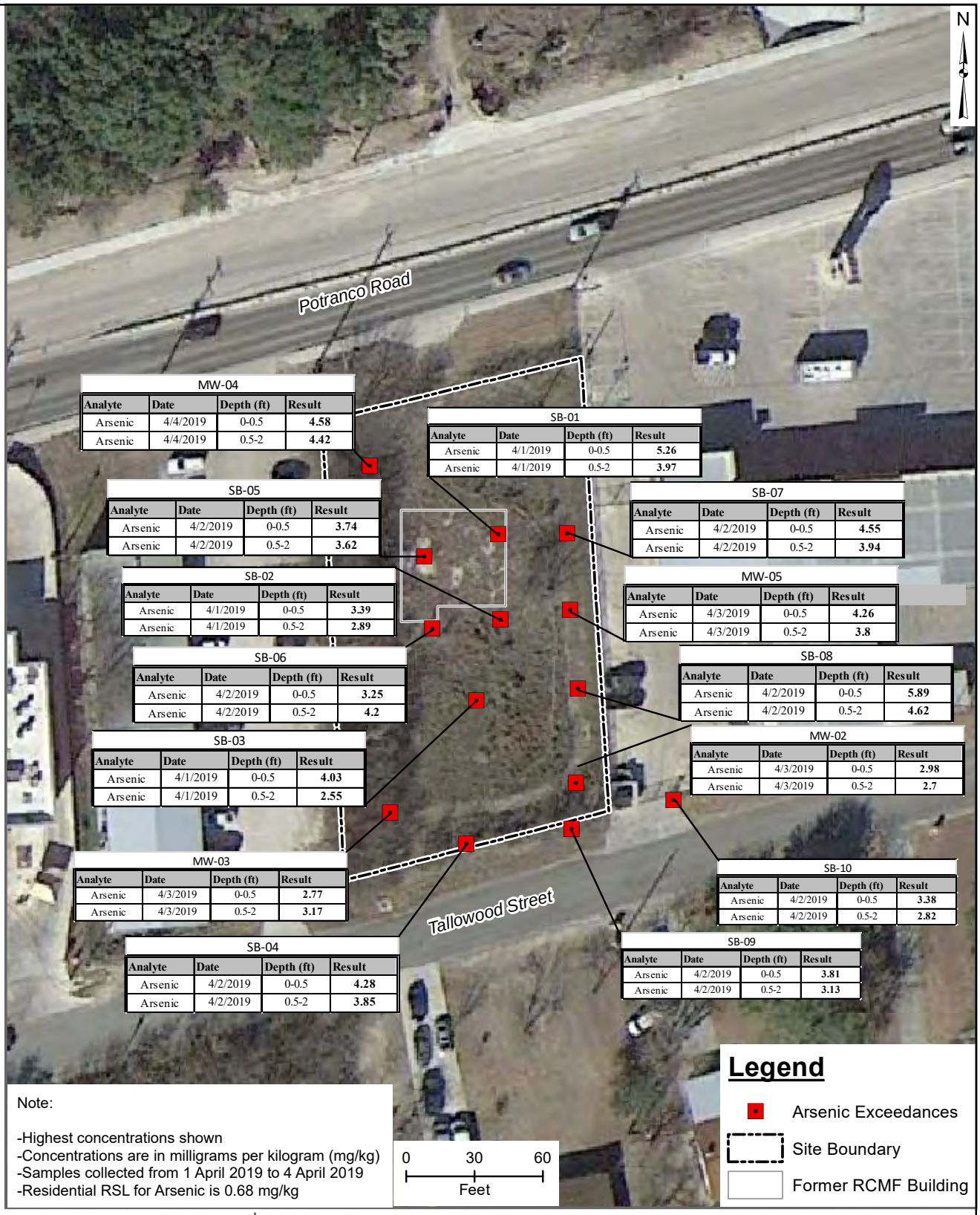
Note:
-Highest concentration shown
-Concentrations are in milligrams per kilogram (mg/kg)
-Samples collected from 1 April 2019 to 4 April 2019
-Residential RSL for Hexavalent Chromium is 0.3 mg/kg
-J = Estimated Value

River City metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4-1
Hexavalent Chromium
Exceedances in Surface Soil

2020 -10-09 C:\Data\River City\RC_SS_HexChromium_202004.mxd EA-Dallas jbarnett



MW-04

Analyte	Date	Depth (ft)	Result
Arsenic	4/4/2019	0-0.5	**4.58**
Arsenic	4/4/2019	0.5-2	**4.42**

SB-01

Analyte	Date	Depth (ft)	Result
Arsenic	4/1/2019	0-0.5	**5.26**
Arsenic	4/1/2019	0.5-2	**3.97**

SB-05

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**3.74**
Arsenic	4/2/2019	0.5-2	**3.62**

SB-07

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**4.55**
Arsenic	4/2/2019	0.5-2	**3.94**

SB-02

Analyte	Date	Depth (ft)	Result
Arsenic	4/1/2019	0-0.5	**3.39**
Arsenic	4/1/2019	0.5-2	**2.89**

MW-05

Analyte	Date	Depth (ft)	Result
Arsenic	4/3/2019	0-0.5	**4.26**
Arsenic	4/3/2019	0.5-2	**3.8**

SB-06

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**3.25**
Arsenic	4/2/2019	0.5-2	**4.2**

SB-08

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**5.89**
Arsenic	4/2/2019	0.5-2	**4.62**

SB-03

Analyte	Date	Depth (ft)	Result
Arsenic	4/1/2019	0-0.5	**4.03**
Arsenic	4/1/2019	0.5-2	**2.55**

MW-02

Analyte	Date	Depth (ft)	Result
Arsenic	4/3/2019	0-0.5	**2.98**
Arsenic	4/3/2019	0.5-2	**2.7**

MW-03

Analyte	Date	Depth (ft)	Result
Arsenic	4/3/2019	0-0.5	**2.77**
Arsenic	4/3/2019	0.5-2	**3.17**

SB-10

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**3.38**
Arsenic	4/2/2019	0.5-2	**2.82**

SB-04

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**4.28**
Arsenic	4/2/2019	0.5-2	**3.85**

SB-09

Analyte	Date	Depth (ft)	Result
Arsenic	4/2/2019	0-0.5	**3.81**
Arsenic	4/2/2019	0.5-2	**3.13**

Note:

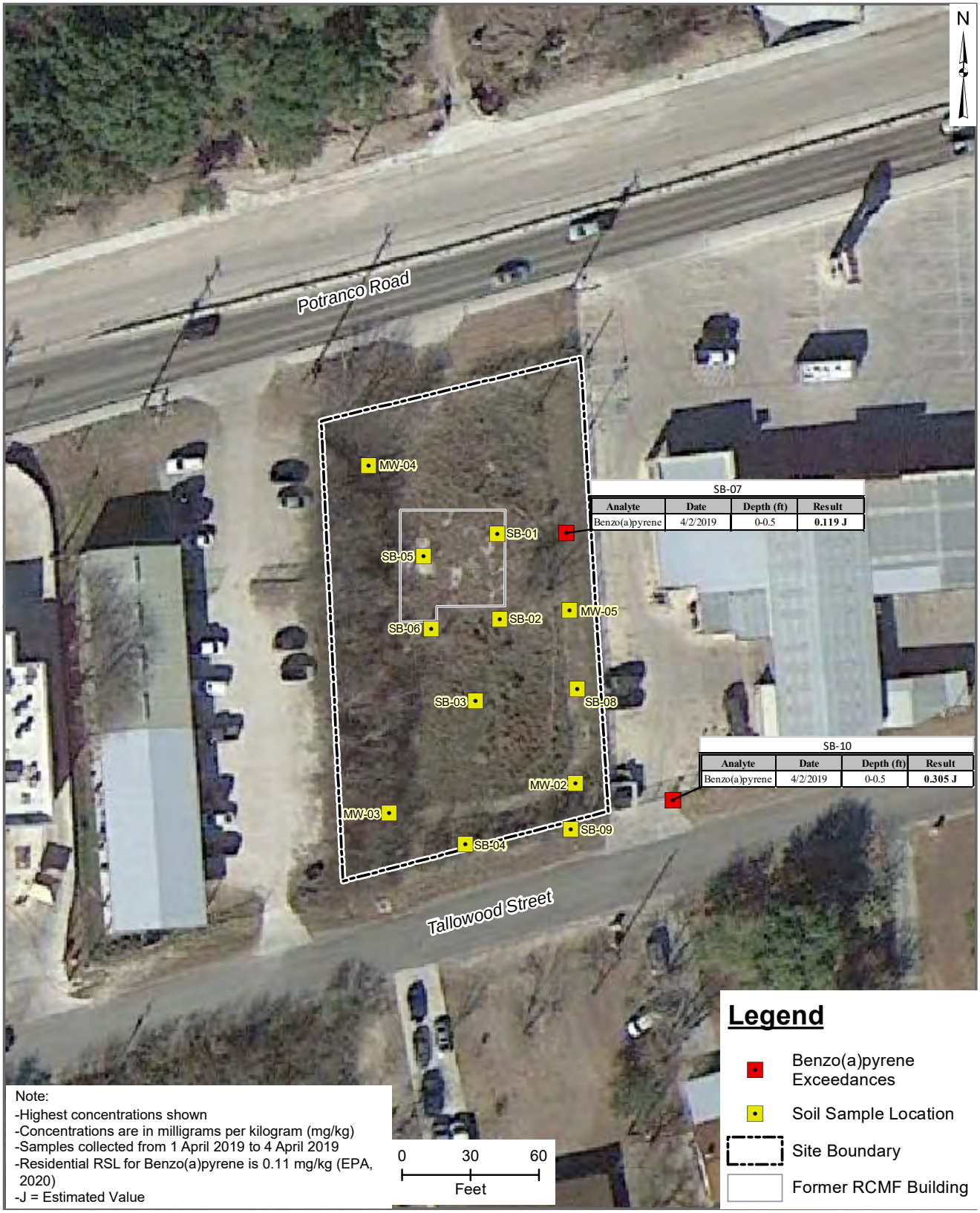
-Highest concentrations shown
-Concentrations are in milligrams per kilogram (mg/kg)
-Samples collected from 1 April 2019 to 4 April 2019
-Residential RSL for Arsenic is 0.68 mg/kg

River City Metal Finishing
Superfund Site
San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4-2
Arsenic Exceedances in Surface Soil

2020-10-09 C:\Data\River City\RC__SS_Arsenic_202004.mxd EA-Dallas jbarnett

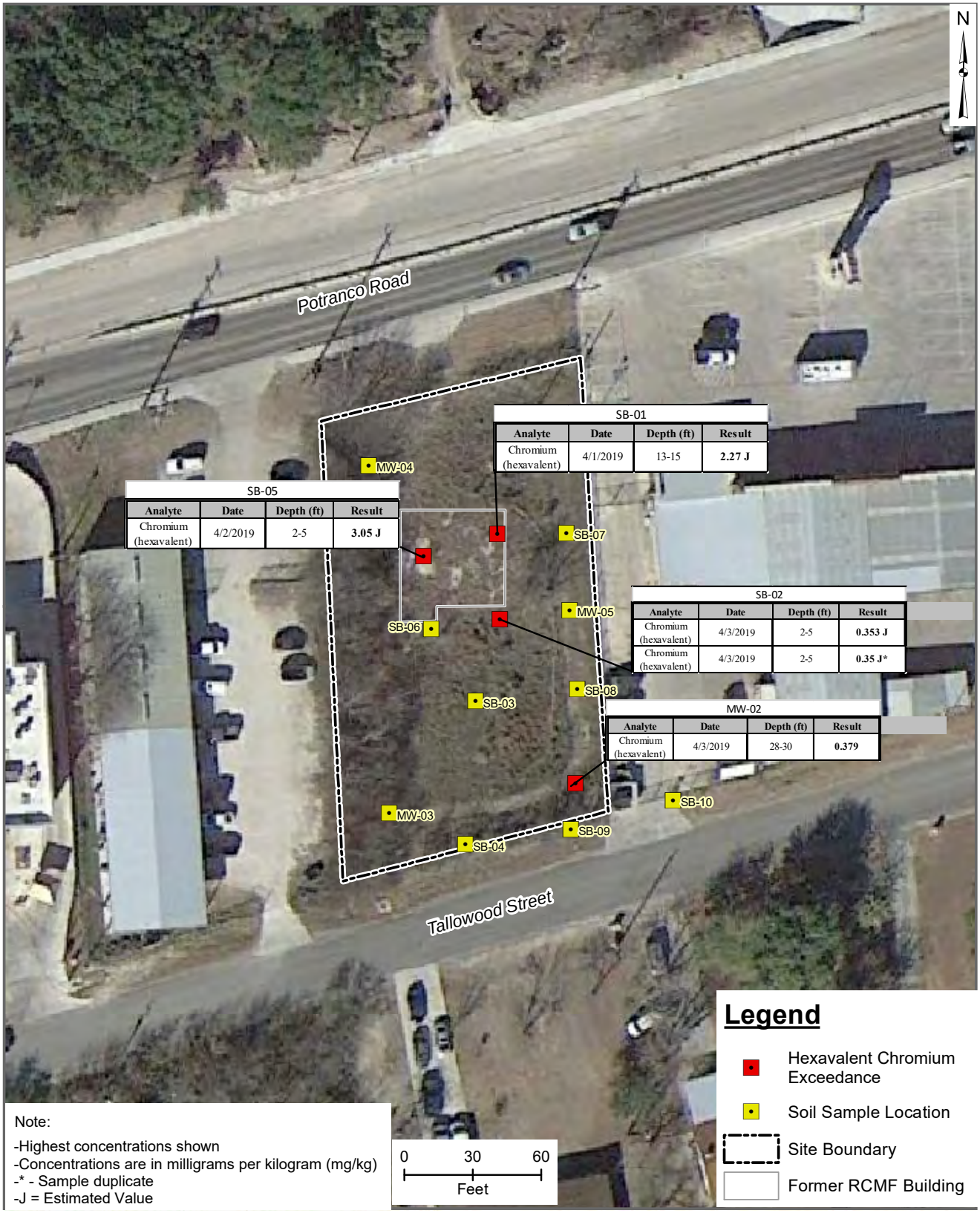


River City Metal Finishing Superfund Site San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4-3
Benzo(a)pyrene Exceedances in Surface Soil

2020 -10-09 C:\Data\River City\RC_SS_BaP_202004.mxd EA-Dallas jbarnett



Note:

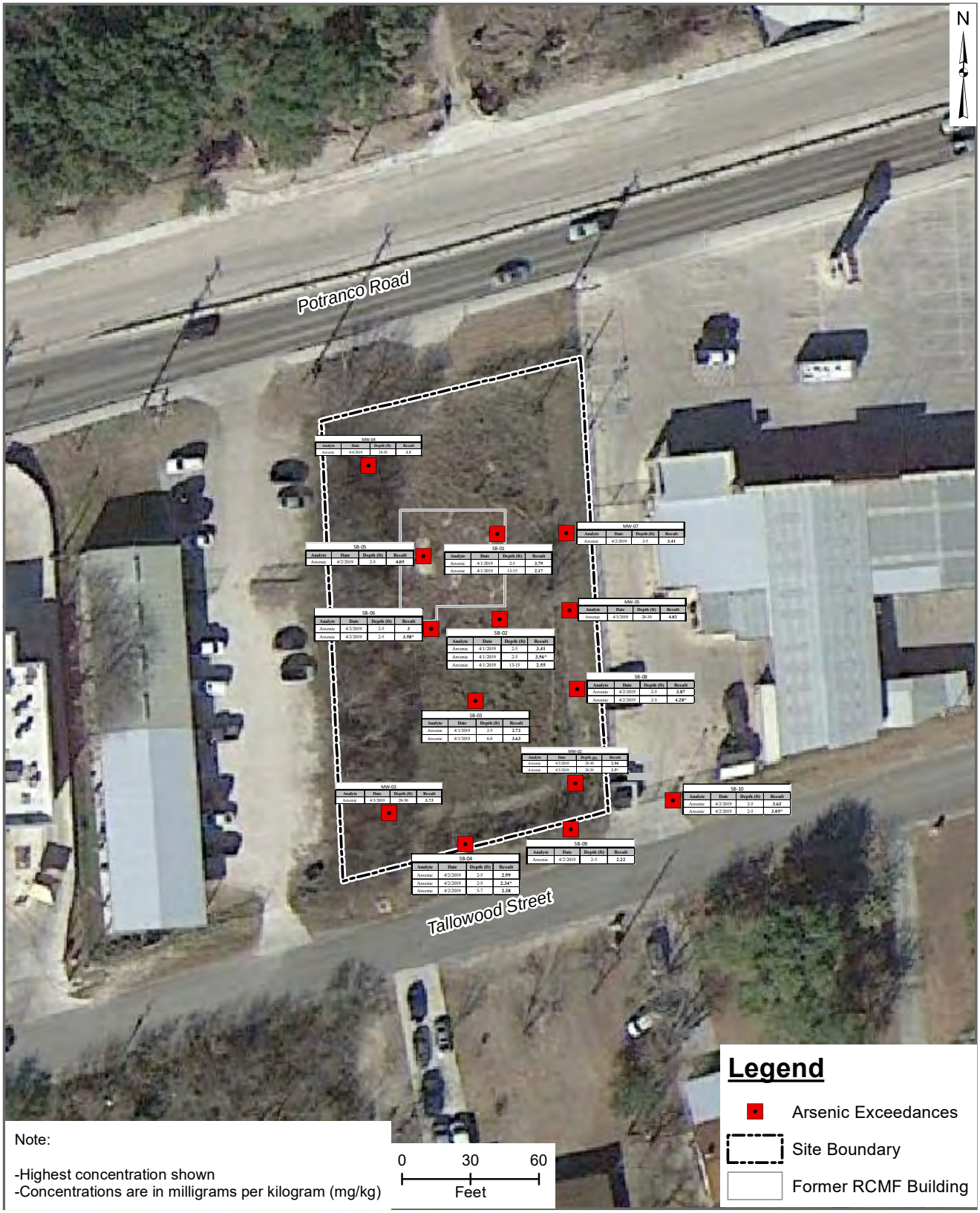
-Highest concentrations shown
-Concentrations are in milligrams per kilogram (mg/kg)
-* - Sample duplicate
-J = Estimated Value

River City Metal Finishing Superfund Site San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4-4
Hexavalent Chromium Exceedances in Subsurface Soil

2020 -10-09 C:\Data\River City\RC_SubSS_HexChrom_202004.mxd EA-Dallas jbarnett



Note:

-Highest concentration shown
-Concentrations are in milligrams per kilogram (mg/kg)

River City Metal Finishing Superfund Site San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4-5
Arsenic Exceedances in Subsurface Soil

2020 -10-09 C:\Data\River City\RC_SubSS_Arsenic_202004.mxd EA-Dallas jbarnett

MW-08

Analyte	Date	Depth (ft)	Result
Chromium (hexavalent)	12/17/2019	175	**0.84**
Chromium (hexavalent)	4/29/2020	156	0.022
Chromium (hexavalent)	4/29/2020	166	**0.154 J**
Chromium (hexavalent)	4/29/2020	176	**0.276 J**
Chromium (hexavalent)	4/29/2020	186	**0.364 J**
Chromium (hexavalent)	4/29/2020	196	**0.229 J**
Chromium (hexavalent)	4/29/2020	206	**0.224 J**

MW-01

Analyte	Date	Depth (ft)	Result
Chromium (hexavalent)	12/17/2019	21	**6,140**

MW-06

Analyte	Date	Depth (ft)	Result
Chromium (hexavalent)	12/17/2019	170	**29.3**
Chromium (hexavalent)	4/29/2020	164.5	**23.1 J**
Chromium (hexavalent)	4/29/2020	164.5	**23 J***
Chromium (hexavalent)	4/29/2020	174.5	**19.5 J**
Chromium (hexavalent)	4/29/2020	174.5	**20.4 J***

MW-07

Analyte	Date	Depth (ft)	Result
Chromium (hexavalent)	12/17/2019	190	**0.541**
Chromium (hexavalent)	4/29/2020	163	**1.01 J**
Chromium (hexavalent)	4/29/2020	173	**2.08 J**
Chromium (hexavalent)	4/29/2020	183	**2.4 J**
Chromium (hexavalent)	4/29/2020	193	**1.81 J**
Chromium (hexavalent)	4/29/2020	203	**1.61 J**
Chromium (hexavalent)	4/29/2020	213	**1.67 J**
Chromium (hexavalent)	4/29/2020	223	**1.57 J**

Legend

- Austin Chalk Monitoring Wells
- Shallow Monitoring Wells
- Site Boundary
- Former RCMF Building

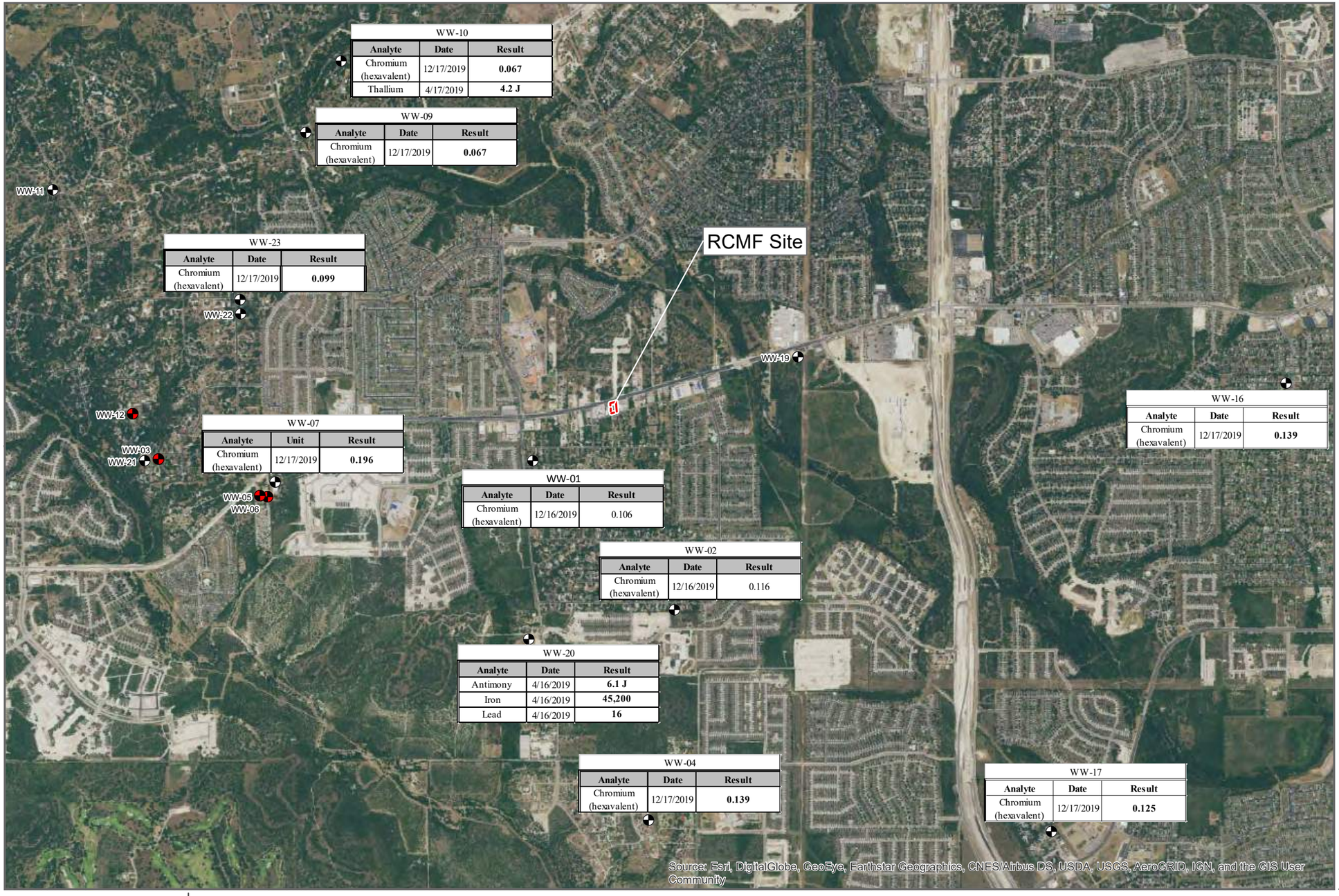
Notes:
Units are in micrograms per liter (µg/L)
USEPA Tap Water Regional Screening Level for hexavalent chromium is 0.035 µg/L (EPA, 2020)
J = Estimated Value
* = Duplicate Sample

River City Metal Finishing Superfund Site San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4-6 Hexavalent Chromium Exceendances in Groundwater, On-site Monitoring Wells

2020-10-09 C:\Data\River City\RC_Onsite_Analytes.mxd EA-Dallas jbarnett



WW-10

Analyte	Date	Result
Chromium (hexavalent)	12/17/2019	**0.067**
Thallium	4/17/2019	**4.2 J**

WW-09

Analyte	Date	Result
Chromium (hexavalent)	12/17/2019	**0.067**

WW-23

Analyte	Date	Result
Chromium (hexavalent)	12/17/2019	**0.099**

WW-07

Analyte	Unit	Result
Chromium (hexavalent)	12/17/2019	**0.196**

WW-01

Analyte	Date	Result
Chromium (hexavalent)	12/16/2019	0.106

WW-02

Analyte	Date	Result
Chromium (hexavalent)	12/16/2019	0.116

WW-20

Analyte	Date	Result
Antimony	4/16/2019	**6.1 J**
Iron	4/16/2019	**45,200**
Lead	4/16/2019	**16**

WW-04

Analyte	Date	Result
Chromium (hexavalent)	12/17/2019	**0.139**

WW-16

Analyte	Date	Result
Chromium (hexavalent)	12/17/2019	**0.139**

WW-17

Analyte	Date	Result
Chromium (hexavalent)	12/17/2019	**0.125**

N

0 1,000 2,000
Feet

Legend

Groundwater Sample Location

Not Sampled

Units are in microgram per liter (µg/L)

USEPA Tap Water Regional Screening Levels:

- Hexavalent chromium = 0.035 µg/L
- Thallium = 0.2 µg/L
- Iron = 14,000 µg/L
- Lead = 15 µg/L

Site Boundary

Imagery Source:
Texas Orthoimagery Program
2018 0.6 Meter, Texas
Strategic Mapping Program, 2018

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Figure 4-7
Target List Analyte Metals Exceedances in Groundwater Collected from Off-site Public and Private Supply Wells

2020 -10-09 C:\Data\River City\RC_Offsite_Analytes.mxd EA-Dallas jbarnett

FIGURE 5-1
HUMAN HEALTH CONCEPTUAL SITE MODEL
RIVER CITY METAL FINISHING SUPERFUND SITE
SAN ANTONIO, BEXAR COUNTY, TEXAS

PRIMARY SOURCE	PRIMARY RELEASE MECHANISM	SECONDARY SOURCE	SECONDARY RELEASE MECHANISM	TERTIARY SOURCE	TERTIARY RELEASE MECHANISM	EXPOSURE ROUTE	POTENTIAL RECEPTORS			
							Residents (Adult and Child)	Construction Workers	Commercial/ Industrial Worker	Trespassers
Former Plating/Metal Finishing Operations	Direct Deposition	Surface Soil				Ingestion	C	C	C	C
						Dermal Contact	C	C	C	C
			Particulate Emission/Suspension			Inhalation of Particulate	C	C	C	C
			Migration/Overland Flow	Off-Site Surface Soil		Ingestion	C	C	C	C
						Dermal Contact	C	C	C	C
					Particulate Emission/Suspension	Inhalation of Particulates	C	C	C	C
			Infiltration/Leaching	Subsurface Soil		Ingestion	C	C	I	I
						Dermal Contact	C	C	I	I
					Particulate Emission/Suspension	Inhalation of Particulates	C	C	I	I
			Migration/Overland Flow	Surface Water		Ingestion	I	I	I	I
						Dermal Contact	I	I	I	I
			Migration/Overland Flow	Sediment		Ingestion	I	I	I	I
						Dermal Contact	I	I	I	I
			Infiltration/Leaching	Groundwater		Ingestion	C	I	I	I
						Dermal Contact	C	I	I	I
						Inhalation of VOCs	I	I	I	I
					Vapor Intrusion to Indoor Air	Inhalation of VOCs (from Vapor Intrusion)	I	I	I	I

LEGEND

I Incomplete or negligible exposure pathway

C Complete/Potentially complete exposure pathway

Tables

Table 2-1 Soil Data Collection Summary

Sample Location	Sample ID	Field Duplicate Sample ID	Sample Date	Matrix	Sample Depth (feet)	VOCs	SVOCs	TPH	TAL Metals	Hexavalent Chromium	Cyanide	Pesticides	Herbicides
MW-02	MW-02(0.5-2)		4/3/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
MW-02	MW-02(0-0.5)		4/3/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
MW-02	MW-02(28-30)	MW-02(28-30)D	4/3/2019	Subsurface Soil	28-30	X	X	X	X	X	X		
MW-03	MW-03(0.5-2)		4/3/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
MW-03	MW-03(0-0.5)		4/3/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
MW-03	MW-03(28-30)		4/3/2019	Subsurface Soil	28-30	X	X	X	X	X	X		
MW-04	MW-04(0.5-2)		4/4/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
MW-04	MW-04(0-0.5)		4/4/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
MW-04	MW-04(28-30)		4/4/2019	Subsurface Soil	28-30	X	X	X	X	X	X		
MW-05	MW-05(0.5-2)		4/3/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
MW-05	MW-05(0-0.5)		4/3/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
MW-05	MW-05(28-30)		4/3/2019	Subsurface Soil	28-30	X	X	X	X	X	X		
SB-01	SB-01(0.5-2)		4/1/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-01	SB-01(0-0.5)		4/1/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-01	SB-01(13-15)		4/1/2019	Subsurface Soil	13-15	X	X	X	X	X	X		
SB-01	SB-01(2-5)		4/1/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-02	SB-02(0.5-2)		4/1/2019	Surface Soil	0.5-2		X	X	X	X	X	X	X
SB-02	SB-02(0.5-2)		4/3/2019	Surface Soil	0.5-2	X							
SB-02	SB-02(0-0.5)		4/1/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-02	SB-02(13-15)		4/1/2019	Subsurface Soil	13-15	X	X	X	X	X	X		
SB-02	SB-02(2-5)	SB-02(2-5)D	4/1/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-03	SB-03(0.5-2)		4/1/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-03	SB-03(0-0.5)		4/1/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-03	SB-03(2-5)		4/1/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-03	SB-03(6-8)		4/1/2019	Subsurface Soil	6-8	X	X	X	X	X	X		
SB-04	SB-04(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-04	SB-04(0-0.5)		4/2/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-04	SB-04(2-5)	SB-04(2-5)D	4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-04	SB-04(5-7)		4/2/2019	Subsurface Soil	5-7	X	X	X	X	X	X		
SB-05	SB-05(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-05	SB-05(0-0.5)		4/2/2019	Surface Soil	0-0.5		X	X	X	X	X	X	X
SB-05	SB-05(0-0.5)		4/3/2019	Surface Soil	0-0.5	X							
SB-05	SB-05(2-5)		4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-06	SB-06(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-06	SB-06(0-0.5)		4/2/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-06	SB-06(2-5)		4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-06	SB-06(2-5)D		4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-07	SB-07(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-07	SB-07(0-0.5)		4/2/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-07	SB-07(2-5)		4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-08	SB-08(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-08	SB-08(0-0.5)		4/2/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-08	SB-08(2-5)	SB-08(2-5)D	4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-09	SB-09(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-09	SB-09(0-0.5)		4/2/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-09	SB-09(2-5)		4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		
SB-10	SB-10(0.5-2)		4/2/2019	Surface Soil	0.5-2	X	X	X	X	X	X	X	X
SB-10	SB-10(0-0.5)		4/2/2019	Surface Soil	0-0.5	X	X	X	X	X	X	X	X
SB-10	SB-10(2-5)	SB-10(2-5)D	4/2/2019	Subsurface Soil	2-5	X	X	X	X	X	X		

NOTES:
SVOC = Semivolatile organic compound.
TPH = Total petroleum hydrocarbon.
VOC = Volatile organic compound.

Table 2-2 - Groundwater Data Collection Summary

Sample Location	Sample ID	Field Duplicate Sample ID	Sample Date	Well Type	Sample Depth (ft bgs)	VOCs	SVOCs	TPH	TAL Metals	Hexavalent Chromium	Cyanide	MEE	Anions	Pesticides	Herbicides
MW-01	MW-01	MW-01D	4/15/2019	Monitor Well	--	X	X	X	X	X	X	X	X	X	X
MW-01	MW-01		12/17/2019	Monitor Well	--				X	X	X				
MW-06	MW-06		12/17/2019	Monitor Well	--				X	X	X				
MW-06	MW-06-164.5	MW-06-164.5-D	4/29/2020	Monitor Well	164.5					X					
MW-06	MW-06-174.5	MW-06-174.5-D	4/29/2020	Monitor Well	174.5					X					
MW-07	MW-07		12/17/2019	Monitor Well	--				X	X	X				
MW-07	MW-07-163		4/29/2020	Monitor Well	163					X					
MW-07	MW-07-173		4/29/2020	Monitor Well	173					X					
MW-07	MW-07-183		4/29/2020	Monitor Well	183					X					
MW-07	MW-07-193		4/29/2020	Monitor Well	193					X					
MW-07	MW-07-203		4/29/2020	Monitor Well	203					X					
MW-07	MW-07-213		4/29/2020	Monitor Well	213					X					
MW-07	MW-07-223		4/29/2020	Monitor Well	223					X					
MW-08	MW-08		12/16/2019	Monitor Well	--				X	X	X				
MW-08	MW-08-156		4/29/2020	Monitor Well	156					X					
MW-08	MW-08-166		4/29/2020	Monitor Well	166					X					
MW-08	MW-08-176		4/29/2020	Monitor Well	176					X					
MW-08	MW-08-186		4/29/2020	Monitor Well	186					X					
MW-08	MW-08-196		4/29/2020	Monitor Well	196					X					
MW-08	MW-08-206		4/29/2020	Monitor Well	206					X					
WW-01	WW-01	WW-01D	4/15/2019	Private Water Well	--				X	X	X				
WW-01	WW-01	WW-01D	12/16/2019	Private Water Well	--				X	X	X				
WW-02	WW-02	WW-02D	4/15/2019	Private Water Well	--				X	X	X				
WW-02	WW-02	WW-02D	12/16/2019	Private Water Well	--				X	X	X				
WW-04	WW-04		4/16/2019	Private Water Well	--				X	X	X				
WW-04	WW-04		12/17/2019	Private Water Well	--				X	X	X				
WW-07	WW-07		4/16/2019	Private Water Well	--				X	X	X				
WW-07	WW-07		12/17/2019	Private Water Well	--				X	X	X				
WW-09	WW-09	WW-09D	12/17/2019	Private Water Well	--				X	X	X				
WW-09	WW-9		4/17/2019	Private Water Well	--				X	X	X				
WW-10	WW-10		4/17/2019	Private Water Well	--				X	X	X				
WW-10	WW-10		12/17/2019	Private Water Well	--				X	X	X				
WW-11	WW-11		4/16/2019	Private Water Well	--				X	X	X				
WW-16	WW-16		4/17/2019	Private Water Well	--				X	X	X				
WW-16	WW-16		12/17/2019	Private Water Well	--				X	X	X				
WW-17	WW-17		4/16/2019	Private Water Well	--				X	X	X				
WW-17	WW-17		12/17/2019	Private Water Well	--				X	X	X				
WW-19	WW-19		4/16/2019	Private Water Well	--				X	X	X				
WW-20	WW-20		4/16/2019	Private Water Well	--				X	X	X				
WW-21	WW-21		4/17/2019	Private Water Well	--				X	X	X				
WW-22	WW-22		4/17/2019	Private Water Well	--				X	X	X				
WW-23	WW-23		12/17/2019	Private Water Well	--				X	X	X				

NOTES:
-- Not applicable.
ft bgs = Feet below ground surface.
MEE = Methane, Ethane, Ethene.
SVOC = Semivolatile organic compound.
TPH = Total petroleum hydrocarbon.
VOC = Volatile organic compound.

Table 3-1 Monitoring Well Construction and Depth to Water Data

Well ID Number	Well Coordinates		Well Construction			Top of Casing Elevation (feet amsl)	Date Measured	DTW (feet btoc)	Groundwater Elevation (feet amsl)
	Latitude	Longitude	Diameter (inches)	Screen Interval (feet bgs)	Depth to Bottom (feet bgs)				
MW-01	29.4330560	98.7213890	4	15.00-27.25	27.27	851.452	2-Apr-19	16.55	834.90
							15-Apr-19	17.07	834.38
							8-May-19	9.51	841.94
							20-Jun-19	10.00	841.45
							18-Sep-19	17.86	833.59
							1-Oct-19	18.25	833.20
							17-Dec-19	21.75	829.70
							6-Apr-20	26.65	824.80
							29-Apr-20	26.86	824.59
MW-02	29.4301810	98.7317220	4	10.00-28.00	31.50	851.084	15-Apr-19	30.17	820.91
							8-May-19	31.03	820.05
							20-Jun-19	31.09	819.99
							18-Sep-19	31.29	819.79
							1-Oct-19	31.33	819.75
							6-Apr-20	-	-
							29-Apr-20	31.28	819.80
MW-03	29.4301810	98.7317220	4	10.00-28.00	31.00	853.836	15-Apr-19	29.52	824.32
							8-May-19	29.54	824.30
							20-Jun-19	29.64	824.20
							18-Sep-19	29.42	824.42
							1-Oct-19	29.22	824.62
							6-Apr-20	-	-
							29-Apr-20	31.21	822.63
MW-04	29.4301810	98.7317220	4	10.00-28.00	31.00	853.747	15-Apr-19	29.29	824.46
							8-May-19	30.05	823.70
							20-Jun-19	30.86	822.89
							18-Sep-19	31.06	249.94
							1-Oct-19	31.09	822.66
							6-Apr-20	-	-
							29-Apr-20	31.66	822.09
MW-05	29.4301810	98.7317220	4	10.00-28.00	31.00	851.15	15-Apr-19	30.48	820.67
							8-May-19	31.13	820.02
							20-Jun-19	31.44	819.71
							18-Sep-19	31.46	819.69
							1-Oct-19	31.49	819.66
							6-Apr-20	-	-
							29-Apr-20	31.44	819.71
MW-06	29.430111	98.7317500	10-inch stell casing then 7 7/8-inch borehole	10-inch diameter steel casing to 42 feet bgs, open borehole from 42-feet to 180 feet bgs	180.00	852.22	15-Apr-19	-	-
							8-May-19	-	-
							20-Jun-19	-	-
							18-Sep-19	-	-
							1-Oct-19	-	-
							17-Dec-19	160.45	691.77
							8-Apr-20	161.05	691.17
							29-Apr-20	167.98	684.24
MW-07	29.428328	98.7315830	10-inch stell casing then 7 7/8-inch borehole	10-inch diameter steel casing to 41 feet bgs, open borehole from 42-feet to 230 feet bgs	230.00	850.526	15-Apr-19	-	-
							8-May-19	-	-
							20-Jun-19	-	-
							18-Sep-19	-	-
							1-Oct-19	-	-
							17-Dec-19	159.67	690.86
							8-Apr-20	159.00	691.53
							29-Apr-20	168.71	681.82
MW-08	29.43025	98.7316110	10-inch stell casing then 7 7/8-inch borehole	10-inch diameter steel casing to 42 feet bgs, open borehole from 42-feet to 220 feet bgs	220.00	850.088	15-Apr-19	-	-
							8-May-19	-	-
							20-Jun-19	-	-
							18-Sep-19	-	-
							1-Oct-19	-	-
							17-Dec-19	159.00	691.09
							8-Apr-20	158.68	691.41
							29-Apr-20	168.32	681.77

NOTES:
* MW-1, MW-2, MW-13, and MW-14 were not accessible during February 2020 gauging.
-- = Not measured/unknown.
amsl = Above mean sea level.
bgs = Below ground surface.
btoc = Below top of casing.
DTW = Depth to water.
ID = Identification.

Table 4-1 Screening Level Exceedances for Surface Soil

				Location ID	MW-02	MW-02	MW-03	MW-03	MW-04	MW-04
				Sample Name	MW-02(0-0.5)	MW-02(0.5-2)	MW-03(0-0.5)	MW-03(0.5-2)	MW-04(0-0.5)	MW-04(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/4/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	2310 J	1640 J	3940 J	4970 J	9,730	9,860
Antimony	31	470	31	mg/kg	0.429 J	0.644 J	< 2.73 UJ	0.38 J	< 2.85 UJ	0.683 J
Arsenic	0.68	3	0.68	mg/kg	**2.98**	**2.7**	**2.77**	**3.17**	**4.58**	**4.42**
Barium	15,000	220,000	15,000	mg/kg	36.7	30.5	41.1	54.2	44.9	49.3
Beryllium	160	2,300	160	mg/kg	0.185 J	0.143 J	0.191 J	0.231 J	0.41	0.389
Cadmium	71	980	71	mg/kg	0.319 J	0.274 J	0.267 J	0.267 J	0.416	0.394
Calcium	NSL	NSL	NSL	mg/kg	327,000	339,000	262,000	342,000	285,000	314,000
Chromium [3]	120,000	1,800,000	120,000	mg/kg	7.04	5.65	5.18	5.39	10.2	10.8
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	< 0.358 UJ	< 0.371 UJ	< 0.354 UJ	< 0.353 UJ	< 0.346 UJ	< 0.355 UJ
Cobalt	23	350	23	mg/kg	1.27 J	0.477 J	1.36	1.61	2.96	3.03
Copper	3,100	47,000	3,100	mg/kg	4.94 J	1.9 J	4.55 J	3.78 J	18.9 J	12.4 J
Iron	55,000	820,000	55,000	mg/kg	2840 J	2070 J	3050 J	3210 J	6,990	6,550
Lead	400	800	400	mg/kg	2.03 J	< 2.98 U	4.18	2.76 J	8.14	5.33
Magnesium	NSL	NSL	NSL	mg/kg	1290 J	1510 J	1310 J	1360 J	2290 J	1890 J
Manganese	1,800	26,000	1,800	mg/kg	57.4	47.1	56.2	54.3	141	97.3
Mercury	11	46	11	mg/kg	0.00721 J	< 0.0204 U	0.00615 J	< 0.0206 U	< 0.0194 U	< 0.0202 U
Nickel	1,500	22,000	1,500	mg/kg	4.46 J	2.74 J	4.85	4	23.5	15.4
Potassium	NSL	NSL	NSL	mg/kg	442 J	235 J	535 J	561 J	1590 J	1140 J
Selenium	390	5,800	390	mg/kg	< 2.32 U	< 2.39 U	< 2.18 U	< 2.37 U	< 2.28 U	< 2.22 U
Silver	390	5,800	390	mg/kg	< 0.464 U	< 0.477 U	< 0.437 U	< 0.474 U	0.319 J	< 0.444 U
Sodium	NSL	NSL	NSL	mg/kg	128 J	185 J	88 J	107 J	97.7 J	101 J
Thallium	0.78	12	0.78	mg/kg	< 1.74 U	< 1.79 U	< 1.64 U	< 1.78 U	< 1.71 U	< 1.67 U
Vanadium	390	5,800	390	mg/kg	7.8	8.13	7.49	8.85	13.7	14.9
Zinc	23,000	350,000	23,000	mg/kg	23.6	16.9	21.9	18.2	38 J	30.7 J
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.123 UJ	< 0.143 UJ	< 0.135 UJ	< 0.139 UJ	< 0.137 UJ	< 0.121 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	< 0.00384 UJ	< 0.00408 UJ	< 0.00387 UJ	< 0.00398 UJ	< 0.00383 UJ	< 0.00392 UJ
4,4-DDE	2	9.3	2	mg/kg	< 0.00384 U	< 0.00408 U	< 0.00387 U	< 0.00398 U	< 0.00383 UJ	< 0.00392 UJ
4,4-DDT	1.9	8.5	1.9	mg/kg	< 0.00384 UJ	< 0.00408 UJ	< 0.00387 UJ	< 0.00398 UJ	< 0.00383 UJ	< 0.00392 UJ
Aldrin	0.039	0.18	0.039	mg/kg	< 0.00198 UJ	< 0.0021 UJ	< 0.00199 UJ	< 0.00205 UJ	< 0.00197 UJ	< 0.00202 UJ
alpha-BHC	0.086	0.36	0.086	mg/kg	< 0.00198 U	< 0.0021 U	< 0.00199 U	< 0.00205 U	< 0.00197 UJ	< 0.00202 U
alpha-Chlordane	1.7	7.7	1.7	mg/kg	< 0.00384 UJ	< 0.00408 UJ	< 0.00387 UJ	< 0.00398 UJ	< 0.00383 UJ	< 0.00392 UJ
Beta-BHC	0.3	1.3	0.3	mg/kg	< 0.00198 U	< 0.0021 U	< 0.00199 U	< 0.00205 U	< 0.00197 UJ	< 0.00202 U
Chlordane	1.7	7.7	1.7	mg/kg	< 0.0873 U	< 0.0926 U	< 0.0879 U	< 0.0905 U	< 0.087 UJ	< 0.0892 U
delta-BHC	0.086	0.36	0.086	mg/kg	< 0.00198 U	< 0.0021 U	< 0.00199 U	< 0.00205 U	< 0.00197 UJ	< 0.00202 U
Dieldrin	0.034	0.14	0.034	mg/kg	< 0.00384 U	< 0.00408 U	< 0.00387 U	< 0.00398 U	< 0.00383 UJ	< 0.00392 UJ
Endosulfan I	470	7,000	470	mg/kg	< 0.00198 U	< 0.0021 U	< 0.00199 U	< 0.00205 U	< 0.00197 UJ	< 0.00202 UJ
Endosulfan II	470	7,000	470	mg/kg	< 0.00384 U	< 0.00408 U	< 0.00387 U	< 0.00398 U	< 0.00383 UJ	< 0.00392 U
Endosulfan sulfate	380	4,900	380	mg/kg	< 0.00384 U	< 0.00408 U	< 0.00387 U	< 0.00398 U	< 0.00383 UJ	< 0.00392 U
Endrin	19	250	19	mg/kg	< 0.00384 U	< 0.00408 U	< 0.00387 U	< 0.00398 U	< 0.00383 UJ	< 0.00392 UJ
Endrin aldehyde	19	250	19	mg/kg	< 0.00384 U	< 0.00408 U	< 0.00387 U	< 0.00398 U	< 0.00383 UJ	< 0.00392 U
Endrin ketone	19	250	19	mg/kg	< 0.00384 UJ	< 0.00408 UJ	< 0.00387 UJ	< 0.00398 UJ	< 0.00383 UJ	< 0.00392 UJ

Table 4-1 Screening Level Exceedances for Surface Soil

				Location ID	MW-02	MW-02	MW-03	MW-03	MW-04	MW-04
				Sample Name	MW-02(0-0.5)	MW-02(0.5-2)	MW-03(0-0.5)	MW-03(0.5-2)	MW-04(0-0.5)	MW-04(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/4/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	< 0.00198 U	< 0.0021 U	< 0.00199 U	< 0.00205 U	< 0.00197 UJ	< 0.00202 U
Heptachlor	0.13	0.63	0.13	mg/kg	< 0.00198 UJ	< 0.0021 UJ	< 0.00199 UJ	< 0.00205 UJ	< 0.00197 UJ	< 0.00202 UJ
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	< 0.00198 U	< 0.0021 U	< 0.00199 U	< 0.00205 U	< 0.00197 UJ	< 0.00202 U
Methoxychlor	320	4,100	320	mg/kg	< 0.0198 UJ	< 0.021 UJ	< 0.0199 UJ	< 0.0205 UJ	< 0.0197 UJ	< 0.0202 UJ
Toxaphene	0.49	2.1	0.49	mg/kg	< 0.198 UJ	< 0.21 UJ	< 0.199 UJ	< 0.205 UJ	< 0.197 UJ	< 0.202 UJ
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	< 0.778 U	< 0.827 U	< 0.785 U	< 0.805 U	< 0.772 U	< 0.793 U
2,4,5-T	630	8,200	630	mg/kg	< 0.00778 U	< 0.00827 U	0.00365 J	< 0.00805 U	< 0.00772 U	< 0.00793 U
2,4,5-TP (silvex)	510	6,600	510	mg/kg	< 0.00778 U	< 0.00827 U	< 0.00785 U	< 0.00805 U	< 0.00772 U	< 0.00793 U
2,4-D	700	9,600	700	mg/kg	< 0.00778 UJ	< 0.00827 UJ	< 0.00785 UJ	< 0.00805 UJ	< 0.00772 UJ	< 0.00793 UJ
2,4-DB	1,900	25,000	1,900	mg/kg	< 0.00778 UJ	< 0.00827 UJ	< 0.00785 UJ	< 0.00805 UJ	< 0.00772 U	< 0.00793 U
Dicamba	1,900	25,000	1,900	mg/kg	< 0.00778 U	< 0.00827 U	< 0.00785 U	< 0.00805 U	< 0.00772 U	< 0.00793 U
Dichlorprop	NSL	NSL	NSL	mg/kg	< 0.00778 U	< 0.00827 U	< 0.00785 U	< 0.00805 U	< 0.00772 U	< 0.00793 U
Dinoseb	63	820	63	mg/kg	< 0.00778 UJ	< 0.00827 R	< 0.00785 UJ	< 0.00805 UJ	< 0.00772 UJ	< 0.00793 UJ
MCPP	63	820	63	mg/kg	< 0.778 U	< 0.827 U	< 0.785 U	< 0.805 U	< 0.772 U	< 0.793 U
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 UJ	< 0.00599 UJ
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0477 U	< 0.0443 U	< 0.0582 U	< 0.0416 U	< 0.0438 U	< 0.0479 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.00596 UJ	< 0.00554 UJ	< 0.00728 UJ	< 0.0052 UJ	< 0.00547 UJ	< 0.00599 UJ
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 UJ	< 0.00599 UJ
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U
2-Hexanone	200	1,300	200	mg/kg	< 0.0119 UJ	< 0.0111 UJ	< 0.0146 UJ	< 0.0104 UJ	< 0.0109 UJ	< 0.012 UJ
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.0119 UJ	< 0.0111 UJ	< 0.0146 UJ	< 0.0104 UJ	< 0.0109 UJ	< 0.012 UJ
Acetone	61,000	670,000	61,000	mg/kg	< 0.0119 UJ	< 0.0111 UJ	< 0.0146 UJ	< 0.0104 UJ	< 0.0109 U	< 0.012 U
Benzene	1.2	5.1	1.2	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Bromochloromethane	150	630	150	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Bromoform	19	86	19	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 UJ	< 0.012 UJ
Carbon disulfide	770	3,500	770	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U

Table 4-1 Screening Level Exceedances for Surface Soil

				Location ID	MW-02	MW-02	MW-03	MW-03	MW-04	MW-04
				Sample Name	MW-02(0-0.5)	MW-02(0.5-2)	MW-03(0-0.5)	MW-03(0.5-2)	MW-04(0-0.5)	MW-04(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/4/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U
Chloromethane	110	460	110	mg/kg	< 0.0119 UJ	< 0.0111 UJ	< 0.0146 UJ	< 0.0104 UJ	< 0.0109 UJ	< 0.012 UJ
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 UJ	< 0.00599 UJ
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Methylene Chloride	57	1,000	57	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U
o-Xylene	650	2,800	650	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Tetrachloroethene	24	100	24	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Toluene	4,900	47,000	4,900	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.0119 UJ	< 0.0111 UJ	< 0.0146 UJ	< 0.0104 UJ	< 0.0109 UJ	< 0.012 UJ
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.0119 U	< 0.0111 U	< 0.0146 U	< 0.0104 U	< 0.0109 U	< 0.012 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.00596 U	< 0.00554 U	< 0.00728 U	< 0.0052 U	< 0.00547 U	< 0.00599 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0167 J	< 0.0387 U	< 0.0394 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0389 UJ	< 0.0411 UJ	< 0.0392 UJ	< 0.0401 UJ	< 0.0387 UJ	< 0.0394 UJ
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0314 J	< 0.0387 U	< 0.0394 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	0.0134 J	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.117 U	< 0.123 UJ	< 0.118 U	< 0.12 U	< 0.116 U	< 0.118 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	0.00607 J	< 0.0411 U	< 0.0392 U	0.0177 J	< 0.0387 U	< 0.0394 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2-Methylnaphthalene	240	3,000	240	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0263 J	< 0.0387 U	< 0.0394 U
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	0.0429	< 0.0394 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0389 U	< 0.0411 UJ	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0389 UJ	< 0.0411 UJ	< 0.0392 UJ	< 0.0401 UJ	< 0.0387 UJ	< 0.0394 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.198 U	< 0.21 UJ	< 0.2 U	< 0.205 U	< 0.198 U	< 0.201 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	0.00596 J	< 0.0411 U	< 0.0392 U	0.0162 J	< 0.0387 U	< 0.0394 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U

Table 4-1 Screening Level Exceedances for Surface Soil

				Location ID	MW-02	MW-02	MW-03	MW-03	MW-04	MW-04
				Sample Name	MW-02(0-0.5)	MW-02(0.5-2)	MW-03(0-0.5)	MW-03(0.5-2)	MW-04(0-0.5)	MW-04(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/4/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0389 U	< 0.0411 UJ	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0158 J	< 0.0387 U	< 0.0394 U
4-Nitroaniline	27	110	27	mg/kg	< 0.0389 UJ	< 0.0411 UJ	< 0.0392 UJ	< 0.0401 UJ	< 0.0387 UJ	< 0.0394 UJ
Acenaphthene	3,600	45,000	3,600	mg/kg	0.00629 J	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Acenaphthylene	3,600	45,000	3,600	mg/kg	0.00471 J	< 0.0411 U	< 0.0392 U	0.0115 J	< 0.0387 U	< 0.0394 U
Acetophenone	7,800	120,000	7,800	mg/kg	0.00973 J	< 0.0411 U	0.00672 J	0.0215 J	0.0117 J	0.00596 J
Anthracene	18,000	230,000	18,000	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0157 J	0.00478 J	< 0.0394 U
Benzo[a]anthracene	1.1	21	1.1	mg/kg	0.0637	0.0106 J	0.0157 J	0.0379 J	0.0569	0.0165 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	0.103	0.0155 J	0.029 J	0.0335 J	0.0927	0.0297 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	0.187	0.0241 J	0.0606	0.0452	0.182	0.0637
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	0.0851	0.016 J	0.0216 J	0.022 J	0.0517	0.0171 J
Benzo[k]fluoranthene	11	210	11	mg/kg	0.0686	0.0107 J	0.0207 J	0.0334 J	0.0704	< 0.0394 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	0.0105 J	0.00931 J	0.0291 J	0.0139 J	0.278	0.0513 J
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	0.00438 J	< 0.0411 U	< 0.0392 U	< 0.0401 U	0.0367 J	< 0.0394 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Carbazole [4]	230	950	230	mg/kg	0.0198 J	< 0.0411 UJ	< 0.0392 UJ	< 0.0401 UJ	0.0243 J	< 0.0394 UJ
Chrysene	110	2,100	110	mg/kg	0.126	0.0178 J	0.0322 J	0.0581	0.105	0.0332 J
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	0.0234 J	< 0.0411 U	< 0.0392 U	0.019 J	0.0132 J	0.00457 J
Dibenzofuran	78	1,200	78	mg/kg	0.00911 J	< 0.0411 U	< 0.0392 U	0.0197 J	< 0.0387 U	< 0.0394 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0779 U	< 0.0823 U	< 0.0785 U	< 0.0803 U	< 0.0775 U	< 0.079 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0779 U	< 0.0823 U	< 0.0785 U	< 0.0803 U	< 0.0775 U	< 0.079 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0779 U	< 0.0823 U	< 0.0785 U	< 0.0803 U	< 0.0775 U	< 0.079 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	0.1	0.0334 J	< 0.0785 U	< 0.0803 U	0.105	0.0409 J
Fluoranthene	2,400	30,000	2,400	mg/kg	0.184	0.0259 J	0.0511	0.0462	0.186	0.0511
Fluorene	2,400	30,000	2,400	mg/kg	0.00932 J	< 0.0411 U	< 0.0392 U	0.0208 J	< 0.0387 U	< 0.0394 U
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0347 J	< 0.0387 U	< 0.0394 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0389 U	< 0.0411 UJ	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	0.0805	0.0126 J	0.0204 J	0.0246 J	0.0514	0.0169 J
Isophorone	570	2,400	570	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Naphthalene	2	8.6	2	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	< 0.0401 U	< 0.0387 U	< 0.0394 U
Pentachlorophenol	1	4	1	mg/kg	< 0.195 U	< 0.206 U	< 0.197 U	< 0.201 U	< 0.194 U	< 0.198 U
Phenanthrene	18,000	230,000	18,000	mg/kg	0.0657	0.00727 J	0.0126 J	0.0602	0.0447	0.0167 J
Phenol	19,000	250,000	19,000	mg/kg	< 0.0389 U	< 0.0411 U	< 0.0392 U	0.0582	< 0.0387 U	< 0.0394 U
Pyrene	1,800	23,000	1,800	mg/kg	0.143	0.0232 J	0.0357 J	0.0544	0.125	0.0341 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 10.2 UJ	< 10.6 UJ	< 8.86 UJ	< 9.85 UJ	< 8.78 UJ	< 8.55 UJ
TPH (C12-C28)	520	2,200	520	mg/kg	< 10.2 UJ	< 10.6 UJ	< 8.86 UJ	< 9.85 UJ	< 8.78 UJ	< 8.55 UJ

Table 4-1 Screening Level Exceedances for Surface Soil

				Location ID	MW-02	MW-02	MW-03	MW-03	MW-04	MW-04
				Sample Name	MW-02(0-0.5)	MW-02(0.5-2)	MW-03(0-0.5)	MW-03(0.5-2)	MW-04(0-0.5)	MW-04(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/4/2019
Analyte	**EPA Regional Screening Levels [1]**		**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
	Residential	**Industrial**								
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 10.2 UJ	< 10.6 UJ	< 8.86 UJ	< 9.85 UJ	< 8.78 UJ	< 8.55 UJ
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 10.2 UJ	< 10.6 UJ	< 8.86 UJ	< 9.85 UJ	< 8.78 UJ	< 8.55 UJ

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} cancer risk level for carcinogens (May 2020).
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes inhalation, ingestion, dermal, and vegetable consumption for residential and industrial pathways, https://www.tceq.texas.gov/remediation/trrp/trrppcls

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

				Location ID	MW-05	MW-05	SB-01	SB-01	SB-02	SB-02
				Sample Name	MW-05(0-0.5)	MW-05(0.5-2)	SB-01(0-0.5)	SB-01(0.5-2)	SB-02(0-0.5)	SB-02(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	6260 J	6020 J	8900 J	4650 J	3030 J	2480 J
Antimony	31	470	31	mg/kg	< 2.71 UJ	< 2.62 UJ	0.338 J	0.362 J	< 2.77 UJ	< 2.88 UJ
Arsenic	0.68	3	0.68	mg/kg	**4.26**	**3.8**	**5.26**	**3.97**	**3.39**	**2.89**
Barium	15,000	220,000	15,000	mg/kg	46.6	49.6	50.5	49	44	48.5
Beryllium	160	2,300	160	mg/kg	0.315	0.294	0.392	0.246 J	0.183 J	0.173 J
Cadmium	71	980	71	mg/kg	0.407 J	0.346 J	0.374	0.292	0.415	0.38
Calcium	NSL	NSL	NSL	mg/kg	301,000	316,000	254000 J	307000 J	292000 J	333000 J
Chromium [3]	120,000	1,800,000	120,000	mg/kg	18.5	13	31.8	23.9	29.9	28.7
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	< 0.318 UJ	< 0.336 UJ	< 0.361 UJ	< 0.352 UJ	< 0.362 UJ	0.236 J
Cobalt	23	350	23	mg/kg	2.16	2.44 J	2.52	1.8	1.58 J	1.3 J
Copper	3,100	47,000	3,100	mg/kg	16.1 J	8.17 J	13.9 J	19.6 J	32.5 J	24.3 J
Iron	55,000	820,000	55,000	mg/kg	5500 J	5000 J	6,740	3,200	2,900	2,170
Lead	400	800	400	mg/kg	6.76	5.4	7.15	3.95	4.79	2.88
Magnesium	NSL	NSL	NSL	mg/kg	1800 J	1630 J	2120 J	1300 J	1340 J	1240 J
Manganese	1,800	26,000	1,800	mg/kg	92.1	72.3	100 J	63.1 J	51.8 J	40.7 J
Mercury	11	46	11	mg/kg	0.00552 J	< 0.0178 U	< 0.0184 U	< 0.0196 U	0.0248	< 0.0213 U
Nickel	1,500	22,000	1,500	mg/kg	15.7	10.1	15.7	17.3	51.6	63.5
Potassium	NSL	NSL	NSL	mg/kg	1110 J	957 J	1140 J	607 J	497 J	360 J
Selenium	390	5,800	390	mg/kg	< 2.17 U	< 2.1 U	< 2.41 U	< 2.34 U	< 2.21 U	< 2.3 U
Silver	390	5,800	390	mg/kg	0.945 J	0.252 J	0.827 J	1.54 J	0.825 J	0.732 J
Sodium	NSL	NSL	NSL	mg/kg	127 J	106 J	89 J	98.5 J	100 J	103 J
Thallium	0.78	12	0.78	mg/kg	< 1.63 U	< 1.57 U	< 1.81 U	< 1.75 U	< 8.3 U	< 8.64 U
Vanadium	390	5,800	390	mg/kg	12.8	10.8	16 J	8.61 J	9.15 J	8.28 J
Zinc	23,000	350,000	23,000	mg/kg	33.8	23.9	43.5	40.6	43.7	35.9
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.117 UJ	< 0.124 UJ	< 0.134 UJ	< 0.117 U	< 0.0796 UJ	< 0.102 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	< 0.00361 UJ	< 0.00373 UJ	< 0.00398 UJ	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
4,4-DDE	2	9.3	2	mg/kg	< 0.00361 U	< 0.00373 U	< 0.00398 UJ	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
4,4-DDT	1.9	8.5	1.9	mg/kg	< 0.00361 UJ	< 0.00373 UJ	< 0.00398 UJ	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Aldrin	0.039	0.18	0.039	mg/kg	< 0.00186 UJ	< 0.00192 UJ	< 0.00205 UJ	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
alpha-BHC	0.086	0.36	0.086	mg/kg	< 0.00186 U	< 0.00192 U	< 0.00205 U	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
alpha-Chlordane	1.7	7.7	1.7	mg/kg	< 0.00361 UJ	< 0.00373 UJ	< 0.00398 UJ	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Beta-BHC	0.3	1.3	0.3	mg/kg	< 0.00186 U	< 0.00192 U	< 0.00205 U	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
Chlordane	1.7	7.7	1.7	mg/kg	< 0.082 U	< 0.0848 U	< 0.0904 U	< 0.0873 UJ	< 0.0905 UJ	< 0.0941 UJ
delta-BHC	0.086	0.36	0.086	mg/kg	< 0.00186 U	< 0.00192 U	< 0.00205 U	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
Dieldrin	0.034	0.14	0.034	mg/kg	< 0.00361 U	< 0.00373 U	< 0.00398 U	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Endosulfan I	470	7,000	470	mg/kg	< 0.00186 U	< 0.00192 U	< 0.00205 UJ	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
Endosulfan II	470	7,000	470	mg/kg	< 0.00361 U	< 0.00373 U	< 0.00398 U	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Endosulfan sulfate	380	4,900	380	mg/kg	< 0.00361 U	< 0.00373 U	< 0.00398 U	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Endrin	19	250	19	mg/kg	< 0.00361 U	< 0.00373 U	< 0.00398 U	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Endrin aldehyde	19	250	19	mg/kg	< 0.00361 U	< 0.00373 U	< 0.00398 U	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ
Endrin ketone	19	250	19	mg/kg	< 0.00361 UJ	< 0.00373 UJ	< 0.00398 UJ	< 0.00384 UJ	< 0.00398 UJ	< 0.00414 UJ

				Location ID	MW-05	MW-05	SB-01	SB-01	SB-02	SB-02
				Sample Name	MW-05(0-0.5)	MW-05(0.5-2)	SB-01(0-0.5)	SB-01(0.5-2)	SB-02(0-0.5)	SB-02(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	< 0.00186 U	< 0.00192 U	< 0.00205 U	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
Heptachlor	0.13	0.63	0.13	mg/kg	< 0.00186 UJ	< 0.00192 UJ	< 0.00205 UJ	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	< 0.00186 U	< 0.00192 U	< 0.00205 U	< 0.00198 UJ	< 0.00205 UJ	< 0.00213 UJ
Methoxychlor	320	4,100	320	mg/kg	< 0.0186 UJ	< 0.0192 UJ	< 0.0205 UJ	< 0.0198 UJ	< 0.0205 UJ	< 0.0213 UJ
Toxaphene	0.49	2.1	0.49	mg/kg	< 0.186 UJ	< 0.192 UJ	< 0.205 UJ	< 0.198 UJ	< 0.205 UJ	< 0.213 UJ
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	< 0.729 U	< 0.753 U	< 0.803 U	< 0.779 U	< 0.803 U	< 0.835 U
2,4,5-T	630	8,200	630	mg/kg	< 0.00729 U	< 0.00753 U	< 0.00803 U	< 0.00779 U	< 0.00803 U	< 0.00835 U
2,4,5-TP (silvex)	510	6,600	510	mg/kg	< 0.00729 U	< 0.00753 U	< 0.00803 U	< 0.00779 U	< 0.00803 U	< 0.00835 U
2,4-D	700	9,600	700	mg/kg	< 0.00729 UJ	< 0.00753 UJ	< 0.00803 UJ	< 0.00779 UJ	< 0.00803 UJ	< 0.00835 UJ
2,4-DB	1,900	25,000	1,900	mg/kg	< 0.00729 UJ	< 0.00753 UJ	< 0.00803 U	< 0.00779 U	< 0.00803 U	< 0.00835 U
Dicamba	1,900	25,000	1,900	mg/kg	< 0.00729 U	< 0.00753 U	< 0.00803 U	< 0.00779 U	< 0.00803 U	< 0.00835 U
Dichlorprop	NSL	NSL	NSL	mg/kg	< 0.00729 U	< 0.00753 U	< 0.00803 U	< 0.00779 U	< 0.00803 U	< 0.00835 U
Dinoseb	63	820	63	mg/kg	< 0.00729 UJ	< 0.00753 UJ	< 0.00803 UJ	< 0.00779 UJ	< 0.00803 UJ	< 0.00835 UJ
MCPP	63	820	63	mg/kg	< 0.729 U	< 0.753 U	< 0.803 U	< 0.779 U	< 0.803 U	< 0.835 U
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.044 U	< 0.0394 U	< 0.0474 U	< 0.0433 U	< 0.045 U	--
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.0055 UJ	< 0.00493 UJ	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
2-Hexanone	200	1,300	200	mg/kg	< 0.011 UJ	< 0.00985 UJ	< 0.0119 UJ	< 0.0108 UJ	< 0.0113 UJ	--
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.011 UJ	< 0.00985 UJ	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
Acetone	61,000	670,000	61,000	mg/kg	< 0.011 UJ	< 0.00985 UJ	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
Benzene	1.2	5.1	1.2	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Bromochloromethane	150	630	150	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Bromoform	19	86	19	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Bromomethane	6.8	30	6.8	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
Carbon disulfide	770	3,500	770	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Chlorobenzene	280	1,300	280	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--

				Location ID	MW-05	MW-05	SB-01	SB-01	SB-02	SB-02
				Sample Name	MW-05(0-0.5)	MW-05(0.5-2)	SB-01(0-0.5)	SB-01(0.5-2)	SB-02(0-0.5)	SB-02(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
Chloromethane	110	460	110	mg/kg	< 0.011 UJ	< 0.00985 UJ	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 UJ	< 0.00541 UJ	< 0.00563 UJ	--
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
m,p-Xylene	550	2,400	550	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Methylene Chloride	57	1,000	57	mg/kg	< 0.011 U	< 0.00985 U	0.00519 J	0.00589 J	0.00404 J	--
o-Xylene	650	2,800	650	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Styrene	6,000	35,000	6,000	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Tetrachloroethene	24	100	24	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Toluene	4,900	47,000	4,900	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Trichloroethene	0.94	6	0.94	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Vinyl acetate	910	3,800	910	mg/kg	< 0.011 UJ	< 0.00985 UJ	< 0.0119 UJ	< 0.0108 UJ	< 0.0113 UJ	--
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.011 U	< 0.00985 U	< 0.0119 U	< 0.0108 U	< 0.0113 U	--
Xylenes, Total	580	2,500	580	mg/kg	< 0.0055 U	< 0.00493 U	< 0.00593 U	< 0.00541 U	< 0.00563 U	--
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	0.00719 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0364 UJ	< 0.0375 UJ	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.109 U	< 0.113 U	< 0.121 U	< 0.117 U	< 0.12 UJ	< 0.125 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	0.00747 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
2-Methylnaphthalene	240	3,000	240	mg/kg	0.00908 J	0.00626 J	< 0.0402 U	0.00689 J	0.386	< 0.0416 U
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0364 UJ	< 0.0375 UJ	< 0.0402 UJ	< 0.0389 UJ	< 0.0401 UJ	< 0.0416 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.186 U	< 0.192 U	< 0.205 U	< 0.199 U	< 0.205 UJ	< 0.212 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	0.0055 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U

				Location ID	MW-05	MW-05	SB-01	SB-01	SB-02	SB-02
				Sample Name	MW-05(0-0.5)	MW-05(0.5-2)	SB-01(0-0.5)	SB-01(0.5-2)	SB-02(0-0.5)	SB-02(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/3/2019	4/3/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	0.00645 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
4-Nitroaniline	27	110	27	mg/kg	< 0.0364 UJ	< 0.0375 UJ	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Acenaphthene	3,600	45,000	3,600	mg/kg	0.00338 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Acenaphthylene	3,600	45,000	3,600	mg/kg	0.00364 J	0.00182 J	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Acetophenone	7,800	120,000	7,800	mg/kg	0.00622 J	0.0106 J	0.00512 J	< 0.0389 U	< 0.0401 U	0.00513 J
Anthracene	18,000	230,000	18,000	mg/kg	0.00879 J	0.00512 J	< 0.0402 U	< 0.0389 U	0.0056 J	< 0.0416 U
Benzo[a]anthracene	1.1	21	1.1	mg/kg	0.0452	0.0438	< 0.0402 U	< 0.0389 U	0.00911 J	0.00524 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	0.0791	0.0724	< 0.0402 U	0.0061 J	0.00448 J	0.0043 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	0.21	0.136	0.00409 J	0.0105 J	0.015 J	0.00995 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	0.0494	0.0514	< 0.0402 U	0.0078 J	0.00997 J	< 0.0416 U
Benzo[k]fluoranthene	11	210	11	mg/kg	< 0.0364 U	0.0435	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	0.0509 J	0.0331 J	0.0102 J	0.00962 J	0.106	0.0869
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Carbazole [4]	230	950	230	mg/kg	0.0185 J	< 0.0375 UJ	0.00433 J	< 0.0389 UJ	0.00577 J	< 0.0416 UJ
Chrysene	110	2,100	110	mg/kg	0.0887	0.0759	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	0.0122 J	0.0136 J	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Dibenzofuran	78	1,200	78	mg/kg	0.00717 J	0.00481 J	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0729 U	< 0.0752 U	< 0.0805 U	< 0.078 U	< 0.0803 U	< 0.0833 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0729 U	< 0.0752 U	< 0.0805 U	< 0.078 U	< 0.0803 U	< 0.0833 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0729 U	< 0.0752 U	< 0.0805 U	< 0.078 U	< 0.0803 U	< 0.0833 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	< 0.0729 U	0.119	< 0.0805 U	< 0.078 U	< 0.0803 U	< 0.0833 U
Fluoranthene	2,400	30,000	2,400	mg/kg	0.15	0.13	< 0.0402 U	< 0.0389 U	0.0177 J	0.0105 J
Fluorene	2,400	30,000	2,400	mg/kg	0.00593 J	0.00708 J	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	0.0119 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	0.0477	0.0488	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Isophorone	570	2,400	570	mg/kg	0.00407 J	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Naphthalene	2	8.6	2	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	0.364	< 0.0416 U
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 U	< 0.0416 U
Pentachlorophenol	1	4	1	mg/kg	< 0.183 U	< 0.188 U	< 0.201 U	< 0.195 U	< 0.201 UJ	< 0.209 U
Phenanthrene	18,000	230,000	18,000	mg/kg	0.0452	0.0388	< 0.0402 U	0.00657 J	0.0149 J	< 0.0416 U
Phenol	19,000	250,000	19,000	mg/kg	< 0.0364 U	< 0.0375 U	< 0.0402 U	< 0.0389 U	< 0.0401 UJ	< 0.0416 U
Pyrene	1,800	23,000	1,800	mg/kg	0.108	0.0951	0.00244 J	0.00954 J	0.0159 J	0.00858 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	28.4	< 9.31 U	< 10.4 UJ	< 9.44 UJ	< 9.79 UJ	< 10.5 UJ
TPH (C12-C28)	520	2,200	520	mg/kg	10.5	< 9.31 U	< 10.4 UJ	< 9.44 UJ	< 9.79 UJ	< 10.5 UJ

					Location ID	MW-05	MW-05	SB-01	SB-01	SB-02	SB-02
					Sample Name	MW-05(0-0.5)	MW-05(0.5-2)	SB-01(0-0.5)	SB-01(0.5-2)	SB-02(0-0.5)	SB-02(0.5-2)
					Parent Sample ID						
					Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
					Sample Date	4/3/2019	4/3/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
Analyte	**EPA Regional Screening Levels [1]**		**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
	Residential	**Industrial**									
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	17.9	< 9.31 U	< 10.4 UJ	< 9.44 UJ	< 9.79 UJ	< 10.5 UJ
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 9.73 U	< 9.31 U	< 10.4 UJ	< 9.44 UJ	< 9.79 UJ	< 10.5 UJ

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in.html, is presented.

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

					Location ID	SB-02	SB-03	SB-03	SB-04	SB-04	SB-05
					Sample Name	SB-02(0.5-2)	SB-03(0-0.5)	SB-03(0.5-2)	SB-04(0-0.5)	SB-04(0.5-2)	SB-05(0-0.5)
					Parent Sample ID						
					Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5
					Sample Date	4/3/2019	4/1/2019	4/1/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]										
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	--	3050 J	3360 J	2,710	1,950	5,460
Antimony	31	470	31	mg/kg	--	0.366 J	< 2.95 UJ	0.6 J	0.406 J	< 2.56 UJ
Arsenic	0.68	3	0.68	mg/kg	--	**4.03**	**2.55**	**4.28**	**3.85**	**3.74**
Barium	15,000	220,000	15,000	mg/kg	--	34.1	48.9	41.5	41.1	72.7
Beryllium	160	2,300	160	mg/kg	--	0.231 J	0.212 J	0.206 J	0.188 J	0.246 J
Cadmium	71	980	71	mg/kg	--	0.298	0.236 J	0.325	0.285 J	0.43
Calcium	NSL	NSL	NSL	mg/kg	--	291000 J	310000 J	338,000	334,000	279,000
Chromium [3]	120,000	1,800,000	120,000	mg/kg	--	8.56	7.34	5.67	5.56	84.9
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	--	< 0.343 UJ	< 0.355 UJ	< 0.375 UJ	< 0.371 UJ	**0.718 J**
Cobalt	23	350	23	mg/kg	--	1.58 J	1.45 J	1.03 J	0.819 J	1.87 J
Copper	3,100	47,000	3,100	mg/kg	--	4.53 J	3.23 J	2.71	2.03	63.3
Iron	55,000	820,000	55,000	mg/kg	--	3,870	2,980	3,100	2,640	4,280
Lead	400	800	400	mg/kg	--	2.73 J	< 2.95 U	1.81 J	0.698 J	6.96
Magnesium	NSL	NSL	NSL	mg/kg	--	1700 J	1470 J	1650 J	1550 J	1520 J
Manganese	1,800	26,000	1,800	mg/kg	--	75.1 J	58.1 J	59.5	50.1	68.8
Mercury	11	46	11	mg/kg	--	< 0.0189 U	< 0.0181 U	< 0.0202 U	< 0.02 U	0.13
Nickel	1,500	22,000	1,500	mg/kg	--	5.74	4.34 J	4.97 J	3 J	56.5
Potassium	NSL	NSL	NSL	mg/kg	--	637 J	501 J	436 J	310 J	764 J
Selenium	390	5,800	390	mg/kg	--	< 2.25 U	< 2.36 U	< 2.5 U	< 2.43 U	< 2.05 U
Silver	390	5,800	390	mg/kg	--	< 0.45 U	< 0.472 U	< 0.5 U	< 0.485 U	2.65 J
Sodium	NSL	NSL	NSL	mg/kg	--	133	112 J	143	162	198
Thallium	0.78	12	0.78	mg/kg	--	< 8.45 U	< 8.85 U	< 9.38 U	< 9.1 U	< 7.68 U
Vanadium	390	5,800	390	mg/kg	--	10.8 J	7.78 J	11.3 J	12.1 J	13.2 J
Zinc	23,000	350,000	23,000	mg/kg	--	22.2	15.7	16.7	7.25 J	83.8
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	--	< 0.0872 UJ	< 0.112 UJ	< 0.095 UJ	< 0.0977 UJ	< 0.105 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 UJ	< 0.00408 UJ	< 0.00347 UJ
4,4-DDE	2	9.3	2	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 U	< 0.00408 U	< 0.00347 U
4,4-DDT	1.9	8.5	1.9	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 UJ	< 0.00408 UJ	< 0.00347 UJ
Aldrin	0.039	0.18	0.039	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 UJ	< 0.0021 UJ	< 0.00179 UJ
alpha-BHC	0.086	0.36	0.086	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 U	< 0.0021 U	< 0.00179 U
alpha-Chlordane	1.7	7.7	1.7	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 UJ	< 0.00408 UJ	< 0.00347 UJ
Beta-BHC	0.3	1.3	0.3	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 U	< 0.0021 U	< 0.00179 U
Chlordane	1.7	7.7	1.7	mg/kg	--	< 0.0856 UJ	< 0.0893 UJ	< 0.0933 U	< 0.0926 U	< 0.079 U
delta-BHC	0.086	0.36	0.086	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 U	< 0.0021 U	< 0.00179 U
Dieldrin	0.034	0.14	0.034	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 U	< 0.00408 U	< 0.00347 U
Endosulfan I	470	7,000	470	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 U	< 0.0021 U	< 0.00179 U
Endosulfan II	470	7,000	470	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 U	< 0.00408 U	< 0.00347 U
Endosulfan sulfate	380	4,900	380	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 U	< 0.00408 U	< 0.00347 U
Endrin	19	250	19	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 U	< 0.00408 U	< 0.00347 U
Endrin aldehyde	19	250	19	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 U	< 0.00408 U	< 0.00347 U
Endrin ketone	19	250	19	mg/kg	--	< 0.00377 UJ	< 0.00393 UJ	< 0.0041 UJ	< 0.00408 UJ	< 0.00347 UJ

					Location ID	SB-02	SB-03	SB-03	SB-04	SB-04	SB-05
					Sample Name	SB-02(0.5-2)	SB-03(0-0.5)	SB-03(0.5-2)	SB-04(0-0.5)	SB-04(0.5-2)	SB-05(0-0.5)
					Parent Sample ID						
					Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5
					Sample Date	4/3/2019	4/1/2019	4/1/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]										
Analyte	Residential	Industrial	Project Screening Level [2]	Unit	Result	Result	Result	Result	Result	Result	Result
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 U	< 0.0021 U	< 0.00179 U	
Heptachlor	0.13	0.63	0.13	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 UJ	< 0.0021 UJ	< 0.00179 UJ	
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	--	< 0.00194 UJ	< 0.00202 UJ	< 0.00211 U	< 0.0021 U	< 0.00179 U	
Methoxychlor	320	4,100	320	mg/kg	--	< 0.0194 UJ	< 0.0202 UJ	< 0.0211 UJ	< 0.021 UJ	< 0.0179 UJ	
Toxaphene	0.49	2.1	0.49	mg/kg	--	< 0.194 UJ	< 0.202 UJ	< 0.211 UJ	< 0.21 UJ	< 0.179 UJ	
Herbicides (SW8151A)											
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	--	< 0.765 U	< 0.793 U	< 0.832 U	< 0.822 U	< 0.702 U	
2,4,5-T	630	8,200	630	mg/kg	--	< 0.00765 U	< 0.00793 U	< 0.00832 U	< 0.00822 U	< 0.00702 U	
2,4,5-TP (silvex)	510	6,600	510	mg/kg	--	< 0.00765 U	< 0.00793 U	< 0.00832 U	< 0.00822 U	< 0.00702 U	
2,4-D	700	9,600	700	mg/kg	--	< 0.00765 UJ	< 0.00793 UJ	< 0.00832 UJ	< 0.00822 UJ	< 0.00702 UJ	
2,4-DB	1,900	25,000	1,900	mg/kg	--	< 0.00765 U	< 0.00793 U	< 0.00832 U	< 0.00822 U	< 0.00702 U	
Dicamba	1,900	25,000	1,900	mg/kg	--	< 0.00765 U	< 0.00793 UJ	< 0.00832 U	< 0.00822 U	< 0.00702 U	
Dichlorprop	NSL	NSL	NSL	mg/kg	--	< 0.00765 U	< 0.00793 U	< 0.00832 U	< 0.00822 U	< 0.00702 U	
Dinoseb	63	820	63	mg/kg	--	< 0.00765 UJ	< 0.00793 R	< 0.00832 UJ	< 0.00822 UJ	< 0.00702 UJ	
MCPP	63	820	63	mg/kg	--	< 0.765 U	< 0.793 UJ	< 0.832 U	< 0.822 U	< 0.702 U	
Volatile Organic Compounds (SW8260C)											
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 UJ	< 0.00525 UJ	--	
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0458 U	< 0.034 U	< 0.0357 U	< 0.0439 U	< 0.042 U	--	
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.00573 UJ	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--	
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--	
2-Hexanone	200	1,300	200	mg/kg	< 0.0115 UJ	< 0.0085 UJ	< 0.00892 UJ	< 0.011 U	< 0.0105 U	--	
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.0115 UJ	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--	
Acetone	61,000	670,000	61,000	mg/kg	0.00924 J	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--	
Benzene	1.2	5.1	1.2	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
Bromochloromethane	150	630	150	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
Bromoform	19	86	19	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
Bromomethane	6.8	30	6.8	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--	
Carbon disulfide	770	3,500	770	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 UJ	< 0.0105 UJ	--	
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
Chlorobenzene	280	1,300	280	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--	
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 UJ	< 0.0105 UJ	--	

				Location ID	SB-02	SB-03	SB-03	SB-04	SB-04	SB-05
				Sample Name	SB-02(0.5-2)	SB-03(0-0.5)	SB-03(0.5-2)	SB-04(0-0.5)	SB-04(0.5-2)	SB-05(0-0.5)
				Parent Sample ID						
				Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5
				Sample Date	4/3/2019	4/1/2019	4/1/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--
Chloromethane	110	460	110	mg/kg	< 0.0115 UJ	< 0.0085 U	< 0.00892 U	< 0.011 U	< 0.0105 U	--
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.00573 U	< 0.00425 UJ	< 0.00446 UJ	< 0.00549 U	< 0.00525 U	--
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	0.00165 J	< 0.00525 U	--
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
m,p-Xylene	550	2,400	550	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Methylene Chloride	57	1,000	57	mg/kg	< 0.0115 U	0.00315 J	0.00237 J	< 0.011 U	< 0.0105 U	--
o-Xylene	650	2,800	650	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Styrene	6,000	35,000	6,000	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Tetrachloroethene	24	100	24	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Toluene	4,900	47,000	4,900	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Trichloroethene	0.94	6	0.94	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Vinyl acetate	910	3,800	910	mg/kg	< 0.0115 UJ	< 0.0085 UJ	< 0.00892 UJ	< 0.011 U	< 0.0105 U	--
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.0115 U	< 0.0085 U	< 0.00892 U	< 0.011 UJ	< 0.0105 UJ	--
Xylenes, Total	580	2,500	580	mg/kg	< 0.00573 U	< 0.00425 U	< 0.00446 U	< 0.00549 U	< 0.00525 U	--
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	--	< 0.115 U	< 0.119 U	< 0.125 U	< 0.124 U	< 0.21 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2-Chlorophenol	390	5,800	390	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2-Methylnaphthalene	240	3,000	240	mg/kg	--	0.132	< 0.0396 U	< 0.0416 U	0.0039 J	< 0.07 U
2-Methylphenol	3,200	41,000	3,200	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2-Nitroaniline	630	8,000	630	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
2-Nitrophenol	3.2	15	3.2	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	--	0.00967 J	< 0.0396 U	0.014 J	< 0.0412 U	< 0.07 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
3-Nitroaniline	6.3	82	6.3	mg/kg	--	0.0838 J	< 0.0396 UJ	< 0.0416 UJ	< 0.0412 UJ	< 0.07 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	--	< 0.195 U	< 0.202 U	< 0.212 U	< 0.21 U	< 0.357 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U

					Location ID	SB-02	SB-03	SB-03	SB-04	SB-04	SB-05
					Sample Name	SB-02(0.5-2)	SB-03(0-0.5)	SB-03(0.5-2)	SB-04(0-0.5)	SB-04(0.5-2)	SB-05(0-0.5)
					Parent Sample ID						
					Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5
					Sample Date	4/3/2019	4/1/2019	4/1/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]										
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
4-Nitroaniline	27	110	27	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Acenaphthene	3,600	45,000	3,600	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Acenaphthylene	3,600	45,000	3,600	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Acetophenone	7,800	120,000	7,800	mg/kg	--	0.00877 J	0.00505 J	0.0076 J	< 0.0412 U	0.0141 J
Anthracene	18,000	230,000	18,000	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Benzo[a]anthracene	1.1	21	1.1	mg/kg	--	0.00913 J	0.00868 J	< 0.0416 U	< 0.0412 U	< 0.07 U
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	--	0.0135 J	0.0117 J	0.00764 J	< 0.0412 U	< 0.07 U
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	--	0.0247 J	0.0218 J	0.0119 J	< 0.0412 U	0.0106 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	--	0.0108 J	0.00932 J	0.00706 J	< 0.0412 U	< 0.07 U
Benzo[k]fluoranthene	11	210	11	mg/kg	--	< 0.0382 U	< 0.0396 U	0.00446 J	< 0.0412 U	< 0.07 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	--	0.0185 J	0.0108 J	< 0.0832 U	< 0.0825 U	0.529
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Carbazole [4]	230	950	230	mg/kg	--	0.0105 J	0.00396 J	< 0.0416 UJ	< 0.0412 UJ	< 0.07 UJ
Chrysene	110	2,100	110	mg/kg	--	< 0.0382 U	< 0.0396 U	0.00981 J	< 0.0412 U	< 0.07 U
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Dibenzofuran	78	1,200	78	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	--	< 0.0765 U	< 0.0792 U	< 0.0832 U	< 0.0825 U	< 0.14 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	--	< 0.0765 U	< 0.0792 U	< 0.0832 U	< 0.0825 U	< 0.14 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	--	< 0.0765 U	< 0.0792 U	< 0.0832 U	< 0.0825 U	< 0.14 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	--	< 0.0765 U	< 0.0792 U	< 0.0832 U	< 0.0825 U	< 0.14 U
Fluoranthene	2,400	30,000	2,400	mg/kg	--	0.0277 J	0.0214 J	0.0124 J	< 0.0412 U	0.0079 J
Fluorene	2,400	30,000	2,400	mg/kg	--	0.0158 J	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Hexachloroethane	1.8	8	1.8	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	--	< 0.0382 U	< 0.0396 U	0.00703 J	< 0.0412 U	< 0.07 U
Isophorone	570	2,400	570	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	0.00886 J
Naphthalene	2	8.6	2	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Nitrobenzene	5.1	22	5.1	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	--	< 0.0382 U	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Pentachlorophenol	1	4	1	mg/kg	--	< 0.191 U	< 0.198 U	< 0.208 U	< 0.207 U	< 0.351 U
Phenanthrene	18,000	230,000	18,000	mg/kg	--	0.0453	< 0.0396 U	< 0.0416 U	< 0.0412 U	< 0.07 U
Phenol	19,000	250,000	19,000	mg/kg	--	0.0205 J	< 0.0396 U	0.0484	< 0.0412 U	< 0.07 U
Pyrene	1,800	23,000	1,800	mg/kg	--	0.0356 J	0.0154 J	0.0102 J	0.00228 J	< 0.07 U
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	--	< 9.46 U	< 10.3 U	< 10.3 UJ	< 9.95 UJ	< 8.47 UJ
TPH (C12-C28)	520	2,200	520	mg/kg	--	< 9.46 U	< 10.3 U	< 10.3 UJ	< 9.95 UJ	< 8.47 UJ

					Location ID	SB-02	SB-03	SB-03	SB-04	SB-04	SB-05
					Sample Name	SB-02(0.5-2)	SB-03(0-0.5)	SB-03(0.5-2)	SB-04(0-0.5)	SB-04(0.5-2)	SB-05(0-0.5)
					Parent Sample ID						
					Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5
					Sample Date	4/3/2019	4/1/2019	4/1/2019	4/2/2019	4/2/2019	4/2/2019
Analyte	**EPA Regional Screening Levels [1]**		**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
	Residential	**Industrial**									
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	--	< 9.46 U	< 10.3 U	< 10.3 UJ	< 9.95 UJ	< 8.47 UJ
TPH-GRO (C6-C10)	97	560	97	mg/kg	--	< 9.46 U	< 10.3 U	< 10.3 UJ	< 9.95 UJ	< 8.47 UJ

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

				Location ID	SB-05	SB-05	SB-06	SB-06	SB-07	SB-07
				Sample Name	SB-05(0.5-2)	SB-05(0-0.5)	SB-06(0.5-2)	SB-06(0-0.5)	SB-07(0-0.5)	SB-07(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/3/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	5,550	--	5,420	6,100	10300 J	5,200
Antimony	31	470	31	mg/kg	0.308 J	--	0.333 J	< 2.7 UJ	< 2.73 UJ	< 2.73 UJ
Arsenic	0.68	3	0.68	mg/kg	**3.62**	--	**3.25**	**4.2**	**4.55**	**3.94**
Barium	15,000	220,000	15,000	mg/kg	82 J	--	49.8	51.8	53.3	54.7
Beryllium	160	2,300	160	mg/kg	0.29 J	--	0.275 J	0.324	0.41	0.278
Cadmium	71	980	71	mg/kg	0.29 J	--	0.467	0.514	0.345 J	0.278 J
Calcium	NSL	NSL	NSL	mg/kg	291,000	--	297,000	277,000	255,000	334,000
Chromium [3]	120,000	1,800,000	120,000	mg/kg	49.6	--	8.57	10.2	12.5	8.31
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	**3.1 J**	--	< 0.358 UJ	< 0.35 UJ	< 0.341 UJ	0.123 J
Cobalt	23	350	23	mg/kg	1.95	--	1.97	2.27 J	2.57	2.21 J
Copper	3,100	47,000	3,100	mg/kg	11.2 J	--	16.7	20.9	7.19	4.67
Iron	55,000	820,000	55,000	mg/kg	3,560	--	4,210	5,380	6160 J	4,090
Lead	400	800	400	mg/kg	2.63 J	--	5.61	8.9	7.79	2.37 J
Magnesium	NSL	NSL	NSL	mg/kg	1490 J	--	1520 J	1910 J	2290 J	1400 J
Manganese	1,800	26,000	1,800	mg/kg	67.3	--	64.9	89.6	112	63.9
Mercury	11	46	11	mg/kg	< 0.0199 UJ	--	< 0.0184 U	< 0.0192 U	< 0.0182 U	< 0.0197 UJ
Nickel	1,500	22,000	1,500	mg/kg	11.9	--	30.8	37.8	9.14	6.22
Potassium	NSL	NSL	NSL	mg/kg	705 J	--	680 J	987 J	1290 J	628 J
Selenium	390	5,800	390	mg/kg	< 2.42 U	--	< 2.34 U	< 2.16 U	< 2.19 U	< 2.18 U
Silver	390	5,800	390	mg/kg	0.266 J	--	0.298 J	0.324 J	< 0.438 U	< 0.436 U
Sodium	NSL	NSL	NSL	mg/kg	248	--	115 J	119	93.7 J	92.8 J
Thallium	0.78	12	0.78	mg/kg	< 1.81 U	--	< 1.75 U	< 8.11 U	< 1.64 U	< 8.18 U
Vanadium	390	5,800	390	mg/kg	11.8 J	--	10.9 J	11 J	13.4	11.7 J
Zinc	23,000	350,000	23,000	mg/kg	21.1 J	--	60.6	63.8	31	20.9
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.117 UJ	--	< 0.152 UJ	< 0.128 UJ	< 0.118 UJ	< 0.145 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	< 0.00397 UJ	--	< 0.00391 UJ	< 0.00383 UJ	< 0.00371 UJ	< 0.00387 UJ
4,4-DDE	2	9.3	2	mg/kg	< 0.00397 U	--	< 0.00391 U	< 0.00383 U	< 0.00371 U	< 0.00387 U
4,4-DDT	1.9	8.5	1.9	mg/kg	< 0.00397 UJ	--	< 0.00391 UJ	< 0.00383 UJ	< 0.00371 UJ	< 0.00387 UJ
Aldrin	0.039	0.18	0.039	mg/kg	< 0.00204 UJ	--	< 0.00202 UJ	< 0.00197 UJ	< 0.00191 UJ	< 0.00199 UJ
alpha-BHC	0.086	0.36	0.086	mg/kg	< 0.00204 U	--	< 0.00202 U	< 0.00197 U	< 0.00191 U	< 0.00199 U
alpha-Chlordane	1.7	7.7	1.7	mg/kg	< 0.00397 UJ	--	< 0.00391 UJ	< 0.00383 UJ	< 0.00371 UJ	< 0.00387 UJ
Beta-BHC	0.3	1.3	0.3	mg/kg	< 0.00204 U	--	< 0.00202 U	< 0.00197 U	< 0.00191 U	< 0.00199 U
Chlordane	1.7	7.7	1.7	mg/kg	< 0.0902 U	--	< 0.0889 U	< 0.0871 U	< 0.0844 U	< 0.0879 U
delta-BHC	0.086	0.36	0.086	mg/kg	< 0.00204 U	--	< 0.00202 U	< 0.00197 U	< 0.00191 U	< 0.00199 U
Dieldrin	0.034	0.14	0.034	mg/kg	< 0.00397 U	--	< 0.00391 U	< 0.00383 U	< 0.00371 U	< 0.00387 U
Endosulfan I	470	7,000	470	mg/kg	< 0.00204 U	--	< 0.00202 U	< 0.00197 U	< 0.00191 U	< 0.00199 U
Endosulfan II	470	7,000	470	mg/kg	< 0.00397 U	--	< 0.00391 U	< 0.00383 U	< 0.00371 U	< 0.00387 U
Endosulfan sulfate	380	4,900	380	mg/kg	< 0.00397 U	--	< 0.00391 U	< 0.00383 U	< 0.00371 U	< 0.00387 U
Endrin	19	250	19	mg/kg	< 0.00397 U	--	< 0.00391 U	< 0.00383 U	< 0.00371 U	< 0.00387 U
Endrin aldehyde	19	250	19	mg/kg	< 0.00397 U	--	< 0.00391 U	< 0.00383 U	< 0.00371 U	< 0.00387 U
Endrin ketone	19	250	19	mg/kg	< 0.00397 UJ	--	< 0.00391 UJ	< 0.00383 UJ	< 0.00371 UJ	< 0.00387 UJ

				Location ID	SB-05	SB-05	SB-06	SB-06	SB-07	SB-07
				Sample Name	SB-05(0.5-2)	SB-05(0-0.5)	SB-06(0.5-2)	SB-06(0-0.5)	SB-07(0-0.5)	SB-07(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/3/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	< 0.00204 U	--	< 0.00202 U	< 0.00197 U	< 0.00191 U	< 0.00199 U
Heptachlor	0.13	0.63	0.13	mg/kg	< 0.00204 UJ	--	< 0.00202 UJ	< 0.00197 UJ	< 0.00191 UJ	< 0.00199 UJ
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	< 0.00204 U	--	< 0.00202 U	< 0.00197 U	< 0.00191 U	< 0.00199 U
Methoxychlor	320	4,100	320	mg/kg	< 0.0204 UJ	--	< 0.0202 UJ	< 0.0197 UJ	< 0.0191 UJ	< 0.0199 UJ
Toxaphene	0.49	2.1	0.49	mg/kg	< 0.204 UJ	--	< 0.202 UJ	< 0.197 UJ	< 0.191 UJ	< 0.199 UJ
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	< 0.805 U	--	< 0.793 U	< 0.777 U	< 0.75 U	< 0.785 U
2,4,5-T	630	8,200	630	mg/kg	< 0.00805 U	--	< 0.00793 U	< 0.00777 U	< 0.0075 U	< 0.00785 U
2,4,5-TP (silvex)	510	6,600	510	mg/kg	< 0.00805 U	--	< 0.00793 U	< 0.00777 U	< 0.0075 U	< 0.00785 U
2,4-D	700	9,600	700	mg/kg	< 0.00805 UJ	--	< 0.00793 UJ	< 0.00777 UJ	< 0.0075 UJ	< 0.00785 UJ
2,4-DB	1,900	25,000	1,900	mg/kg	< 0.00805 U	--	< 0.00793 U	< 0.00777 U	< 0.0075 U	< 0.00785 U
Dicamba	1,900	25,000	1,900	mg/kg	< 0.00805 U	--	< 0.00793 U	< 0.00777 U	< 0.0075 U	< 0.00785 U
Dichlorprop	NSL	NSL	NSL	mg/kg	< 0.00805 U	--	< 0.00793 U	< 0.00777 U	< 0.0075 U	< 0.00785 U
Dinoseb	63	820	63	mg/kg	< 0.00805 UJ	--	< 0.00793 UJ	< 0.00777 UJ	< 0.0075 UJ	< 0.00785 UJ
MCPP	63	820	63	mg/kg	< 0.805 U	--	< 0.793 U	< 0.777 U	< 0.75 U	< 0.785 U
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.0053 UJ	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.0053 UJ	< 0.0048 U	< 0.00616 U	< 0.00606 UJ	< 0.00521 U	< 0.00546 U
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0424 U	< 0.0384 U	< 0.0493 U	< 0.0484 U	< 0.0417 U	< 0.0437 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.0053 UJ	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.0053 U	< 0.0048 UJ	< 0.00616 U	< 0.00606 UJ	< 0.00521 UJ	< 0.00546 UJ
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 UJ	< 0.00521 U	< 0.00546 U
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.0106 U	< 0.00959 U	< 0.0123 U	< 0.0121 U	< 0.0104 U	< 0.0109 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.0106 U	< 0.00959 U	0.00617 J	< 0.0121 U	< 0.0104 U	< 0.0109 U
2-Hexanone	200	1,300	200	mg/kg	< 0.0106 U	< 0.00959 UJ	< 0.0123 U	< 0.0121 UJ	< 0.0104 UJ	< 0.0109 UJ
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.0106 U	< 0.00959 UJ	< 0.0123 U	< 0.0121 UJ	< 0.0104 UJ	< 0.0109 UJ
Acetone	61,000	670,000	61,000	mg/kg	< 0.0106 UJ	< 0.00959 UJ	< 0.0123 U	< 0.0121 U	< 0.0104 UJ	< 0.0109 UJ
Benzene	1.2	5.1	1.2	mg/kg	< 0.0053 U	< 0.0048 U	0.00327 J	< 0.00606 U	< 0.00521 U	< 0.00546 U
Bromochloromethane	150	630	150	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Bromoform	19	86	19	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.0106 U	< 0.00959 U	< 0.0123 U	< 0.0121 UJ	< 0.0104 U	< 0.0109 U
Carbon disulfide	770	3,500	770	mg/kg	< 0.0106 UJ	< 0.00959 U	< 0.0123 U	< 0.0121 U	< 0.0104 U	< 0.0109 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.0106 UJ	< 0.00959 U	< 0.0123 U	< 0.0121 U	< 0.0104 U	< 0.0109 U

				Location ID	SB-05	SB-05	SB-06	SB-06	SB-07	SB-07
				Sample Name	SB-05(0.5-2)	SB-05(0-0.5)	SB-06(0.5-2)	SB-06(0-0.5)	SB-07(0-0.5)	SB-07(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/3/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.0106 U	< 0.00959 U	< 0.0123 U	< 0.0121 U	< 0.0104 U	< 0.0109 U
Chloromethane	110	460	110	mg/kg	< 0.0106 U	< 0.00959 UJ	< 0.0123 U	< 0.0121 UJ	< 0.0104 UJ	< 0.0109 UJ
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 UJ	< 0.00521 U	< 0.00546 U
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.0053 U	< 0.0048 U	0.00136 J	< 0.00606 U	< 0.00521 U	< 0.00546 U
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Methylene Chloride	57	1,000	57	mg/kg	< 0.0106 U	< 0.00959 U	< 0.0123 U	< 0.0121 U	< 0.0104 U	< 0.0109 U
o-Xylene	650	2,800	650	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Tetrachloroethene	24	100	24	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Toluene	4,900	47,000	4,900	mg/kg	< 0.0053 U	< 0.0048 U	0.00359 J	< 0.00606 U	< 0.00521 U	< 0.00546 U
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.0106 U	< 0.00959 UJ	< 0.0123 U	< 0.0121 UJ	< 0.0104 UJ	< 0.0109 UJ
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.0106 UJ	< 0.00959 U	< 0.0123 U	< 0.0121 U	< 0.0104 U	< 0.0109 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.0053 U	< 0.0048 U	< 0.00616 U	< 0.00606 U	< 0.00521 U	< 0.00546 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.121 R	--	< 0.119 U	< 0.117 U	< 0.112 U	< 0.118 R
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2-Methylnaphthalene	240	3,000	240	mg/kg	< 0.0403 U	--	0.0408	< 0.0389 U	0.00318 J	< 0.0392 UJ
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
3&4-methylphenol	3,200	41,000	3,200	mg/kg	< 0.0403 UJ	--	< 0.0396 U	0.0176 J	< 0.0374 U	< 0.0392 UJ
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0403 R	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0403 UJ	--	< 0.0396 UJ	< 0.0389 UJ	< 0.0374 UJ	< 0.0392 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.206 R	--	< 0.202 U	< 0.198 U	< 0.191 U	< 0.2 R
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ

				Location ID	SB-05	SB-05	SB-06	SB-06	SB-07	SB-07
				Sample Name	SB-05(0.5-2)	SB-05(0-0.5)	SB-06(0.5-2)	SB-06(0-0.5)	SB-07(0-0.5)	SB-07(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/3/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0403 R	--	< 0.0396 UJ	< 0.0389 UJ	< 0.0374 UJ	< 0.0392 UJ
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
4-Nitroaniline	27	110	27	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Acenaphthene	3,600	45,000	3,600	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Acenaphthylene	3,600	45,000	3,600	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Acetophenone	7,800	120,000	7,800	mg/kg	< 0.0403 U	--	0.0157 J	0.0532	0.00493 J	0.0066 J
Anthracene	18,000	230,000	18,000	mg/kg	< 0.0403 UJ	--	0.00577 J	< 0.0389 U	0.00476 J	0.00699 J
Benzo[a]anthracene	1.1	21	1.1	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	0.061	0.0844 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	< 0.0403 UJ	--	0.00875 J	0.00839 J	0.0848	**0.119 J**
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	< 0.0403 U	--	0.0121 J	0.0127 J	0.159	0.221 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	< 0.0403 U	--	0.0352 J	0.0263 J	0.055	0.0761 J
Benzo[k]fluoranthene	11	210	11	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	0.0564	0.074 J
Benzyl butyl phthalate	290	1,200	290	mg/kg	0.0246 J	--	0.128	0.13	0.00813 J	< 0.0786 UJ
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0403 U	--	0.0805	0.0787	< 0.0374 U	< 0.0392 UJ
Carbazole [4]	230	950	230	mg/kg	< 0.0403 UJ	--	< 0.0396 UJ	< 0.0389 UJ	0.0185 J	0.0254 J
Chrysene	110	2,100	110	mg/kg	< 0.0403 U	--	0.0125 J	0.00949 J	0.0956	0.133 J
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	0.0149 J	0.0176 J
Dibenzofuran	78	1,200	78	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0806 U	--	< 0.0792 U	< 0.0779 U	< 0.0749 U	< 0.0786 UJ
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0806 U	--	< 0.0792 U	0.0482 J	< 0.0749 U	< 0.0786 UJ
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0806 U	--	< 0.0792 U	< 0.0779 U	< 0.0749 U	< 0.0786 UJ
Di-n-octyl phthalate	630	8,200	630	mg/kg	< 0.0806 U	--	< 0.0792 U	< 0.0779 U	< 0.0749 U	< 0.0786 UJ
Fluoranthene	2,400	30,000	2,400	mg/kg	< 0.0403 U	--	0.029 J	0.0106 J	0.16	0.242 J
Fluorene	2,400	30,000	2,400	mg/kg	< 0.0403 U	--	0.00694 J	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0403 R	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 R
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	< 0.0403 U	--	0.0108 J	0.00996 J	0.0511	0.0721 J
Isophorone	570	2,400	570	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Naphthalene	2	8.6	2	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0403 U	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0403 R	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Pentachlorophenol	1	4	1	mg/kg	< 0.202 UJ	--	< 0.198 U	< 0.195 U	< 0.187 U	< 0.197 UJ
Phenanthrene	18,000	230,000	18,000	mg/kg	< 0.0403 U	--	0.0259 J	< 0.0389 U	0.0379	0.0606 J
Phenol	19,000	250,000	19,000	mg/kg	< 0.0403 UJ	--	< 0.0396 U	< 0.0389 U	< 0.0374 U	< 0.0392 UJ
Pyrene	1,800	23,000	1,800	mg/kg	< 0.0403 U	--	0.0262 J	0.00887 J	0.113	0.167 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 9.36 UJ	--	< 9.69 U	< 9.16 U	< 9.27 U	< 9.77 U
TPH (C12-C28)	520	2,200	520	mg/kg	< 9.36 UJ	--	< 9.69 U	< 9.16 U	< 9.27 U	< 9.77 U

				Location ID	SB-05	SB-05	SB-06	SB-06	SB-07	SB-07
				Sample Name	SB-05(0.5-2)	SB-05(0-0.5)	SB-06(0.5-2)	SB-06(0-0.5)	SB-07(0-0.5)	SB-07(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/3/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
Analyte	**EPA Regional Screening Levels [1]**		**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
	Residential	**Industrial**								
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 9.36 UJ	--	< 9.69 U	< 9.16 U	< 9.27 U	< 9.77 U
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 9.36 UJ	--	< 9.69 U	< 9.16 U	< 9.27 U	< 9.77 U

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

				Location ID	SB-08	SB-08	SB-09	SB-09	SB-10	SB-10
				Sample Name	SB-08(0-0.5)	SB-08(0.5-2)	SB-09(0-0.5)	SB-09(0.5-2)	SB-10(0-0.5)	SB-10(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	7020 J	8460 J	3430 J	2760 J	2410 J	2010 J
Antimony	31	470	31	mg/kg	0.488 J	0.334 J	0.481 J	0.369 J	0.337 J	0.393 J
Arsenic	0.68	3	0.68	mg/kg	**5.89**	**4.62**	**3.81**	**3.13**	**3.38**	**2.82**
Barium	15,000	220,000	15,000	mg/kg	49	55.8	47.1	42.1	47.5	38.5
Beryllium	160	2,300	160	mg/kg	0.315	0.322	0.192 J	0.169 J	0.15 J	0.133 J
Cadmium	71	980	71	mg/kg	0.341 J	0.322 J	0.24 J	0.244 J	0.246 J	0.285 J
Calcium	NSL	NSL	NSL	mg/kg	270,000	284,000	322,000	325,000	315,000	341,000
Chromium [3]	120,000	1,800,000	120,000	mg/kg	14.4	10.4	6.26	5.77	4.54	4.52
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	< 0.328 UJ	< 0.34 UJ	< 0.364 UJ	< 0.376 UJ	< 0.368 UJ	< 0.39 UJ
Cobalt	23	350	23	mg/kg	2.15	2.2	1.23	0.931	0.998	0.653
Copper	3,100	47,000	3,100	mg/kg	16	8.04	3.32	1.77	3.46	1.48
Iron	55,000	820,000	55,000	mg/kg	5410 J	4980 J	2800 J	2330 J	1960 J	1650 J
Lead	400	800	400	mg/kg	7.57	6.09	4.51	2.44 J	6.49	2.12 J
Magnesium	NSL	NSL	NSL	mg/kg	1850 J	1920 J	1500 J	1440 J	1320 J	1320 J
Manganese	1,800	26,000	1,800	mg/kg	93.4	89.9	60.2	45.8	48.5	35.9
Mercury	11	46	11	mg/kg	0.00618 J	< 0.0182 U	< 0.0198 U	< 0.0212 U	0.00556 J	< 0.0216 U
Nickel	1,500	22,000	1,500	mg/kg	11.3	8.12	3.69	2.92	3.28	2.54
Potassium	NSL	NSL	NSL	mg/kg	1020 J	983 J	565 J	388 J	356 J	240 J
Selenium	390	5,800	390	mg/kg	< 2.1 U	< 2.22 U	< 2.4 U	< 2.5 U	< 2.4 U	< 2.54 U
Silver	390	5,800	390	mg/kg	1.34 J	0.856 J	< 0.481 U	< 0.5 U	< 0.481 U	< 0.507 U
Sodium	NSL	NSL	NSL	mg/kg	116 J	95.9 J	131 J	139 J	140 J	149 J
Thallium	0.78	12	0.78	mg/kg	< 1.57 U	< 1.67 U	< 1.8 U	< 1.87 U	< 1.8 U	< 1.9 U
Vanadium	390	5,800	390	mg/kg	12	11.1	9.3	8.68	7.14	7.01
Zinc	23,000	350,000	23,000	mg/kg	31.4	23.7	27.5	16.3	21.6	10.7
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.132 UJ	< 0.116 UJ	< 0.133 UJ	< 0.133 UJ	< 0.129 UJ	< 0.148 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	< 0.00359 UJ	< 0.00368 UJ	< 0.00396 UJ	< 0.00412 UJ	< 0.00404 UJ	< 0.00425 UJ
4,4-DDE	2	9.3	2	mg/kg	< 0.00359 U	< 0.00368 U	< 0.00396 UJ	< 0.00412 U	< 0.00404 U	< 0.00425 U
4,4-DDT	1.9	8.5	1.9	mg/kg	< 0.00359 UJ	< 0.00368 UJ	< 0.00396 UJ	< 0.00412 UJ	< 0.00404 UJ	< 0.00425 UJ
Aldrin	0.039	0.18	0.039	mg/kg	< 0.00185 UJ	< 0.0019 UJ	< 0.00204 UJ	< 0.00212 UJ	< 0.00208 UJ	< 0.00219 UJ
alpha-BHC	0.086	0.36	0.086	mg/kg	< 0.00185 U	< 0.0019 U	< 0.00204 UJ	< 0.00212 U	< 0.00208 U	< 0.00219 U
alpha-Chlordane	1.7	7.7	1.7	mg/kg	< 0.00359 UJ	< 0.00368 UJ	< 0.00396 UJ	< 0.00412 UJ	< 0.00404 UJ	< 0.00425 UJ
Beta-BHC	0.3	1.3	0.3	mg/kg	< 0.00185 U	< 0.0019 U	< 0.00204 UJ	< 0.00212 U	< 0.00208 U	< 0.00219 U
Chlordane	1.7	7.7	1.7	mg/kg	< 0.0817 U	< 0.0837 U	< 0.0899 UJ	< 0.0935 U	< 0.0918 U	< 0.0965 U
delta-BHC	0.086	0.36	0.086	mg/kg	< 0.00185 U	< 0.0019 U	< 0.00204 UJ	< 0.00212 U	< 0.00208 U	< 0.00219 U
Dieldrin	0.034	0.14	0.034	mg/kg	< 0.00359 U	< 0.00368 U	< 0.00396 UJ	< 0.00412 U	< 0.00404 U	< 0.00425 U
Endosulfan I	470	7,000	470	mg/kg	< 0.00185 U	< 0.0019 U	< 0.00204 UJ	< 0.00212 U	< 0.00208 U	< 0.00219 U
Endosulfan II	470	7,000	470	mg/kg	< 0.00359 U	< 0.00368 U	< 0.00396 UJ	< 0.00412 U	< 0.00404 U	< 0.00425 U
Endosulfan sulfate	380	4,900	380	mg/kg	< 0.00359 U	< 0.00368 U	< 0.00396 UJ	< 0.00412 U	< 0.00404 U	< 0.00425 U
Endrin	19	250	19	mg/kg	< 0.00359 U	< 0.00368 U	< 0.00396 UJ	< 0.00412 U	< 0.00404 U	< 0.00425 U
Endrin aldehyde	19	250	19	mg/kg	< 0.00359 U	< 0.00368 U	< 0.00396 UJ	< 0.00412 U	< 0.00404 U	< 0.00425 U
Endrin ketone	19	250	19	mg/kg	< 0.00359 UJ	< 0.00368 UJ	< 0.00396 UJ	< 0.00412 UJ	< 0.00404 UJ	< 0.00425 UJ

				Location ID	SB-08	SB-08	SB-09	SB-09	SB-10	SB-10
				Sample Name	SB-08(0-0.5)	SB-08(0.5-2)	SB-09(0-0.5)	SB-09(0.5-2)	SB-10(0-0.5)	SB-10(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	< 0.00185 U	< 0.0019 U	< 0.00204 UJ	< 0.00212 U	< 0.00208 U	< 0.00219 U
Heptachlor	0.13	0.63	0.13	mg/kg	< 0.00185 UJ	< 0.0019 UJ	< 0.00204 UJ	< 0.00212 UJ	< 0.00208 UJ	< 0.00219 UJ
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	< 0.00185 U	< 0.0019 U	< 0.00204 UJ	< 0.00212 U	< 0.00208 U	< 0.00219 U
Methoxychlor	320	4,100	320	mg/kg	< 0.0185 UJ	< 0.019 UJ	< 0.0204 R	< 0.0212 UJ	< 0.0208 UJ	< 0.0219 UJ
Toxaphene	0.49	2.1	0.49	mg/kg	< 0.185 UJ	< 0.19 UJ	< 0.204 UJ	< 0.212 UJ	< 0.208 UJ	< 0.219 UJ
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	< 0.726 U	< 0.746 U	< 0.8 U	< 0.832 U	< 0.816 U	< 0.862 U
2,4,5-T	630	8,200	630	mg/kg	0.00477 J	< 0.00746 U	< 0.008 U	< 0.00832 U	< 0.00816 U	< 0.00862 U
2,4,5-TP (silvex)	510	6,600	510	mg/kg	< 0.00726 U	< 0.00746 U	< 0.008 U	< 0.00832 U	< 0.00816 U	< 0.00862 U
2,4-D	700	9,600	700	mg/kg	< 0.00726 UJ	< 0.00746 UJ	< 0.008 UJ	< 0.00832 UJ	< 0.00816 UJ	< 0.00862 UJ
2,4-DB	1,900	25,000	1,900	mg/kg	< 0.00726 U	< 0.00746 U	< 0.008 U	< 0.00832 U	< 0.00816 U	< 0.00862 U
Dicamba	1,900	25,000	1,900	mg/kg	< 0.00726 U	< 0.00746 U	< 0.008 U	< 0.00832 U	< 0.00816 U	< 0.00862 U
Dichlorprop	NSL	NSL	NSL	mg/kg	< 0.00726 U	< 0.00746 U	< 0.008 U	< 0.00832 U	< 0.00816 U	< 0.00862 U
Dinoseb	63	820	63	mg/kg	< 0.00726 UJ	< 0.00746 UJ	< 0.008 UJ	< 0.00832 UJ	< 0.00816 UJ	< 0.00862 UJ
MCPP	63	820	63	mg/kg	< 0.726 U	< 0.746 U	< 0.8 U	< 0.832 U	< 0.816 U	< 0.862 U
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0399 U	< 0.0454 U	< 0.0527 U	< 0.0442 U	< 0.0399 U	< 0.0465 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.00499 UJ	< 0.00567 UJ	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.00999 U	< 0.0113 U	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00499 U	< 0.00567 U	0.000964 J	< 0.00553 U	< 0.00499 U	< 0.00581 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.00999 U	< 0.0113 U	0.00267 J	< 0.0111 U	< 0.00999 U	< 0.0116 U
2-Hexanone	200	1,300	200	mg/kg	< 0.00999 UJ	< 0.0113 UJ	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.00999 UJ	< 0.0113 UJ	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
Acetone	61,000	670,000	61,000	mg/kg	< 0.00999 UJ	< 0.0113 UJ	< 0.0132 U	< 0.0111 UJ	< 0.00999 U	< 0.0116 U
Benzene	1.2	5.1	1.2	mg/kg	< 0.00499 U	< 0.00567 U	0.00249 J	< 0.00553 U	0.001 J	< 0.00581 U
Bromochloromethane	150	630	150	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Bromoform	19	86	19	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.00999 U	< 0.0113 U	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
Carbon disulfide	770	3,500	770	mg/kg	< 0.00999 U	< 0.0113 U	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.00999 U	< 0.0113 U	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U

				Location ID	SB-08	SB-08	SB-09	SB-09	SB-10	SB-10
				Sample Name	SB-08(0-0.5)	SB-08(0.5-2)	SB-09(0-0.5)	SB-09(0.5-2)	SB-10(0-0.5)	SB-10(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.00999 U	< 0.0113 U	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
Chloromethane	110	460	110	mg/kg	< 0.00999 UJ	< 0.0113 UJ	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.00499 U	< 0.00567 U	0.00141 J	< 0.00553 U	< 0.00499 U	0.00307 J
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Methylene Chloride	57	1,000	57	mg/kg	< 0.00999 U	0.00279 J	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
o-Xylene	650	2,800	650	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Tetrachloroethene	24	100	24	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Toluene	4,900	47,000	4,900	mg/kg	< 0.00499 U	< 0.00567 U	0.00226 J	< 0.00553 U	< 0.00499 U	0.00207 J
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.00999 UJ	< 0.0113 UJ	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.00999 U	< 0.0113 U	< 0.0132 U	< 0.0111 U	< 0.00999 U	< 0.0116 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.00499 U	< 0.00567 U	< 0.00659 U	< 0.00553 U	< 0.00499 U	< 0.00581 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 UJ	< 0.043 U
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.361 U	0.0191 J	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 1.09 U	< 0.112 U	< 0.12 U	< 0.125 R	< 1.22 U	< 0.129 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2-Methylnaphthalene	240	3,000	240	mg/kg	< 0.361 U	0.00666 J	0.0509	0.31 J	< 0.407 U	< 0.043 U
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 UJ	< 0.407 U	< 0.043 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 UJ	< 0.407 U	< 0.043 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.361 UJ	< 0.0374 UJ	< 0.04 UJ	< 0.0416 UJ	< 0.407 UJ	< 0.043 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 1.85 U	< 0.191 U	< 0.204 U	< 0.212 R	< 2.08 U	< 0.22 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U

				Location ID	SB-08	SB-08	SB-09	SB-09	SB-10	SB-10
				Sample Name	SB-08(0-0.5)	SB-08(0.5-2)	SB-09(0-0.5)	SB-09(0.5-2)	SB-10(0-0.5)	SB-10(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.361 UJ	< 0.0374 UJ	< 0.04 UJ	< 0.0416 R	< 0.407 U	< 0.043 UJ
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
4-Nitroaniline	27	110	27	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 UJ	< 0.407 UJ	< 0.043 U
Acenaphthene	3,600	45,000	3,600	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Acenaphthylene	3,600	45,000	3,600	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Acetophenone	7,800	120,000	7,800	mg/kg	< 0.361 U	0.0109 J	0.0184 J	< 0.0416 U	< 0.407 U	< 0.043 U
Anthracene	18,000	230,000	18,000	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	0.00285 J	0.0372 J	< 0.043 U
Benzo[a]anthracene	1.1	21	1.1	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	0.00522 J	0.243 J	0.0165 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	0.0852 J	0.0047 J	0.0111 J	< 0.0416 U	**0.305 J**	0.0242 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	0.159 J	0.0114 J	0.0259 J	< 0.0416 U	0.446	0.0431
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 UJ	0.305 J	0.012 J
Benzo[k]fluoranthene	11	210	11	mg/kg	0.0409 J	< 0.0374 U	< 0.04 U	< 0.0416 U	0.205 J	0.0178 J
Benzyl butyl phthalate	290	1,200	290	mg/kg	< 0.724 U	0.00792 J	< 0.0802 U	< 0.0832 U	< 0.815 U	< 0.0861 U
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Carbazole [4]	230	950	230	mg/kg	< 0.361 UJ	< 0.0374 UJ	< 0.04 UJ	< 0.0416 UJ	0.0551 J	0.00477 J
Chrysene	110	2,100	110	mg/kg	0.0992 J	0.00811 J	0.0164 J	< 0.0416 U	0.389 J	0.0289 J
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 UJ	0.0483 J	< 0.043 U
Dibenzofuran	78	1,200	78	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.724 U	< 0.0749 U	< 0.0802 U	< 0.0832 U	< 0.815 U	< 0.0861 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.724 U	< 0.0749 U	< 0.0802 U	< 0.0832 U	< 0.815 U	< 0.0861 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.724 U	< 0.0749 U	< 0.0802 U	< 0.0832 U	< 0.815 U	< 0.0861 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	< 0.724 U	< 0.0749 U	< 0.0802 U	< 0.0832 U	< 0.815 U	< 0.0861 U
Fluoranthene	2,400	30,000	2,400	mg/kg	0.159 J	< 0.0374 U	0.0275 J	< 0.0416 U	0.694	0.0421 J
Fluorene	2,400	30,000	2,400	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.361 U	0.0126 J	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 R	< 0.407 U	< 0.043 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	0.0574 J	0.00454 J	< 0.04 U	< 0.0416 U	0.251 J	0.0123 J
Isophorone	570	2,400	570	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Naphthalene	2	8.6	2	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	0.329 J	< 0.407 U	< 0.043 U
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.361 U	< 0.0374 U	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Pentachlorophenol	1	4	1	mg/kg	< 1.81 U	< 0.188 U	< 0.201 U	< 0.208 UJ	< 2.04 U	< 0.216 U
Phenanthrene	18,000	230,000	18,000	mg/kg	< 0.361 U	< 0.0374 U	0.0149 J	0.00689 J	0.195 J	0.00845 J
Phenol	19,000	250,000	19,000	mg/kg	< 0.361 U	0.0177 J	< 0.04 U	< 0.0416 U	< 0.407 U	< 0.043 U
Pyrene	1,800	23,000	1,800	mg/kg	0.11 J	0.00838 J	0.0194 J	0.00476 J	0.51	0.0294 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 10.3 U	< 9.95 U	< 11.4 U	< 11.3 U	< 10.7 U	< 12.3 U
TPH (C12-C28)	520	2,200	520	mg/kg	< 10.3 U	< 9.95 U	< 11.4 U	< 11.3 U	< 10.7 U	< 12.3 U

				Location ID	SB-08	SB-08	SB-09	SB-09	SB-10	SB-10
				Sample Name	SB-08(0-0.5)	SB-08(0.5-2)	SB-09(0-0.5)	SB-09(0.5-2)	SB-10(0-0.5)	SB-10(0.5-2)
				Parent Sample ID						
				Sample Depth (feet)	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2	0 - 0.5	0.5 - 2
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 10.3 U	< 9.95 U	< 11.4 U	< 11.3 U	< 10.7 U	< 12.3 U
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 10.3 U	< 9.95 U	< 11.4 U	< 11.3 U	< 10.7 U	< 12.3 U

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

Table 4-2 Screening Level Exceedances for Subsurface Soil

				Location ID	MW-02	MW-02	MW-03	MW-04	MW-05	SB-01
				Sample Name	MW-02(28-30)	MW-02(28-30)D	MW-03(28-30)	MW-04(28-30)	MW-05(28-30)	SB-01(2-5)
				Parent Sample ID		MW-02(28-30)				
				Sample Depth (feet)	28 - 30	28 - 30	28 - 30	28 - 30	28 - 30	2 - 5
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/3/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	3890 J	4250 J	4670 J	3,340	4730 J	5870 J
Antimony	31	470	31	mg/kg	< 2.72 UJ	< 2.5 UJ	< 2.67 UJ	< 2.65 UJ	0.275 J	< 2.77 UJ
Arsenic	0.68	3	0.68	mg/kg	**2.94**	**2.5**	**3.73**	**3.5**	**4.02**	**3.79**
Barium	15,000	220,000	15,000	mg/kg	15.6	15.9	29.2	14.7	90.4	48.3
Beryllium	160	2,300	160	mg/kg	0.261 J	0.265	0.288	0.281	0.318	0.294
Cadmium	71	980	71	mg/kg	0.397 J	0.395 J	0.369 J	0.339	0.367 J	0.288
Calcium	NSL	NSL	NSL	mg/kg	298,000	320,000	326,000	325,000	317,000	277000 J
Chromium [3]	120,000	1,800,000	120,000	mg/kg	11.5	11.5	12.2	10.8	10.5	33.3
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	**0.379 J**	< 0.327 UJ	< 0.334 UJ	< 0.319 UJ	< 0.329 UJ	< 0.357 UJ
Cobalt	23	350	23	mg/kg	2.15 J	1.62 J	1.9	1.7 J	1.54 J	1.91
Copper	3,100	47,000	3,100	mg/kg	3.97 J	4.01 J	3.65 J	4.51 J	3.98 J	15.6 J
Iron	55,000	820,000	55,000	mg/kg	4810 J	5310 J	4900 J	5,340	7360 J	4,100
Lead	400	800	400	mg/kg	2.28 J	1.47 J	1.15 J	1.54 J	3.56	2.97
Magnesium	NSL	NSL	NSL	mg/kg	2050 J	2060 J	2090 J	2000 J	2050 J	1480 J
Manganese	1,800	26,000	1,800	mg/kg	83.7	76.6	76.6	95.8	86.9	66.1 J
Mercury	11	46	11	mg/kg	< 0.0182 U	< 0.0179 U	< 0.0191 U	< 0.0181 U	< 0.0174 U	< 0.0189 U
Nickel	1,500	22,000	1,500	mg/kg	6.34	7	5.49	14.2	5.69	14.3
Potassium	NSL	NSL	NSL	mg/kg	731 J	743 J	698 J	621 J	675 J	639 J
Selenium	390	5,800	390	mg/kg	< 2.18 U	< 2 U	< 2.14 U	< 2.12 U	< 2.16 U	< 2.22 U
Silver	390	5,800	390	mg/kg	< 0.435 U	< 0.4 U	< 0.427 U	< 2.12 U	< 0.431 U	0.671 J
Sodium	NSL	NSL	NSL	mg/kg	344 J	349 J	289 J	270	362 J	117
Thallium	0.78	12	0.78	mg/kg	< 1.63 U	< 1.5 U	< 1.6 U	< 1.59 U	< 1.62 U	< 1.66 U
Vanadium	390	5,800	390	mg/kg	13.8	14	18.9	16.6	10.6	13.4 J
Zinc	23,000	350,000	23,000	mg/kg	24.4	25.2	30.5	21.7 J	27.5	31.8
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.118 UJ	< 0.13 UJ	< 0.121 UJ	< 0.127 UJ	< 0.122 UJ	< 0.166 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	--	--	--	--	--	--
4,4-DDE	2	9.3	2	mg/kg	--	--	--	--	--	--
4,4-DDT	1.9	8.5	1.9	mg/kg	--	--	--	--	--	--
Aldrin	0.039	0.18	0.039	mg/kg	--	--	--	--	--	--
alpha-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
alpha-Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
Beta-BHC	0.3	1.3	0.3	mg/kg	--	--	--	--	--	--
Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
delta-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
Dieldrin	0.034	0.14	0.034	mg/kg	--	--	--	--	--	--
Endosulfan I	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan II	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan sulfate	380	4,900	380	mg/kg	--	--	--	--	--	--
Endrin	19	250	19	mg/kg	--	--	--	--	--	--
Endrin aldehyde	19	250	19	mg/kg	--	--	--	--	--	--
Endrin ketone	19	250	19	mg/kg	--	--	--	--	--	--

Table 4-2 Screening Level Exceedances for Subsurface Soil

				Location ID	MW-02	MW-02	MW-03	MW-04	MW-05	SB-01
				Sample Name	MW-02(28-30)	MW-02(28-30)D	MW-03(28-30)	MW-04(28-30)	MW-05(28-30)	SB-01(2-5)
				Parent Sample ID		MW-02(28-30)				
				Sample Depth (feet)	28 - 30	28 - 30	28 - 30	28 - 30	28 - 30	2 - 5
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/3/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	--	--	--	--	--	--
Heptachlor	0.13	0.63	0.13	mg/kg	--	--	--	--	--	--
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	--	--	--	--	--	--
Methoxychlor	320	4,100	320	mg/kg	--	--	--	--	--	--
Toxaphene	0.49	2.1	0.49	mg/kg	--	--	--	--	--	--
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	--	--	--	--	--	--
2,4,5-T	630	8,200	630	mg/kg	--	--	--	--	--	--
2,4,5-TP (silvex)	510	6,600	510	mg/kg	--	--	--	--	--	--
2,4-D	700	9,600	700	mg/kg	--	--	--	--	--	--
2,4-DB	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dicamba	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	mg/kg	--	--	--	--	--	--
Dinoseb	63	820	63	mg/kg	--	--	--	--	--	--
MCPP	63	820	63	mg/kg	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 UJ	< 0.00463 U	< 0.00543 U
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0367 U	< 0.0386 U	< 0.0392 U	< 0.0356 U	< 0.0371 U	< 0.0435 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.00459 UJ	< 0.00482 UJ	< 0.00489 UJ	< 0.00445 UJ	< 0.00463 UJ	< 0.00543 U
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 UJ	< 0.00463 U	< 0.00543 U
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	< 0.0109 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	< 0.0109 U
2-Hexanone	200	1,300	200	mg/kg	< 0.00917 UJ	< 0.00964 UJ	< 0.00979 UJ	< 0.00891 UJ	< 0.00927 UJ	< 0.0109 UJ
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.00917 UJ	< 0.00964 UJ	< 0.00979 UJ	< 0.00891 UJ	< 0.00927 UJ	< 0.0109 U
Acetone	61,000	670,000	61,000	mg/kg	< 0.00917 UJ	< 0.00964 UJ	0.00172 J	< 0.00891 U	< 0.00927 UJ	< 0.0109 U
Benzene	1.2	5.1	1.2	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Bromochloromethane	150	630	150	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Bromoform	19	86	19	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 UJ	< 0.00927 U	< 0.0109 U
Carbon disulfide	770	3,500	770	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	< 0.0109 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	< 0.0109 U

Table 4-2 Screening Level Exceedances for Subsurface Soil

				Location ID	MW-02	MW-02	MW-03	MW-04	MW-05	SB-01
				Sample Name	MW-02(28-30)	MW-02(28-30)D	MW-03(28-30)	MW-04(28-30)	MW-05(28-30)	SB-01(2-5)
				Parent Sample ID		MW-02(28-30)				
				Sample Depth (feet)	28 - 30	28 - 30	28 - 30	28 - 30	28 - 30	2 - 5
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/3/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	< 0.0109 U
Chloromethane	110	460	110	mg/kg	< 0.00917 UJ	< 0.00964 UJ	< 0.00979 UJ	< 0.00891 UJ	< 0.00927 UJ	< 0.0109 U
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 UJ	< 0.00463 U	< 0.00543 UJ
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Methylene Chloride	57	1,000	57	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	0.00391 J
o-Xylene	650	2,800	650	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Tetrachloroethene	24	100	24	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Toluene	4,900	47,000	4,900	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.00917 UJ	< 0.00964 UJ	< 0.00979 UJ	< 0.00891 UJ	< 0.00927 UJ	< 0.0109 UJ
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.00917 U	< 0.00964 U	< 0.00979 U	< 0.00891 U	< 0.00927 U	< 0.0109 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.00459 U	< 0.00482 U	< 0.00489 U	< 0.00445 U	< 0.00463 U	< 0.00543 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0362 UJ	< 0.0362 UJ	< 0.0372 UJ	< 0.0366 UJ	< 0.037 UJ	< 0.0393 U
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.109 U	< 0.109 U	< 0.112 U	< 0.11 U	< 0.111 R	< 0.118 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
2-Methylnaphthalene	240	3,000	240	mg/kg	0.0183 J	0.00447 J	< 0.0372 U	< 0.0366 U	0.00531 J	0.102
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0362 UJ	< 0.0362 UJ	< 0.0372 UJ	< 0.0366 UJ	< 0.037 UJ	< 0.0393 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.185 U	< 0.185 U	< 0.19 U	< 0.187 U	< 0.189 R	< 0.201 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U

Table 4-2 Screening Level Exceedances for Subsurface Soil

				Location ID	MW-02	MW-02	MW-03	MW-04	MW-05	SB-01
				Sample Name	MW-02(28-30)	MW-02(28-30)D	MW-03(28-30)	MW-04(28-30)	MW-05(28-30)	SB-01(2-5)
				Parent Sample ID		MW-02(28-30)				
				Sample Depth (feet)	28 - 30	28 - 30	28 - 30	28 - 30	28 - 30	2 - 5
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/3/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	< 0.0393 U
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
4-Nitroaniline	27	110	27	mg/kg	< 0.0362 UJ	< 0.0362 UJ	< 0.0372 UJ	< 0.0366 UJ	< 0.037 UJ	< 0.0393 U
Acenaphthene	3,600	45,000	3,600	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	0.00644 J
Acenaphthylene	3,600	45,000	3,600	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Acetophenone	7,800	120,000	7,800	mg/kg	0.00421 J	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	0.00478 J
Anthracene	18,000	230,000	18,000	mg/kg	0.00175 J	0.00306 J	< 0.0372 U	< 0.0366 U	< 0.037 U	0.00413 J
Benzo[a]anthracene	1.1	21	1.1	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	0.0112 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	0.00196 J	0.00347 J	< 0.0372 U	0.00315 J	< 0.037 U	0.0136 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	< 0.0362 U	0.00564 J	< 0.0372 U	0.00526 J	< 0.037 U	0.0225 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	0.0129 J
Benzo[k]fluoranthene	11	210	11	mg/kg	< 0.0362 U	0.00208 J	< 0.0372 U	0.00196 J	< 0.037 U	< 0.0393 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	< 0.0726 U	0.00789 J	< 0.0745 U	< 0.0734 U	0.00746 J	0.0105 J
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	< 0.0393 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0362 UJ	< 0.0362 UJ	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Carbazole [4]	230	950	230	mg/kg	< 0.0362 UJ	< 0.0362 UJ	< 0.0372 UJ	< 0.0366 UJ	< 0.037 UJ	< 0.0393 UJ
Chrysene	110	2,100	110	mg/kg	0.00287 J	0.0268 J	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Dibenzofuran	78	1,200	78	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0726 U	< 0.0725 U	< 0.0745 U	< 0.0734 U	< 0.0741 U	< 0.0788 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0726 U	< 0.0725 U	< 0.0745 U	< 0.0734 U	< 0.0741 U	< 0.0788 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0726 U	< 0.0725 U	< 0.0745 U	< 0.0734 U	< 0.0741 U	< 0.0788 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	0.00735 J	0.006 J	< 0.0745 U	0.00774 J	< 0.0741 U	< 0.0788 U
Fluoranthene	2,400	30,000	2,400	mg/kg	0.00753 J	0.0112 J	< 0.0372 U	0.0044 J	< 0.037 U	0.0291 J
Fluorene	2,400	30,000	2,400	mg/kg	< 0.0362 U	0.00404 J	< 0.0372 U	< 0.0366 U	< 0.037 U	0.0125 J
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	< 0.0393 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Isophorone	570	2,400	570	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	< 0.0393 U
Naphthalene	2	8.6	2	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	< 0.0393 U
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 UJ	< 0.0393 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 U	< 0.0393 U
Pentachlorophenol	1	4	1	mg/kg	< 0.182 U	< 0.181 U	< 0.187 U	< 0.184 U	< 0.185 R	< 0.197 U
Phenanthrene	18,000	230,000	18,000	mg/kg	0.00773 J	0.0508 J	< 0.0372 U	< 0.0366 U	< 0.037 U	0.04
Phenol	19,000	250,000	19,000	mg/kg	< 0.0362 U	< 0.0362 U	< 0.0372 U	< 0.0366 U	< 0.037 R	< 0.0393 U
Pyrene	1,800	23,000	1,800	mg/kg	0.00707 J	0.0273 J	< 0.0372 U	0.00407 J	< 0.037 U	0.0386 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 8.9 UJ	< 8.23 UJ	< 7.54 UJ	< 7.66 UJ	< 8.55 U	< 9.61 UJ
TPH (C12-C28)	520	2,200	520	mg/kg	< 8.9 UJ	< 8.23 UJ	< 7.54 UJ	< 7.66 UJ	< 8.55 U	< 9.61 UJ
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 8.9 UJ	< 8.23 UJ	< 7.54 UJ	< 7.66 UJ	< 8.55 U	< 9.61 UJ

Table 4-2 Screening Level Exceedances for Subsurface Soil

				Location ID	MW-02	MW-02	MW-03	MW-04	MW-05	SB-01
				Sample Name	MW-02(28-30)	MW-02(28-30)D	MW-03(28-30)	MW-04(28-30)	MW-05(28-30)	SB-01(2-5)
				Parent Sample ID		MW-02(28-30)				
				Sample Depth (feet)	28 - 30	28 - 30	28 - 30	28 - 30	28 - 30	2 - 5
				Sample Date	4/3/2019	4/3/2019	4/3/2019	4/4/2019	4/3/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 8.9 UJ	< 8.23 UJ	< 7.54 UJ	< 7.66 UJ	< 8.55 U	< 9.61 UJ

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} cancer risk level for carcinogens (May 2020).
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes inhalation, ingestion, dermal, and vegetable consumption for residential and industrial pathways, https://www.tceq.texas.gov/remediation/trrp/trrppcls

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

				Location ID	SB-01	SB-02	SB-02	SB-02	SB-03	SB-03
				Sample Name	SB-01(13-15)	SB-02(2-5)	SB-02(2-5)D	SB-02(13-15)	SB-03(2-5)	SB-03(6-8)
				Parent Sample ID			SB-02(2-5)			
				Sample Depth (feet)	13 - 15	2 - 5	2 - 5	13 - 15	2 - 5	6 - 8
				Sample Date	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	4750 J	2790 J	2890 J	2900 J	2100 J	3160 J
Antimony	31	470	31	mg/kg	< 2.87 UJ	0.437 J	< 3.06 UJ	0.293 J	0.377 J	< 2.64 UJ
Arsenic	0.68	3	0.68	mg/kg	**2.17**	**3.41**	**3.56**	**2.55**	**2.72**	**3.63**
Barium	15,000	220,000	15,000	mg/kg	11.7	34.8	37.2	10.8	30.8	21.9
Beryllium	160	2,300	160	mg/kg	0.322	0.188 J	0.19 J	0.267	0.178 J	0.222 J
Cadmium	71	980	71	mg/kg	0.431	0.298 J	0.33	0.319	0.221 J	0.365
Calcium	NSL	NSL	NSL	mg/kg	256000 J	304000 J	315000 J	292000 J	342000 J	270000 J
Chromium [3]	120,000	1,800,000	120,000	mg/kg	13.5	19.5	19.7	10.8	6.32	6.21
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	**2.27 J**	0.218 J	**0.353 J**	**0.35 J**	< 0.354 UJ	< 0.347 UJ
Cobalt	23	350	23	mg/kg	0.764	1.43	1.43	0.566 J	1.32 J	1.93 J
Copper	3,100	47,000	3,100	mg/kg	3.45 J	11.9 J	12.8 J	3.56 J	3.16 J	3.18 J
Iron	55,000	820,000	55,000	mg/kg	5,430	2,850	3,010	4,950	2,710	3,890
Lead	400	800	400	mg/kg	2.21 J	4.77	4.25	< 2.57 U	< 2.69 U	2.09 J
Magnesium	NSL	NSL	NSL	mg/kg	2010 J	1460 J	1450 J	2080 J	1570 J	1860 J
Manganese	1,800	26,000	1,800	mg/kg	69 J	50.6 J	48.3 J	67.1 J	61.7 J	70.1 J
Mercury	11	46	11	mg/kg	< 0.0177 U	< 0.0198 U	< 0.0207 U	< 0.0177 U	< 0.0196 U	< 0.0178 U
Nickel	1,500	22,000	1,500	mg/kg	4.89	19.6	20.7	4.37 J	4.15 J	5.76
Potassium	NSL	NSL	NSL	mg/kg	678 J	369 J	364 J	548 J	321 J	445 J
Selenium	390	5,800	390	mg/kg	< 2.3 U	< 2.43 U	< 2.45 U	< 2.06 U	< 2.15 U	< 2.11 U
Silver	390	5,800	390	mg/kg	< 0.459 U	0.389 J	0.373 J	< 0.411 U	< 0.431 U	< 0.423 U
Sodium	NSL	NSL	NSL	mg/kg	284	139	137	269	150	228
Thallium	0.78	12	0.78	mg/kg	< 1.72 U	< 1.82 U	< 1.84 U	< 7.71 U	< 8.08 U	< 7.92 U
Vanadium	390	5,800	390	mg/kg	12.2 J	16.5 J	18 J	14.2 J	9.2 J	20.7 J
Zinc	23,000	350,000	23,000	mg/kg	17	25.1	27.1	23.2	16.5	12.1
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.112 UJ	< 0.0817 UJ	< 0.0813 UJ	< 0.0833 UJ	< 0.112 UJ	< 0.0897 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	--	--	--	--	--	--
4,4-DDE	2	9.3	2	mg/kg	--	--	--	--	--	--
4,4-DDT	1.9	8.5	1.9	mg/kg	--	--	--	--	--	--
Aldrin	0.039	0.18	0.039	mg/kg	--	--	--	--	--	--
alpha-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
alpha-Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
Beta-BHC	0.3	1.3	0.3	mg/kg	--	--	--	--	--	--
Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
delta-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
Dieldrin	0.034	0.14	0.034	mg/kg	--	--	--	--	--	--
Endosulfan I	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan II	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan sulfate	380	4,900	380	mg/kg	--	--	--	--	--	--
Endrin	19	250	19	mg/kg	--	--	--	--	--	--
Endrin aldehyde	19	250	19	mg/kg	--	--	--	--	--	--
Endrin ketone	19	250	19	mg/kg	--	--	--	--	--	--

				Location ID	SB-01	SB-02	SB-02	SB-02	SB-03	SB-03
				Sample Name	SB-01(13-15)	SB-02(2-5)	SB-02(2-5)D	SB-02(13-15)	SB-03(2-5)	SB-03(6-8)
				Parent Sample ID			SB-02(2-5)			
				Sample Depth (feet)	13 - 15	2 - 5	2 - 5	13 - 15	2 - 5	6 - 8
				Sample Date	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	--	--	--	--	--	--
Heptachlor	0.13	0.63	0.13	mg/kg	--	--	--	--	--	--
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	--	--	--	--	--	--
Methoxychlor	320	4,100	320	mg/kg	--	--	--	--	--	--
Toxaphene	0.49	2.1	0.49	mg/kg	--	--	--	--	--	--
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	--	--	--	--	--	--
2,4,5-T	630	8,200	630	mg/kg	--	--	--	--	--	--
2,4,5-TP (silvex)	510	6,600	510	mg/kg	--	--	--	--	--	--
2,4-D	700	9,600	700	mg/kg	--	--	--	--	--	--
2,4-DB	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dicamba	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	mg/kg	--	--	--	--	--	--
Dinoseb	63	820	63	mg/kg	--	--	--	--	--	--
MCPP	63	820	63	mg/kg	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0416 U	< 0.0385 U	< 0.0416 U	< 0.0361 U	< 0.0361 U	< 0.0361 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
2-Hexanone	200	1,300	200	mg/kg	< 0.0104 UJ	< 0.00964 UJ	< 0.0104 UJ	< 0.00903 UJ	< 0.00902 UJ	< 0.00903 UJ
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
Acetone	61,000	670,000	61,000	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
Benzene	1.2	5.1	1.2	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Bromochloromethane	150	630	150	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Bromoform	19	86	19	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
Carbon disulfide	770	3,500	770	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U

				Location ID	SB-01	SB-02	SB-02	SB-02	SB-03	SB-03
				Sample Name	SB-01(13-15)	SB-02(2-5)	SB-02(2-5)D	SB-02(13-15)	SB-03(2-5)	SB-03(6-8)
				Parent Sample ID			SB-02(2-5)			
				Sample Depth (feet)	13 - 15	2 - 5	2 - 5	13 - 15	2 - 5	6 - 8
				Sample Date	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
Chloromethane	110	460	110	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.0052 UJ	< 0.00482 UJ	< 0.0052 UJ	< 0.00452 UJ	< 0.00451 UJ	< 0.00451 UJ
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Methylene Chloride	57	1,000	57	mg/kg	0.00878 J	0.00322 J	0.00433 J	0.00543 J	0.00266 J	0.00395 J
o-Xylene	650	2,800	650	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Tetrachloroethene	24	100	24	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Toluene	4,900	47,000	4,900	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.0104 UJ	< 0.00964 UJ	< 0.0104 UJ	< 0.00903 UJ	< 0.00902 UJ	< 0.00903 UJ
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.0104 U	< 0.00964 U	< 0.0104 U	< 0.00903 U	< 0.00902 U	< 0.00903 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.0052 U	< 0.00482 U	< 0.0052 U	< 0.00452 U	< 0.00451 U	< 0.00451 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	0.0125 J	< 0.0412 U	< 0.0419 U	0.005 J	< 0.039 U	0.0211 J
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	0.129	< 0.0412 U	< 0.0419 U	< 0.0368 U	0.024 J	< 0.0383 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.116 U	< 0.124 U	< 0.126 U	< 0.11 U	< 0.117 U	< 0.115 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2-Methylnaphthalene	240	3,000	240	mg/kg	0.369	0.0122 J	< 0.0419 U	0.0897	< 0.039 U	0.404
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0386 U	0.0103 J	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	0.076	< 0.0412 U	0.0119 J	< 0.0368 U	< 0.039 U	< 0.0383 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0386 UJ	< 0.0412 UJ	< 0.0419 UJ	< 0.0368 UJ	< 0.039 UJ	< 0.0383 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.197 U	< 0.21 U	< 0.214 U	< 0.188 U	< 0.199 U	< 0.195 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U

				Location ID	SB-01	SB-02	SB-02	SB-02	SB-03	SB-03
				Sample Name	SB-01(13-15)	SB-02(2-5)	SB-02(2-5)D	SB-02(13-15)	SB-03(2-5)	SB-03(6-8)
				Parent Sample ID			SB-02(2-5)			
				Sample Depth (feet)	13 - 15	2 - 5	2 - 5	13 - 15	2 - 5	6 - 8
				Sample Date	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
4-Nitroaniline	27	110	27	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Acenaphthene	3,600	45,000	3,600	mg/kg	0.0113 J	< 0.0412 U	< 0.0419 U	0.00559 J	< 0.039 U	0.0144 J
Acenaphthylene	3,600	45,000	3,600	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Acetophenone	7,800	120,000	7,800	mg/kg	< 0.0386 U	0.00874 J	0.0136 J	< 0.0368 U	0.0119 J	< 0.0383 U
Anthracene	18,000	230,000	18,000	mg/kg	0.0073 J	< 0.0412 U	< 0.0419 U	0.00585 J	< 0.039 U	0.0082 J
Benzo[a]anthracene	1.1	21	1.1	mg/kg	0.0119 J	< 0.0412 U	< 0.0419 U	0.0126 J	< 0.039 U	< 0.0383 U
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	0.00729 J	< 0.0412 U	0.00339 J	0.00501 J	0.00304 J	0.00472 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	0.00859 J	0.0107 J	0.0106 J	0.00639 J	0.00464 J	0.00708 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	0.00717 J	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Benzo[k]fluoranthene	11	210	11	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	< 0.0773 U	0.122	0.134	< 0.0737 U	< 0.0782 U	< 0.0767 U
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Carbazole [4]	230	950	230	mg/kg	0.00439 J	< 0.0412 UJ	< 0.0419 UJ	0.00563 J	< 0.039 UJ	< 0.0383 UJ
Chrysene	110	2,100	110	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Dibenzofuran	78	1,200	78	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0773 U	< 0.0826 U	< 0.0838 U	< 0.0737 U	< 0.0782 U	< 0.0767 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0773 U	< 0.0826 U	< 0.0838 U	< 0.0737 U	< 0.0782 U	< 0.0767 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0773 U	< 0.0826 U	< 0.0838 U	< 0.0737 U	< 0.0782 U	< 0.0767 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	< 0.0773 U	< 0.0826 U	< 0.0838 U	< 0.0737 U	< 0.0782 U	< 0.0767 U
Fluoranthene	2,400	30,000	2,400	mg/kg	0.0118 J	0.0113 J	0.0108 J	0.0323 J	< 0.039 U	0.0242 J
Fluorene	2,400	30,000	2,400	mg/kg	0.0176 J	< 0.0412 U	< 0.0419 U	0.00872 J	< 0.039 U	0.0266 J
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	0.0133 J	< 0.0383 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Isophorone	570	2,400	570	mg/kg	0.0233 J	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Naphthalene	2	8.6	2	mg/kg	0.169	< 0.0412 U	< 0.0419 U	0.0479	< 0.039 U	0.229
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Pentachlorophenol	1	4	1	mg/kg	< 0.193 U	< 0.207 U	< 0.21 U	< 0.185 U	< 0.196 U	< 0.192 U
Phenanthrene	18,000	230,000	18,000	mg/kg	0.0394	< 0.0412 U	< 0.0419 U	0.0375	< 0.039 U	0.0802
Phenol	19,000	250,000	19,000	mg/kg	< 0.0386 U	< 0.0412 U	< 0.0419 U	< 0.0368 U	< 0.039 U	< 0.0383 U
Pyrene	1,800	23,000	1,800	mg/kg	0.016 J	0.0085 J	0.00812 J	0.0292 J	0.00356 J	0.0269 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 8.44 UJ	< 9.72 U	< 9.97 U	< 8.85 UJ	< 8.6 U	< 8.35 U
TPH (C12-C28)	520	2,200	520	mg/kg	< 8.44 UJ	< 9.72 U	< 9.97 U	< 8.85 UJ	< 8.6 U	< 8.35 U
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 8.44 UJ	< 9.72 U	< 9.97 U	< 8.85 UJ	< 8.6 U	< 8.35 U

				Location ID	SB-01	SB-02	SB-02	SB-02	SB-03	SB-03
				Sample Name	SB-01(13-15)	SB-02(2-5)	SB-02(2-5)D	SB-02(13-15)	SB-03(2-5)	SB-03(6-8)
				Parent Sample ID			SB-02(2-5)			
				Sample Depth (feet)	13 - 15	2 - 5	2 - 5	13 - 15	2 - 5	6 - 8
				Sample Date	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 8.44 UJ	< 9.72 U	< 9.97 U	< 8.85 UJ	< 8.6 U	< 8.35 U

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in.html, is presented.

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

				Location ID	SB-04	SB-04	SB-04	SB-05	SB-06	SB-06
				Sample Name	SB-04(2-5)	SB-04(2-5)D	SB-04(5-7)	SB-05(2-5)	SB-06(2-5)	SB-06(2-5)D
				Parent Sample ID		SB-04(2-5)				SB-06(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	5 - 7	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	2,020	1,720	2,360	5850 J	4,170	4,370
Antimony	31	470	31	mg/kg	0.463 J	< 2.78 UJ	< 2.71 UJ	< 2.92 UJ	0.432 J	< 2.93 UJ
Arsenic	0.68	3	0.68	mg/kg	**2.99**	**2.34**	**2.38**	**4.05**	**3**	**3.58**
Barium	15,000	220,000	15,000	mg/kg	32.4	31.9	20.5	48	43.2	47
Beryllium	160	2,300	160	mg/kg	0.19 J	0.178 J	0.2 J	0.28 J	0.249 J	0.258 J
Cadmium	71	980	71	mg/kg	0.285	0.312	0.352	0.321 J	0.376	0.463
Calcium	NSL	NSL	NSL	mg/kg	313,000	319,000	283,000	303,000	292,000	296,000
Chromium [3]	120,000	1,800,000	120,000	mg/kg	6.63	5.78	7.76	37.6	8.64	10.8
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	< 0.358 UJ	< 0.362 UJ	< 0.33 UJ	**3.05 J**	< 0.346 UJ	< 0.36 UJ
Cobalt	23	350	23	mg/kg	< 2.79 U	0.529 J	3.44	2.15	1.88 J	2.14 J
Copper	3,100	47,000	3,100	mg/kg	2.07	1.74	2.66	20.1	9.72 J	19 J
Iron	55,000	820,000	55,000	mg/kg	2,560	2,390	3,020	4300 J	4,290	4,370
Lead	400	800	400	mg/kg	1.2 J	1.28 J	1.41 J	5.36	2.3 J	7.03 J
Magnesium	NSL	NSL	NSL	mg/kg	1750 J	1610 J	1980 J	1550 J	1540 J	1660 J
Manganese	1,800	26,000	1,800	mg/kg	52.3	53	78	84.7	63.9	68.8
Mercury	11	46	11	mg/kg	< 0.0187 U	< 0.0183 U	< 0.018 U	< 0.0189 U	< 0.0182 U	< 0.019 U
Nickel	1,500	22,000	1,500	mg/kg	10.2	8.15	7.66	20.1	18.8	32.1
Potassium	NSL	NSL	NSL	mg/kg	328 J	284 J	411 J	1070 J	593 J	651 J
Selenium	390	5,800	390	mg/kg	< 2.23 U	< 2.23 U	< 2.17 U	< 2.33 U	< 2.21 U	< 2.34 U
Silver	390	5,800	390	mg/kg	< 0.447 U	< 0.445 U	< 0.433 U	0.542 J	< 0.443 U	0.463 J
Sodium	NSL	NSL	NSL	mg/kg	203	166	246	182 J	119	123
Thallium	0.78	12	0.78	mg/kg	< 8.37 U	< 8.35 U	< 8.12 U	< 1.75 U	< 8.3 U	< 8.79 U
Vanadium	390	5,800	390	mg/kg	11.1 J	8.88 J	13 J	14.5	13.7 J	14.1 J
Zinc	23,000	350,000	23,000	mg/kg	6.5 J	8.54	10.3	38.1	31.3 J	49.5 J
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.0824 UJ	< 0.136 UJ	< 0.0995 UJ	2.27 J	< 0.135 UJ	< 0.153 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	--	--	--	--	--	--
4,4-DDE	2	9.3	2	mg/kg	--	--	--	--	--	--
4,4-DDT	1.9	8.5	1.9	mg/kg	--	--	--	--	--	--
Aldrin	0.039	0.18	0.039	mg/kg	--	--	--	--	--	--
alpha-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
alpha-Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
Beta-BHC	0.3	1.3	0.3	mg/kg	--	--	--	--	--	--
Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
delta-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
Dieldrin	0.034	0.14	0.034	mg/kg	--	--	--	--	--	--
Endosulfan I	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan II	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan sulfate	380	4,900	380	mg/kg	--	--	--	--	--	--
Endrin	19	250	19	mg/kg	--	--	--	--	--	--
Endrin aldehyde	19	250	19	mg/kg	--	--	--	--	--	--
Endrin ketone	19	250	19	mg/kg	--	--	--	--	--	--

				Location ID	SB-04	SB-04	SB-04	SB-05	SB-06	SB-06
				Sample Name	SB-04(2-5)	SB-04(2-5)D	SB-04(5-7)	SB-05(2-5)	SB-06(2-5)	SB-06(2-5)D
				Parent Sample ID		SB-04(2-5)				SB-06(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	5 - 7	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	--	--	--	--	--	--
Heptachlor	0.13	0.63	0.13	mg/kg	--	--	--	--	--	--
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	--	--	--	--	--	--
Methoxychlor	320	4,100	320	mg/kg	--	--	--	--	--	--
Toxaphene	0.49	2.1	0.49	mg/kg	--	--	--	--	--	--
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	--	--	--	--	--	--
2,4,5-T	630	8,200	630	mg/kg	--	--	--	--	--	--
2,4,5-TP (silvex)	510	6,600	510	mg/kg	--	--	--	--	--	--
2,4-D	700	9,600	700	mg/kg	--	--	--	--	--	--
2,4-DB	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dicamba	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	mg/kg	--	--	--	--	--	--
Dinoseb	63	820	63	mg/kg	--	--	--	--	--	--
MCPP	63	820	63	mg/kg	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0418 U	< 0.0407 U	< 0.037 U	< 0.0397 U	< 0.0453 U	< 0.0435 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
2-Hexanone	200	1,300	200	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Acetone	61,000	670,000	61,000	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Benzene	1.2	5.1	1.2	mg/kg	< 0.00522 U	0.00103 J	< 0.00463 U	0.00201 J	< 0.00566 U	0.000734 J
Bromochloromethane	150	630	150	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Bromoform	19	86	19	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Carbon disulfide	770	3,500	770	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U

				Location ID	SB-04	SB-04	SB-04	SB-05	SB-06	SB-06
				Sample Name	SB-04(2-5)	SB-04(2-5)D	SB-04(5-7)	SB-05(2-5)	SB-06(2-5)	SB-06(2-5)D
				Parent Sample ID		SB-04(2-5)				SB-06(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	5 - 7	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Chloromethane	110	460	110	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Ethylbenzene	5.8	25	5.8	mg/kg	0.00295 J	0.00639 J	0.00178 J	0.00106 J	< 0.00566 U	0.00154 J
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Methylene Chloride	57	1,000	57	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
o-Xylene	650	2,800	650	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Tetrachloroethene	24	100	24	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Toluene	4,900	47,000	4,900	mg/kg	0.00197 J	0.00375 J	0.00132 J	0.0028 J	< 0.00566 U	< 0.00544 U
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.0104 U	< 0.0102 U	< 0.00926 U	< 0.00993 U	< 0.0113 U	< 0.0109 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.00522 U	< 0.00509 U	< 0.00463 U	< 0.00497 U	< 0.00566 U	< 0.00544 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.0397 U	< 0.0399 U	0.0359 J	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.119 U	< 0.12 U	< 0.109 U	< 0.117 U	< 0.119 U	< 0.119 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2-Methylnaphthalene	240	3,000	240	mg/kg	0.00642 J	< 0.0399 U	0.0112 J	< 0.0388 U	< 0.0397 U	0.27
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	< 0.0397 U	0.0212 J	0.0122 J	< 0.0388 U	< 0.0397 U	< 0.0397 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0397 UJ	< 0.0399 UJ	< 0.0364 UJ	< 0.0388 UJ	< 0.0397 UJ	< 0.0397 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.202 U	< 0.204 U	< 0.186 U	< 0.198 U	< 0.203 U	< 0.203 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U

				Location ID	SB-04	SB-04	SB-04	SB-05	SB-06	SB-06
				Sample Name	SB-04(2-5)	SB-04(2-5)D	SB-04(5-7)	SB-05(2-5)	SB-06(2-5)	SB-06(2-5)D
				Parent Sample ID		SB-04(2-5)				SB-06(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	5 - 7	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 UJ	< 0.0388 U	< 0.0397 UJ	< 0.0397 UJ
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
4-Nitroaniline	27	110	27	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Acenaphthene	3,600	45,000	3,600	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Acenaphthylene	3,600	45,000	3,600	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Acetophenone	7,800	120,000	7,800	mg/kg	< 0.0397 U	< 0.0399 U	0.0052 J	< 0.0388 U	0.00964 J	< 0.0397 U
Anthracene	18,000	230,000	18,000	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.00268 J	< 0.0397 U	0.00469 J
Benzo[a]anthracene	1.1	21	1.1	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	0.0115 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.00603 J	< 0.0397 U	0.0101 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.0119 J	0.00606 J	0.0161 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	0.0137 J
Benzo[k]fluoranthene	11	210	11	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.00511 J	< 0.0397 U	< 0.0397 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	< 0.0794 U	< 0.0799 U	< 0.0729 U	0.0218 J	0.0255 J	0.0486 J
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 UJ	< 0.0397 UJ
Carbazole [4]	230	950	230	mg/kg	< 0.0397 UJ	< 0.0399 UJ	< 0.0364 UJ	< 0.0388 UJ	< 0.0397 UJ	< 0.0397 UJ
Chrysene	110	2,100	110	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.00924 J	< 0.0397 U	0.0136 J
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Dibenzofuran	78	1,200	78	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0794 U	< 0.0799 U	< 0.0729 U	< 0.0778 U	< 0.0795 U	< 0.0795 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0794 U	< 0.0799 U	< 0.0729 U	< 0.0778 U	< 0.0795 U	< 0.0795 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0794 U	< 0.0799 U	< 0.0729 U	< 0.0778 U	< 0.0795 U	< 0.0795 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	< 0.0794 U	< 0.0799 U	< 0.0729 U	< 0.0778 U	< 0.0795 U	< 0.0795 U
Fluoranthene	2,400	30,000	2,400	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.0153 J	0.00446 J	0.0201 J
Fluorene	2,400	30,000	2,400	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	0.00868 J
Isophorone	570	2,400	570	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Naphthalene	2	8.6	2	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	0.234
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Pentachlorophenol	1	4	1	mg/kg	< 0.199 U	< 0.2 U	< 0.182 U	< 0.195 U	< 0.199 U	< 0.199 U
Phenanthrene	18,000	230,000	18,000	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.0122 J	< 0.0397 U	0.0126 J
Phenol	19,000	250,000	19,000	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	< 0.0388 U	< 0.0397 U	< 0.0397 U
Pyrene	1,800	23,000	1,800	mg/kg	< 0.0397 U	< 0.0399 U	< 0.0364 U	0.0117 J	0.00497 J	0.018 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 10.4 UJ	< 10.3 UJ	< 7.94 UJ	< 8.65 U	< 9.4 U	< 9.19 U
TPH (C12-C28)	520	2,200	520	mg/kg	< 10.4 UJ	< 10.3 UJ	< 7.94 UJ	< 8.65 U	< 9.4 U	< 9.19 U
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 10.4 UJ	< 10.3 UJ	< 7.94 UJ	< 8.65 U	< 9.4 U	< 9.19 U

				Location ID	SB-04	SB-04	SB-04	SB-05	SB-06	SB-06
				Sample Name	SB-04(2-5)	SB-04(2-5)D	SB-04(5-7)	SB-05(2-5)	SB-06(2-5)	SB-06(2-5)D
				Parent Sample ID		SB-04(2-5)				SB-06(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	5 - 7	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 10.4 UJ	< 10.3 UJ	< 7.94 UJ	< 8.65 U	< 9.4 U	< 9.19 U

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

				Location ID	SB-07	SB-08	SB-08	SB-09	SB-10	SB-10
				Sample Name	SB-07(2-5)	SB-08(2-5)	SB-08(2-5)D	SB-09(2-5)	SB-10(2-5)	SB-10(2-5)D
				Parent Sample ID			SB-08(2-5)			SB-10(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals (SW6010C, SW7199, SW7471B)										
Aluminum	77,000	1,100,000	77,000	mg/kg	3080 J	4140 J	5210 J	2290 J	2380 J	1990 J
Antimony	31	470	31	mg/kg	< 2.76 UJ	0.269 J	0.283 J	< 2.94 UJ	< 3.18 UJ	< 3.12 UJ
Arsenic	0.68	3	0.68	mg/kg	**3.41**	**3.87**	**4.28**	**2.22**	**3.63**	**3.05**
Barium	15,000	220,000	15,000	mg/kg	31.2	44.7	49	23.7	36.5	26.6
Beryllium	160	2,300	160	mg/kg	0.182 J	0.229 J	0.253 J	0.17 J	0.159 J	0.156 J
Cadmium	71	980	71	mg/kg	0.205 J	0.291 J	0.265 J	0.235 J	0.235 J	0.299 J
Calcium	NSL	NSL	NSL	mg/kg	284,000	305,000	305,000	311,000	339,000	340,000
Chromium [3]	120,000	1,800,000	120,000	mg/kg	7.76	10.6	13.2	7.12	6.02	6.19
Chromium (hexavalent)	0.3	6.3	0.3	mg/kg	< 0.357 UJ	< 0.35 UJ	< 0.352 UJ	< 0.358 UJ	< 0.385 UJ	< 0.373 UJ
Cobalt	23	350	23	mg/kg	1.23	2.31	1.97	0.729	0.7	0.624
Copper	3,100	47,000	3,100	mg/kg	3.15	7.34	5.58	1.66	1.76	1.71
Iron	55,000	820,000	55,000	mg/kg	2500 J	4230 J	3780 J	2590 J	2190 J	2120 J
Lead	400	800	400	mg/kg	3.04	4.66	3.77	2.06 J	2.13 J	2.09 J
Magnesium	NSL	NSL	NSL	mg/kg	1050 J	1550 J	1550 J	1800 J	1540 J	1620 J
Manganese	1,800	26,000	1,800	mg/kg	48.5	70.2	68.4	56.1	42.5	46.1
Mercury	11	46	11	mg/kg	< 0.019 U	< 0.02 U	< 0.0185 U	< 0.0197 U	< 0.0203 U	< 0.0216 U
Nickel	1,500	22,000	1,500	mg/kg	4.48	7.18	7.56	2.73	3.12	3.02
Potassium	NSL	NSL	NSL	mg/kg	370 J	556 J	647 J	322 J	322 J	279 J
Selenium	390	5,800	390	mg/kg	< 2.21 U	< 2.29 U	< 2.35 U	< 2.35 U	< 2.54 U	< 2.49 U
Silver	390	5,800	390	mg/kg	< 0.442 U	0.36 J	1.09 J	< 0.47 U	< 0.509 U	< 0.499 U
Sodium	NSL	NSL	NSL	mg/kg	94.5 J	147 J	117 J	190 J	186 J	194 J
Thallium	0.78	12	0.78	mg/kg	< 1.66 U	< 1.71 U	< 1.77 U	< 1.76 U	< 1.91 U	< 1.87 U
Vanadium	390	5,800	390	mg/kg	12.7	15.7	12.8	9.42	10.1	9.73
Zinc	23,000	350,000	23,000	mg/kg	16.3	20	17.5	17.2	15.5	15.6
Miscellaneous (SW9012B)										
Cyanide	23	150	23	mg/kg	< 0.132 UJ	< 0.153 UJ	< 0.126 UJ	< 0.14 UJ	< 0.154 UJ	< 0.161 UJ
Pesticides (SW8081B)										
4,4-DDD	1.9	9.6	1.9	mg/kg	--	--	--	--	--	--
4,4-DDE	2	9.3	2	mg/kg	--	--	--	--	--	--
4,4-DDT	1.9	8.5	1.9	mg/kg	--	--	--	--	--	--
Aldrin	0.039	0.18	0.039	mg/kg	--	--	--	--	--	--
alpha-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
alpha-Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
Beta-BHC	0.3	1.3	0.3	mg/kg	--	--	--	--	--	--
Chlordane	1.7	7.7	1.7	mg/kg	--	--	--	--	--	--
delta-BHC	0.086	0.36	0.086	mg/kg	--	--	--	--	--	--
Dieldrin	0.034	0.14	0.034	mg/kg	--	--	--	--	--	--
Endosulfan I	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan II	470	7,000	470	mg/kg	--	--	--	--	--	--
Endosulfan sulfate	380	4,900	380	mg/kg	--	--	--	--	--	--
Endrin	19	250	19	mg/kg	--	--	--	--	--	--
Endrin aldehyde	19	250	19	mg/kg	--	--	--	--	--	--
Endrin ketone	19	250	19	mg/kg	--	--	--	--	--	--

				Location ID	SB-07	SB-08	SB-08	SB-09	SB-10	SB-10
				Sample Name	SB-07(2-5)	SB-08(2-5)	SB-08(2-5)D	SB-09(2-5)	SB-10(2-5)	SB-10(2-5)D
				Parent Sample ID			SB-08(2-5)			SB-10(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Gamma-BHC (Lindane)	0.57	2.5	0.57	mg/kg	--	--	--	--	--	--
Heptachlor	0.13	0.63	0.13	mg/kg	--	--	--	--	--	--
Heptachlor epoxide	0.07	0.33	0.07	mg/kg	--	--	--	--	--	--
Methoxychlor	320	4,100	320	mg/kg	--	--	--	--	--	--
Toxaphene	0.49	2.1	0.49	mg/kg	--	--	--	--	--	--
Herbicides (SW8151A)										
(2-methyl-4-chlorophenoxy)acetic acid	32	410	32	mg/kg	--	--	--	--	--	--
2,4,5-T	630	8,200	630	mg/kg	--	--	--	--	--	--
2,4,5-TP (silvex)	510	6,600	510	mg/kg	--	--	--	--	--	--
2,4-D	700	9,600	700	mg/kg	--	--	--	--	--	--
2,4-DB	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dicamba	1,900	25,000	1,900	mg/kg	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	mg/kg	--	--	--	--	--	--
Dinoseb	63	820	63	mg/kg	--	--	--	--	--	--
MCPP	63	820	63	mg/kg	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)										
1,1,1-Trichloroethane	8,100	36,000	8,100	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,1,2,2-tetrachloroethane	0.6	2.7	0.6	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,1,2-Trichloro-1,2,2-trifluoroethane	6,700	28,000	6,700	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,1,2-Trichloroethane	1.1	5	1.1	mg/kg	< 0.0457 U	< 0.0446 U	< 0.0441 U	< 0.0391 U	< 0.0437 U	< 0.0432 U
1,1-Dichloroethane	3.6	16	3.6	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,1-Dichloroethene	230	1,000	230	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,2,4-Trichlorobenzene	24	110	24	mg/kg	< 0.00571 UJ	< 0.00557 UJ	< 0.00551 UJ	< 0.00488 U	< 0.00547 UJ	< 0.0054 U
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.0053	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,2-Dibromoethane	0.036	0.16	0.036	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,2-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,2-Dichloroethane	0.46	2	0.46	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,2-Dichloroethene	NSL	NSL	NSL	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
1,2-Dichloropropane	2.5	11	2.5	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,3-Dichlorobenzene	1,800	9,300	1,800	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
1,4-Dichlorobenzene	2.6	11	2.6	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
2-Butanone	27,000	190,000	27,000	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
2-Hexanone	200	1,300	200	mg/kg	< 0.0114 UJ	< 0.0111 UJ	< 0.011 UJ	< 0.00977 U	< 0.0109 UJ	< 0.0108 U
4-Methyl-2-pentanone	33,000	140,000	33,000	mg/kg	< 0.0114 UJ	< 0.0111 UJ	< 0.011 UJ	< 0.00977 U	< 0.0109 UJ	< 0.0108 U
Acetone	61,000	670,000	61,000	mg/kg	< 0.0114 UJ	< 0.0111 UJ	< 0.011 UJ	< 0.00977 U	< 0.0109 UJ	< 0.0108 U
Benzene	1.2	5.1	1.2	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	0.000632 J	< 0.00547 U	< 0.0054 U
Bromochloromethane	150	630	150	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Bromodichloromethane	0.29	1.3	0.29	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Bromoform	19	86	19	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Bromomethane	6.8	30	6.8	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
Carbon disulfide	770	3,500	770	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
Carbon tetrachloride	0.65	2.9	0.65	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Chlorobenzene	280	1,300	280	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Chloroethane	14,000	57,000	14,000	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U

				Location ID	SB-07	SB-08	SB-08	SB-09	SB-10	SB-10
				Sample Name	SB-07(2-5)	SB-08(2-5)	SB-08(2-5)D	SB-09(2-5)	SB-10(2-5)	SB-10(2-5)D
				Parent Sample ID			SB-08(2-5)			SB-10(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloroform	0.32	1.4	0.32	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
Chloromethane	110	460	110	mg/kg	< 0.0114 UJ	< 0.0111 UJ	< 0.011 UJ	< 0.00977 U	< 0.0109 UJ	< 0.0108 U
cis-1,2-dichloroethene	160	2,300	160	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
cis-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Cyclohexane	6,500	27,000	6,500	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Dibromochloromethane	8.3	39	8.3	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Dichlorodifluoromethane	87	370	87	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Ethylbenzene	5.8	25	5.8	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	0.00273 J	0.00113 J	0.00128 J
Isopropylbenzene	1,900	9,900	1,900	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
m,p-Xylene	550	2,400	550	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Methyl tert-butyl ether	47	210	47	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Methylene Chloride	57	1,000	57	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
o-Xylene	650	2,800	650	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Styrene	6,000	35,000	6,000	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Tetrachloroethene	24	100	24	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Toluene	4,900	47,000	4,900	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	0.00189 J	< 0.00547 U	< 0.0054 U
trans-1,2-dichloroethene	1,600	23,000	1,600	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
trans-1,3-dichloropropene	1.8	8.2	1.8	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Trichloroethene	0.94	6	0.94	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Vinyl acetate	910	3,800	910	mg/kg	< 0.0114 UJ	< 0.0111 UJ	< 0.011 UJ	< 0.00977 U	< 0.0109 UJ	< 0.0108 U
Vinyl chloride	0.059	1.7	0.059	mg/kg	< 0.0114 U	< 0.0111 U	< 0.011 U	< 0.00977 U	< 0.0109 U	< 0.0108 U
Xylenes, Total	580	2,500	580	mg/kg	< 0.00571 U	< 0.00557 U	< 0.00551 U	< 0.00488 U	< 0.00547 U	< 0.0054 U
Semivolatile Organic Compounds (SW8270D)										
1,1'-Biphenyl	47	200	47	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2,2-oxybis(1-chloropropane)	3,100	47,000	3,100	mg/kg	< 0.0396 U	< 0.0392 UJ	< 0.0392 U	< 0.399 U	< 0.0424 UJ	< 0.0423 UJ
2,4,5-Trichlorophenol	6,300	82,000	6,300	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2,4,6-Trichlorophenol	49	210	49	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2,4-Dichlorophenol	190	2,500	190	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2,4-Dimethylphenol	1,300	16,000	1,300	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2,4-Dinitrophenol	130	1,600	130	mg/kg	< 0.119 U	< 0.118 U	< 0.118 U	< 1.2 U	< 0.127 U	< 0.127 U
2,4-Dinitrotoluene	1.7	7.4	1.7	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	0.00467 J
2,6-Dinitrotoluene	0.36	1.5	0.36	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2-Chloronaphthalene	4,800	60,000	4,800	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2-Chlorophenol	390	5,800	390	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2-Methylnaphthalene	240	3,000	240	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	0.0463 J	0.0129 J	0.0115 J
2-Methylphenol	3,200	41,000	3,200	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
2-Nitroaniline	630	8,000	630	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	0.0172 J
2-Nitrophenol	3.2	15	3.2	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
3&4-methylphenol	3,200	41,000	3,200	mg/kg	0.00595 J	< 0.0392 U	0.00514 J	< 0.399 U	0.0212 J	< 0.0423 U
3,3'-Dichlorobenzidine	1.2	5.1	1.2	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
3-Nitroaniline	6.3	82	6.3	mg/kg	< 0.0396 UJ	< 0.0392 UJ	< 0.0392 UJ	< 0.399 UJ	< 0.0424 UJ	< 0.0423 UJ
4,6-Dinitro-2-methylphenol	5.1	66	5.1	mg/kg	< 0.202 U	< 0.2 U	< 0.2 U	< 2.04 U	< 0.216 U	< 0.216 U
4-Bromophenyl phenyl ether [4]	0.28	1.2	0.28	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
4-chloro-3-methylphenol	6,300	82,000	6,300	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U

				Location ID	SB-07	SB-08	SB-08	SB-09	SB-10	SB-10
				Sample Name	SB-07(2-5)	SB-08(2-5)	SB-08(2-5)D	SB-09(2-5)	SB-10(2-5)	SB-10(2-5)D
				Parent Sample ID			SB-08(2-5)			SB-10(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
4-Chloroaniline	2.7	11	2.7	mg/kg	< 0.0396 UJ	< 0.0392 U	< 0.0392 UJ	< 0.399 UJ	< 0.0424 U	< 0.0423 U
4-Chlorophenyl phenyl ether [4]	0.16	0.98	0.16	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
4-Nitroaniline	27	110	27	mg/kg	< 0.0396 U	< 0.0392 UJ	< 0.0392 U	< 0.399 U	< 0.0424 UJ	< 0.0423 UJ
Acenaphthene	3,600	45,000	3,600	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Acenaphthylene	3,600	45,000	3,600	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Acetophenone	7,800	120,000	7,800	mg/kg	0.0046 J	0.0224 J	0.00408 J	< 0.399 U	< 0.0424 U	< 0.0423 U
Anthracene	18,000	230,000	18,000	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Benzo[a]anthracene	1.1	21	1.1	mg/kg	0.0167 J	0.0135 J	0.00803 J	< 0.399 U	< 0.0424 U	0.0204 J
Benzo[a]pyrene	0.11	2.1	0.11	mg/kg	0.0202 J	0.0239 J	0.0113 J	< 0.399 U	0.00274 J	0.0246 J
Benzo[b]fluoranthene	1.1	21	1.1	mg/kg	0.0388 J	0.0488 J	0.0222 J	< 0.399 U	0.00707 J	0.0371 J
Benzo[g,h,i]perylene	1,800	23,000	1,800	mg/kg	0.0157 J	0.0268 J	0.00831 J	< 0.399 U	< 0.0424 U	0.0246 J
Benzo[k]fluoranthene	11	210	11	mg/kg	0.013 J	0.0158 J	< 0.0392 U	< 0.399 U	0.00371 J	< 0.0423 U
Benzyl butyl phthalate	290	1,200	290	mg/kg	< 0.0794 U	0.00797 J	< 0.0785 U	< 0.8 U	< 0.0849 U	< 0.0848 U
Bis(2-chloroethoxy) methane	190	2,500	190	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Bis(2-chloroethyl) ether	0.23	1	0.23	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Bis(2-ethylhexyl) phthalate	39	160	39	mg/kg	< 0.0396 U	0.0157 J	< 0.0392 U	< 0.399 U	< 0.0424 U	0.0119 J
Carbazole [4]	230	950	230	mg/kg	0.00638 J	< 0.0392 UJ	< 0.0392 UJ	< 0.399 UJ	< 0.0424 UJ	< 0.0423 UJ
Chrysene	110	2,100	110	mg/kg	0.0238 J	0.026 J	0.0129 J	< 0.399 U	0.00562 J	< 0.0423 U
Dibenz[a,h]anthracene	0.11	2.1	0.11	mg/kg	< 0.0396 U	0.00561 J	< 0.0392 U	< 0.399 U	< 0.0424 U	0.00584 J
Dibenzofuran	78	1,200	78	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Diethyl phthalate	51,000	660,000	51,000	mg/kg	< 0.0794 U	< 0.0785 U	< 0.0785 U	< 0.8 U	< 0.0849 U	< 0.0848 U
Dimethyl phthalate [4]	53,000	550,000	53,000	mg/kg	< 0.0794 U	< 0.0785 U	< 0.0785 U	< 0.8 U	< 0.0849 U	< 0.0848 U
Di-n-Butyl phthalate	6,300	82,000	6,300	mg/kg	< 0.0794 U	< 0.0785 U	< 0.0785 U	< 0.8 U	0.00406 J	< 0.0848 U
Di-n-octyl phthalate	630	8,200	630	mg/kg	< 0.0794 U	< 0.0785 U	< 0.0785 U	< 0.8 U	< 0.0849 U	0.0031 J
Fluoranthene	2,400	30,000	2,400	mg/kg	0.0401	0.0399 J	0.0213 J	< 0.399 U	0.00768 J	0.033 J
Fluorene	2,400	30,000	2,400	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Hexachlorobenzene	0.21	0.96	0.21	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Hexachlorobutadiene	1.2	5.3	1.2	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Hexachlorocyclopentadiene	1.8	7.5	1.8	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Hexachloroethane	1.8	8	1.8	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Indeno[1,2,3-c,d]pyrene	1.1	21	1.1	mg/kg	0.013 J	0.0225 J	0.00814 J	< 0.399 U	< 0.0424 U	0.0199 J
Isophorone	570	2,400	570	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Naphthalene	2	8.6	2	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Nitrobenzene	5.1	22	5.1	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
n-Nitrosodi-n-propylamine	0.078	0.33	0.078	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
n-Nitrosodiphenylamine	110	470	110	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Pentachlorophenol	1	4	1	mg/kg	< 0.199 U	< 0.196 U	< 0.196 U	< 2 U	< 0.212 U	< 0.212 U
Phenanthrene	18,000	230,000	18,000	mg/kg	0.00977 J	0.0109 J	0.00689 J	< 0.399 U	0.00668 J	0.0102 J
Phenol	19,000	250,000	19,000	mg/kg	< 0.0396 U	< 0.0392 U	< 0.0392 U	< 0.399 U	< 0.0424 U	< 0.0423 U
Pyrene	1,800	23,000	1,800	mg/kg	0.0289 J	0.0312 J	0.0151 J	< 0.399 U	0.0071 J	0.0297 J
Total Petroleum Hydrocarbons (TX1005)										
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	mg/kg	< 10.3 U	< 10 U	< 9.83 U	< 8.98 U	< 9.61 U	< 10.3 U
TPH (C12-C28)	520	2,200	520	mg/kg	< 10.3 U	< 10 U	< 9.83 U	< 8.98 U	< 9.61 U	< 10.3 U
TPH (C28-C35)	2,400	33,000	2,400	mg/kg	< 10.3 U	< 10 U	< 9.83 U	< 8.98 U	< 9.61 U	< 10.3 U

				Location ID	SB-07	SB-08	SB-08	SB-09	SB-10	SB-10
				Sample Name	SB-07(2-5)	SB-08(2-5)	SB-08(2-5)D	SB-09(2-5)	SB-10(2-5)	SB-10(2-5)D
				Parent Sample ID			SB-08(2-5)			SB-10(2-5)
				Sample Depth (feet)	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
				Sample Date	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
	EPA Regional Screening Levels [1]									
Analyte	**Residential**	**Industrial**	**Project Screening Level [2]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
TPH-GRO (C6-C10)	97	560	97	mg/kg	< 10.3 U	< 10 U	< 9.83 U	< 8.98 U	< 9.61 U	< 10.3 U

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 0.1 for non-carcinogens and a 10^{-6} c
2. The minimum screening level was selected as the project screening level.
3. RSL value for total Chromium is not available, Chromium III value is presented.
4. EPA RSL is not available, the Texas Risk Reduction Program (TRRP) Protection Concentration Levels (PCL)s for soil which includes in

-- = Not analyzed.
J = Estimated value.
mg/kg = Milligram(s) per kilogram
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
Values exceeding the Project Screening level are boldfaced.

Table 4-3 Screening Level Exceedances for Groundwater

Analyte	EPA MCL [1]	EPA Tap water RSL [2]	TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$	Project Screening Level [4]	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
					Location ID	MW-01	MW-01	MW-01	MW-06	MW-06	MW-06	MW-06	MW-06	MW-07	MW-07	MW-07
					Sample Name	MW-01	MW-01D	MW-01	MW-06	MW-06-164.5	MW-06-164.5-D	MW-06-174.5	MW-06-174.5-D	MW-07	MW-07-163	MW-07-173
					Parent Sample ID		MW-01				MW-06-164.5		MW-06-174.5			
					Sample Date	4/15/2019	4/15/2019	12/17/2019	12/17/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/17/2019	4/29/2020	4/29/2020
Total Metals (SW6010C, SW6020C, SW7470A)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	< 500 U	< 500 U	141 J	437 J	290 J	--	--	--	290 J	--	--
Antimony	6	7.8	6	6	µg/L	< 50 U	< 50 U	< 5 U	< 5 U	< 5 U	--	--	--	< 5 U	--	--
Arsenic	10	0.052	10	10	µg/L	< 10 U	< 10 U	0.814 J	1.28	0.73 J	--	--	--	0.73 J	--	--
Barium	2,000	3,800	2,000	2,000	µg/L	48.4	49.1	43.8	118	91.2	--	--	--	91.2	--	--
Beryllium	4	25	4	4	µg/L	< 5 U	< 5 U	< 0.5 U	0.079 J	< 0.5 U	--	--	--	< 0.5 U	--	--
Cadmium	5	9.2	5	5	µg/L	< 5 U	< 5 U	< 1 U	< 1 U	< 1 U	--	--	--	< 1 U	--	--
Calcium	NSL	NSL	NSL	NSL	µg/L	81,700	81,400	98,500	147,000	138,000	--	--	--	138,000	--	--
Chromium[5]	100	22,000	100	100	µg/L	**7,860**	**7,800**	**6,100**	35.6	4.69	--	--	--	4.69	--	--
Cobalt	NSL	6	240	6	µg/L	< 10 U	< 10 U	0.724	0.947	1.58	--	--	--	1.58	--	--
Copper	1,300	800	1,300	1,300	µg/L	< 10 U	< 10 U	2.74	2.78	1.8 J	--	--	--	1.8 J	--	--
Iron	NSL	14,000	NSL	14,000	µg/L	< 400 U	< 400 U	113	737	427	--	--	--	427	--	--
Lead	15	15	15	15	µg/L	< 10 U	< 10 U	0.684	0.872	0.504	--	--	--	0.504	--	--
Magnesium	NSL	NSL	NSL	NSL	µg/L	3,980	3,960	4,520	5,730	7,570	--	--	--	7,570	--	--
Manganese	NSL	430	1,100	430	µg/L	0.9 J	0.9 J	8.5	36.7	26.8	--	--	--	26.8	--	--
Mercury	2	0.63	NSL	2	µg/L	< 0.25 UJ	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	--	--	--	< 0.25 U	--	--
Nickel	NSL	390	490	390	µg/L	2.2 J	2 J	5.49	6.52	5.96	--	--	--	5.96	--	--
Potassium	NSL	NSL	NSL	NSL	µg/L	400 J	366 J	444 J	2970 J	3340 J	--	--	--	3340 J	--	--
Selenium	50	100	50	50	µg/L	21.1 J	17 J	14.7	8.97	5.42	--	--	--	5.42	--	--
Silver	NSL	94	120	94	µg/L	< 10 U	< 10 U	< 1 U	< 1 U	< 1 U	--	--	--	< 1 U	--	--
Sodium	NSL	NSL	NSL	NSL	µg/L	211,000	209,000	228,000	96,400	57,800	--	--	--	57,800	--	--
Thallium	2	0.2	2	2	µg/L	< 30 U	< 30 U	< 0.5 U	0.303 J	0.154 J	--	--	--	0.154 J	--	--
Vanadium	NSL	86	44	44	µg/L	5.4 J	5.3 J	4.43 J	4.66 J	3.33 J	--	--	--	3.33 J	--	--
Zinc	NSL	6,000	7,300	6,000	µg/L	< 30 U	< 30 U	19.9	55.5	52.1	--	--	--	52.1	--	--
Dissolved Metals (SW6010C, SW6020C, SW7470A, E218.6)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	< 500 U	< 500 U	< 20 U	4.71 J	< 20 U	--	--	--	< 20 U	--	--
Antimony	6	7.8	6	6	µg/L	< 50 U	< 50 U	< 5 U	< 5 U	< 5 U	--	--	--	< 5 U	--	--
Arsenic	10	0.052	10	10	µg/L	< 10 U	3.7 J	0.578 J	0.421 J	0.369 J	--	--	--	0.369 J	--	--
Barium	2,000	3,800	2,000	2,000	µg/L	48.5	48.5	45.7	113	86.9	--	--	--	86.9	--	--
Beryllium	4	25	4	4	µg/L	< 5 U	< 5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	--	--	< 0.5 U	--	--
Cadmium	5	9.2	5	5	µg/L	< 5 U	< 5 U	< 1 U	< 1 U	< 1 U	--	--	--	< 1 U	--	--
Calcium	NSL	NSL	NSL	NSL	µg/L	82,600	81,300	101,000	130,000	125,000	--	--	--	125,000	--	--
Chromium[5]	100	22,000	100	100	µg/L	**7,830**	**7,720**	**5,800**	28.8	1.37 J	--	--	--	1.37 J	--	--
Chromium (hexavalent)	NSL	0.035	NSL	0.035	µg/L	--	--	**6,140**	**29.3**	**23.1 J**	**23 J**	**19.5 J**	**20.4 J**	**0.541**	**1.01 J**	**2.08 J**
Cobalt	NSL	6	240	6	µg/L	< 10 U	< 10 U	0.516	0.592	1.28	--	--	--	1.28	--	--
Copper	1,300	800	1,300	1,300	µg/L	< 10 U	< 10 U	2.97	0.898 J	< 2 U	--	--	--	< 2 U	--	--
Iron	NSL	14,000	NSL	14,000	µg/L	< 400 U	< 400 U	4.79 J	25.1	9.98 J	--	--	--	9.98 J	--	--
Lead	15	15	15	15	µg/L	< 10 U	< 10 U	< 0.5 U	< 0.5 U	< 0.5 U	--	--	--	< 0.5 U	--	--
Magnesium	NSL	NSL	NSL	NSL	µg/L	3,990	3,970	5,180	6,250	7,130	--	--	--	7,130	--	--
Manganese	NSL	430	1,100	430	µg/L	< 10 U	< 10 U	0.446 J	9.25	7.5	--	--	--	7.5	--	--
Mercury	2	0.63	NSL	2	µg/L	< 0.25 UJ	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	--	--	--	< 0.25 U	--	--
Nickel	NSL	390	490	390	µg/L	0.9 J	1.8 J	2.48	4.87	4.96	--	--	--	4.96	--	--
Potassium	NSL	NSL	NSL	NSL	µg/L	381 J	356 J	455 J	2900 J	3250 J	--	--	--	3250 J	--	--
Selenium	50	100	50	50	µg/L	21.3 J	21.2 J	14.8	8.2	4.39 J	--	--	--	4.39 J	--	--
Silver	NSL	94	120	94	µg/L	< 10 U	< 10 U	< 1 U	< 1 U	< 1 U	--	--	--	< 1 U	--	--
Sodium	NSL	NSL	NSL	NSL	µg/L	210,000	208,000	241,000	94,500	58,600	--	--	--	58,600	--	--
Thallium	2	0.2	2	2	µg/L	< 30 U	< 30 U	< 0.5 U	0.294 J	0.195 J	--	--	--	0.195 J	--	--
Vanadium	NSL	86	44	44	µg/L	5.3 J	5.5 J	3.89 J	1.72 J	1.04 J	--	--	--	1.04 J	--	--
Zinc	NSL	6,000	7,300	6,000	µg/L	< 30 U	< 30 U	< 5 U	34.7	34	--	--	--	34	--	--
Pesticides (SW8081B)																
4,4-DDD	NSL	0.032	NSL	0.032	µg/L	< 0.217 UJ	< 0.2 UJ	--	--	--	--	--	--	--	--	--
4,4-DDE	NSL	0.046	NSL	0.046	µg/L	< 0.217 U	< 0.2 U	--	--	--	--	--	--	--	--	--
4,4-DDT	NSL	0.23	NSL	0.23	µg/L	< 0.217 UJ	< 0.2 UJ	--	--	--	--	--	--	--	--	--
Aldrin	NSL	0.00092	NSL	0.00092	µg/L	< 0.109 U	< 0.1 U	--	--	--	--	--	--	--	--	--
alpha-BHC	NSL	0.0072	NSL	0.0072	µg/L	< 0.109 U	< 0.1 U	--	--	--	--	--	--	--	--	--
alpha-Chlordane	2	0.02	NSL	2	µg/L	< 0.109 UJ	< 0.1 UJ	--	--	--	--	--	--	--	--	--
Beta-BHC	NSL	0.025	NSL	0.025	µg/L	< 0.109 U	< 0.1 U	--	--	--	--	--	--	--	--	--
Chlordane	2	0.02	NSL	2	µg/L	< 0.217 U	< 0.2 U	--	--	--	--	--	--	--	--	--
delta-BHC	NSL	0.0072	NSL	0.0072	µg/L	< 0.109 UJ	< 0.1 UJ	--	--	--	--	--	--	--	--	--
Dieldrin	NSL	0.0018	NSL	0.0018	µg/L	< 0.217 U	< 0.2 U	--	--	--	--	--	--	--	--	--
Endosulfan I	NSL	100	NSL	100	µg/L	< 0.109 U	< 0.1 U	--	--	--	--	--	--	--	--	--

Table 4-3 Screening Level Exceedances for Groundwater

					Location ID	MW-01	MW-01	MW-01	MW-06	MW-06	MW-06	MW-06	MW-06	MW-07	MW-07	MW-07
					Sample Name	MW-01	MW-01D	MW-01	MW-06	MW-06-164.5	MW-06-164.5-D	MW-06-174.5	MW-06-174.5-D	MW-07	MW-07-163	MW-07-173
					Parent Sample ID		MW-01				MW-06-164.5		MW-06-174.5			
					Sample Date	4/15/2019	4/15/2019	12/17/2019	12/17/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/17/2019	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Endosulfan II	NSL	100	NSL	100	µg/L	< 0.217 U	< 0.2 U	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	NSL	110	NSL	110	µg/L	< 0.217 U	< 0.2 U	--	--	--	--	--	--	--	--	--
Endrin	2	2.3	NSL	2	µg/L	< 0.217 UJ	< 0.2 UJ	--	--	--	--	--	--	--	--	--
Endrin aldehyde	2	2.3	NSL	2	µg/L	< 0.217 U	< 0.2 U	--	--	--	--	--	--	--	--	--
Endrin ketone	2	2.3	NSL	2	µg/L	< 0.217 UJ	< 0.2 UJ	--	--	--	--	--	--	--	--	--
Gamma-BHC (Lindane)	0.2	0.042	NSL	0.2	µg/L	< 0.109 U	< 0.1 U	--	--	--	--	--	--	--	--	--
Heptachlor	0.4	0.0014	NSL	0.4	µg/L	< 0.109 UJ	< 0.1 UJ	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	0.2	0.0014	NSL	0.2	µg/L	< 0.109 U	< 0.1 U	--	--	--	--	--	--	--	--	--
Methoxychlor	40	37	NSL	40	µg/L	< 1.09 UJ	< 1 UJ	--	--	--	--	--	--	--	--	--
Toxaphene	3	0.071	NSL	3	µg/L	< 10.9 UJ	< 10 UJ	--	--	--	--	--	--	--	--	--
Herbicides (SW8151A)																
(2-methyl-4-chlorophenoxy)acetic acid	NSL	7.5	NSL	7.5	µg/L	< 19.6 UJ	< 20.2 UJ	--	--	--	--	--	--	--	--	--
2,4,5-T	NSL	160	NSL	160	µg/L	< 0.196 U	< 0.202 U	--	--	--	--	--	--	--	--	--
2,4,5-TP (silvex)	50	110	NSL	50	µg/L	< 0.196 U	< 0.202 U	--	--	--	--	--	--	--	--	--
2,4-D	70	170	NSL	70	µg/L	< 0.196 UJ	< 0.202 UJ	--	--	--	--	--	--	--	--	--
2,4-DB	NSL	450	NSL	450	µg/L	< 0.196 U	< 0.202 U	--	--	--	--	--	--	--	--	--
Dicamba	NSL	570	NSL	570	µg/L	< 0.196 U	< 0.202 U	--	--	--	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	NSL	µg/L	< 0.196 U	< 0.202 U	--	--	--	--	--	--	--	--	--
Dinoseb	7	15	NSL	7	µg/L	< 0.196 UJ	< 0.202 UJ	--	--	--	--	--	--	--	--	--
MCPP	NSL	16	NSL	16	µg/L	< 19.6 U	< 20.2 U	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)																
1,1,1-Trichloroethane	200	8,000	200	200	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,1,2,2-tetrachloroethane	NSL	0.076	4.6	0.076	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane	NSL	10,000	730,000	10,000	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	0.28	NSL	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	NSL	2.8	4,900	2.8	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	7	280	7	7	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	70	1.2	70	70	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.2	0.00033	0.2	0.2	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.05	0.0075	0.05	0.05	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	600	300	600	600	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	5	0.17	5	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	NSL	NSL	NSL	NSL	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	5	0.85	5	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NSL	NSL	730	730	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	75	0.48	75	75	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
2-Butanone	NSL	5,600	15,000	5,600	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
2-Hexanone	NSL	38	120	38	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NSL	6,300	2,000	2,000	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
Acetone	NSL	14,000	22,000	14,000	µg/L	< 5 U	< 5 U	--	--	--	--	--	--	--	--	--
Benzene	5	0.46	5	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Bromochloromethane	NSL	83	980	83	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Bromodichloromethane	80	0.13	80	80	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Bromoform	80	3.3	80	80	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Bromomethane	NSL	7.5	34	7.5	µg/L	< 2 UJ	< 2 UJ	--	--	--	--	--	--	--	--	--
Carbon disulfide	NSL	810	2,400	810	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	5	0.46	5	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Chlorobenzene	100	78	100	100	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Chloroethane	NSL	21,000	9,800	9,800	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
Chloroform	80	0.22	80	80	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Chloromethane	NSL	190	70	70	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	70	36	70	70	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
cis-1,3-dichloropropene	NSL	0.47	1.7	0.47	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Cyclohexane	NSL	13,000	120,000	13,000	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Dibromochloromethane	80	0.87	80	80	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	NSL	200	4,900	200	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Ethylbenzene	700	1.5	700	700	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Isopropylbenzene	NSL	450	2,400	450	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
m,p-Xylene	NSL	NSL	10,000	10,000	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	NSL	14	240	14	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Methylene Chloride	5	11	5	5	µg/L	< 5 U	< 5 U	--	--	--	--	--	--	--	--	--

Table 4-3 Screening Level Exceedances for Groundwater

					Location ID	MW-01	MW-01	MW-01	MW-06	MW-06	MW-06	MW-06	MW-06	MW-07	MW-07	MW-07
					Sample Name	MW-01	MW-01D	MW-01	MW-06	MW-06-164.5	MW-06-164.5-D	MW-06-174.5	MW-06-174.5-D	MW-07	MW-07-163	MW-07-173
					Parent Sample ID		MW-01				MW-06-164.5		MW-06-174.5			
					Sample Date	4/15/2019	4/15/2019	12/17/2019	12/17/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/17/2019	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
o-Xylene	NSL	190	10,000	190	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Styrene	100	1,200	100	100	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Tetrachloroethene	5	11	5	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Toluene	1,000	1,100	1,000	1,000	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	100	360	100	100	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
trans-1,3-dichloropropene	NSL	0.47	9.1	0.47	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Trichloroethene	5	0.49	5	5	µg/L	< 1 U	< 1 U	--	--	--	--	--	--	--	--	--
Vinyl acetate	NSL	410	NSL	410	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
Vinyl chloride	2	0.019	2	2	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
Xylenes, Total	10,000	190	NSL	10,000	µg/L	< 2 U	< 2 U	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds (SW8270D)																
1,1'-Biphenyl	NSL	0.83	12,000	0.83	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
2,2-oxybis(1-chloropropane)	NSL	710	13	13	µg/L	< 0.962 UJ	< 1 UJ	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NSL	1,200	2,400	1,200	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NSL	4.1	24	4.1	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	NSL	46	73	46	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	NSL	360	490	360	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	NSL	39	49	39	µg/L	< 4.81 U	< 5 U	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NSL	0.24	1.3	0.24	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NSL	0.049	1.3	0.049	µg/L	< 0.962 U	< 1 U	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	NSL	750	2,000	750	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
2-Chlorophenol	NSL	91	120	91	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	NSL	36	98	36	µg/L	0.14 J	< 1.5 U	--	--	--	--	--	--	--	--	--
2-Methylphenol	NSL	930	1,200	930	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
2-Nitroaniline	NSL	190	7.3	7.3	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NSL	0.31	49	0.31	µg/L	< 0.962 U	< 1 U	--	--	--	--	--	--	--	--	--
3&4-methylphenol	NSL	930	NSL	930	µg/L	< 0.962 U	< 1 U	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	NSL	0.13	2	0.13	µg/L	< 4.81 U	< 5 U	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NSL	1.7	7.3	1.7	µg/L	< 2.4 UJ	< 2.5 UJ	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NSL	1.5	2.4	1.5	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
4-chloro-3-methylphenol	NSL	1,400	120	120	µg/L	< 0.962 U	< 1 U	--	--	--	--	--	--	--	--	--
4-Chloroaniline	NSL	0.37	4.6	0.37	µg/L	< 0.962 UJ	< 1 UJ	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
4-Nitroaniline	NSL	3.8	46	3.8	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
Acenaphthene	NSL	530	1,500	530	µg/L	< 0.962 U	< 1 U	--	--	--	--	--	--	--	--	--
Acenaphthylene	NSL	530	1,500	530	µg/L	< 0.962 U	< 1 U	--	--	--	--	--	--	--	--	--
Acetophenone	NSL	1,900	2,400	1,900	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Anthracene	NSL	1,800	7,300	1,800	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NSL	0.03	9.1	0.03	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	0.2	0.025	0.2	0.2	µg/L	< 1.44 UJ	< 1.5 UJ	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	NSL	0.25	9.1	0.25	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	NSL	120	730	120	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	NSL	2.5	91	2.5	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Benzyl butyl phthalate	NSL	16	480	16	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy) methane	NSL	59	0.83	0.83	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--

Table 4-3 Screening Level Exceedances for Groundwater

					Location ID	MW-01	MW-01	MW-01	MW-06	MW-06	MW-06	MW-06	MW-06	MW-07	MW-07	MW-07
					Sample Name	MW-01	MW-01D	MW-01	MW-06	MW-06-164.5	MW-06-164.5-D	MW-06-174.5	MW-06-174.5-D	MW-07	MW-07-163	MW-07-173
					Parent Sample ID		MW-01				MW-06-164.5		MW-06-174.5			
					Sample Date	4/15/2019	4/15/2019	12/17/2019	12/17/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/17/2019	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Bis(2-chloroethyl) ether	NSL	0.014	0.83	0.014	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	6	5.6	6	6	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
Carbazole	NSL	NSL	46	46	µg/L	< 4.81 UJ	< 5 UJ	--	--	--	--	--	--	--	--	--
Chrysene	NSL	25	910	25	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	NSL	0.025	0.2	0.025	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Dibenzofuran	NSL	7.9	98	7.9	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Diethyl phthalate	NSL	15,000	20,000	15,000	µg/L	< 4.81 U	< 5 U	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	NSL	NSL	20,000	20,000	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
Di-n-Butyl phthalate	NSL	900	2,400	900	µg/L	< 4.81 U	< 5 U	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	NSL	200	240	200	µg/L	< 4.81 U	< 5 U	--	--	--	--	--	--	--	--	--
Fluoranthene	NSL	800	980	800	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Fluorene	NSL	290	980	290	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	1	0.0098	1	1	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	NSL	0.14	12	0.14	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	50	0.41	50	50	µg/L	< 1.44 UJ	< 1.5 UJ	--	--	--	--	--	--	--	--	--
Hexachloroethane	NSL	0.33	17	0.33	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-c,d]pyrene	NSL	0.25	9.1	0.25	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Isophorone	NSL	78	960	78	µg/L	< 1.44 UJ	< 1.5 UJ	--	--	--	--	--	--	--	--	--
Naphthalene	NSL	0.12	490	0.12	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Nitrobenzene	NSL	0.14	49	0.14	µg/L	< 1.44 UJ	< 1.5 UJ	--	--	--	--	--	--	--	--	--
n-Nitrosodi-n-propylamine	NSL	0.011	0.13	0.011	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	NSL	12	190	12	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	0.041	1	1	µg/L	< 2.4 U	< 2.5 U	--	--	--	--	--	--	--	--	--
Phenanthrene	NSL	1,800	730	730	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Phenol	NSL	5,800	7,300	5,800	µg/L	< 1.44 U	< 1.5 U	--	--	--	--	--	--	--	--	--
Pyrene	NSL	120	730	120	µg/L	< 1.92 U	< 2 U	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TX1005)																
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	NSL	mg/L	< 1.74 U	< 1.79 U	--	--	--	--	--	--	--	--	--
TPH (C12-C28)	NSL	1.3	0.98	0.98	mg/L	< 1.74 U	< 1.79 U	--	--	--	--	--	--	--	--	--
TPH (C28-C35)	NSL	0.8	0.98	0.8	mg/L	< 1.74 U	< 1.79 U	--	--	--	--	--	--	--	--	--
TPH-GRO (C6-C10)	NSL	0.0055	0.98	0.0055	mg/L	< 1.74 U	< 1.79 U	--	--	--	--	--	--	--	--	--
Anions (E300.0)																
Nitrate	10	32	10	10	mg/L	5.97	--	--	--	--	--	--	--	--	--	--
Nitrate/Nitrite as N	NSL	NSL	NSL	NSL	mg/L	5.97	--	--	--	--	--	--	--	--	--	--
Nitrogen as nitrite	1	2	NSL	1	mg/L	< 0.2 U	--	--	--	--	--	--	--	--	--	--
Sulfate	NSL	NSL	NSL	NSL	mg/L	199	--	--	--	--	--	--	--	--	--	--
Fixed Gas (RSK-175)																
Ethane	NSL	NSL	NSL	NSL	µg/L	< 1 U	--	--	--	--	--	--	--	--	--	--
Ethene	NSL	NSL	NSL	NSL	µg/L	< 1 U	--	--	--	--	--	--	--	--	--	--
Methane	NSL	NSL	NSL	NSL	µg/L	< 1 U	--	--	--	--	--	--	--	--	--	--
Miscellaneous																
Total Dissolved Solids (SM2540C)	NSL	NSL	NSL	NSL	mg/L	1,400	--	--	--	--	--	--	--	--	--	--
Total Activated Carbon (SM5310D)	NSL	NSL	NSL	NSL	mg/L	3.87	--	--	--	--	--	--	--	--	--	--
Cyanide (SW9012B)	200	1.5	NSL	200	µg/L	< 10 U	< 10 U	< 10 U	< 10 U	--	--	--	--	< 10 U	--	--

NOTES:
1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2020.
2. EPA Regional Screening Levels (RSLs) for Tap water (May 2020) for hazard index = 1 for non-carcinogens and a 10-6 cancer risk level for carcinogens.
3. Texas Commission of Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 PCLs, updated November 2019.
4. The MCL has been selected as the project screening level. If no MCL has been established, the lower value of the Tap water RSL or TCEQ TRRP PCL has been selected.
5. RSL value for total Chromium is not available, Chromium III value is presented.
-- = Not analyzed.
J = Estimated value.
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
Values exceeding the Project Screening level are boldfaced.

					Location ID	MW-07	MW-07	MW-07	MW-07	MW-07	MW-08	MW-08	MW-08	MW-08	MW-08	MW-08
					Sample Name	MW-07-183	MW-07-193	MW-07-203	MW-07-213	MW-07-223	MW-08	MW-08-156	MW-08-166	MW-08-176	MW-08-186	MW-08-196
					Parent Sample ID											
					Sample Date	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/16/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Total Metals (SW6010C, SW6020C, SW7470A)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	--	--	--	--	--	749 J	--	--	--	--	--
Antimony	6	7.8	6	6	µg/L	--	--	--	--	--	< 5 U	--	--	--	--	--
Arsenic	10	0.052	10	10	µg/L	--	--	--	--	--	0.704 J	--	--	--	--	--
Barium	2,000	3,800	2,000	2,000	µg/L	--	--	--	--	--	81.8	--	--	--	--	--
Beryllium	4	25	4	4	µg/L	--	--	--	--	--	0.082 J	--	--	--	--	--
Cadmium	5	9.2	5	5	µg/L	--	--	--	--	--	< 1 U	--	--	--	--	--
Calcium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	142,000	--	--	--	--	--
Chromium[5]	100	22,000	100	100	µg/L	--	--	--	--	--	15.3 J	--	--	--	--	--
Cobalt	NSL	6	240	6	µg/L	--	--	--	--	--	1.44	--	--	--	--	--
Copper	1,300	800	1,300	1,300	µg/L	--	--	--	--	--	2.75	--	--	--	--	--
Iron	NSL	14,000	NSL	14,000	µg/L	--	--	--	--	--	734	--	--	--	--	--
Lead	15	15	15	15	µg/L	--	--	--	--	--	0.769	--	--	--	--	--
Magnesium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	7,870	--	--	--	--	--
Manganese	NSL	430	1,100	430	µg/L	--	--	--	--	--	44.7	--	--	--	--	--
Mercury	2	0.63	NSL	2	µg/L	--	--	--	--	--	< 0.25 U	--	--	--	--	--
Nickel	NSL	390	490	390	µg/L	--	--	--	--	--	11.1	--	--	--	--	--
Potassium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	3,550	--	--	--	--	--
Selenium	50	100	50	50	µg/L	--	--	--	--	--	3.56 J	--	--	--	--	--
Silver	NSL	94	120	94	µg/L	--	--	--	--	--	< 1 U	--	--	--	--	--
Sodium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	61,400	--	--	--	--	--
Thallium	2	0.2	2	2	µg/L	--	--	--	--	--	< 0.5 U	--	--	--	--	--
Vanadium	NSL	86	44	44	µg/L	--	--	--	--	--	3.92 J	--	--	--	--	--
Zinc	NSL	6,000	7,300	6,000	µg/L	--	--	--	--	--	39.5	--	--	--	--	--
Dissolved Metals (SW6010C, SW6020C, SW7470A, E218.6)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	--	--	--	--	--	< 20 U	--	--	--	--	--
Antimony	6	7.8	6	6	µg/L	--	--	--	--	--	0.243 J	--	--	--	--	--
Arsenic	10	0.052	10	10	µg/L	--	--	--	--	--	0.323 J	--	--	--	--	--
Barium	2,000	3,800	2,000	2,000	µg/L	--	--	--	--	--	77.4	--	--	--	--	--
Beryllium	4	25	4	4	µg/L	--	--	--	--	--	< 0.5 U	--	--	--	--	--
Cadmium	5	9.2	5	5	µg/L	--	--	--	--	--	< 1 U	--	--	--	--	--
Calcium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	110,000	--	--	--	--	--
Chromium[5]	100	22,000	100	100	µg/L	--	--	--	--	--	2	--	--	--	--	--
Chromium (hexavalent)	NSL	0.035	NSL	0.035	µg/L	**2.4 J**	**1.81 J**	**1.61 J**	**1.67 J**	**1.57 J**	**0.84**	0.022	**0.154 J**	**0.276 J**	**0.364 J**	**0.229 J**
Cobalt	NSL	6	240	6	µg/L	--	--	--	--	--	1.25	--	--	--	--	--
Copper	1,300	800	1,300	1,300	µg/L	--	--	--	--	--	< 2 U	--	--	--	--	--
Iron	NSL	14,000	NSL	14,000	µg/L	--	--	--	--	--	< 10 U	--	--	--	--	--
Lead	15	15	15	15	µg/L	--	--	--	--	--	0.233 J	--	--	--	--	--
Magnesium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	7,630	--	--	--	--	--
Manganese	NSL	430	1,100	430	µg/L	--	--	--	--	--	7.04	--	--	--	--	--
Mercury	2	0.63	NSL	2	µg/L	--	--	--	--	--	< 0.25 U	--	--	--	--	--
Nickel	NSL	390	490	390	µg/L	--	--	--	--	--	8.71	--	--	--	--	--
Potassium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	3,110	--	--	--	--	--
Selenium	50	100	50	50	µg/L	--	--	--	--	--	4.08 J	--	--	--	--	--
Silver	NSL	94	120	94	µg/L	--	--	--	--	--	< 1 U	--	--	--	--	--
Sodium	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	60,800	--	--	--	--	--
Thallium	2	0.2	2	2	µg/L	--	--	--	--	--	< 0.5 U	--	--	--	--	--
Vanadium	NSL	86	44	44	µg/L	--	--	--	--	--	0.965 J	--	--	--	--	--
Zinc	NSL	6,000	7,300	6,000	µg/L	--	--	--	--	--	27.8	--	--	--	--	--
Pesticides (SW8081B)																
4,4-DDD	NSL	0.032	NSL	0.032	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,4-DDE	NSL	0.046	NSL	0.046	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,4-DDT	NSL	0.23	NSL	0.23	µg/L	--	--	--	--	--	--	--	--	--	--	--
Aldrin	NSL	0.00092	NSL	0.00092	µg/L	--	--	--	--	--	--	--	--	--	--	--
alpha-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Beta-BHC	NSL	0.025	NSL	0.025	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	NSL	0.0018	NSL	0.0018	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	NSL	100	NSL	100	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	MW-07	MW-07	MW-07	MW-07	MW-07	MW-08	MW-08	MW-08	MW-08	MW-08	MW-08
					Sample Name	MW-07-183	MW-07-193	MW-07-203	MW-07-213	MW-07-223	MW-08	MW-08-156	MW-08-166	MW-08-176	MW-08-186	MW-08-196
					Parent Sample ID											
					Sample Date	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/16/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Endosulfan II	NSL	100	NSL	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	NSL	110	NSL	110	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Gamma-BHC (Lindane)	0.2	0.042	NSL	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	0.4	0.0014	NSL	0.4	µg/L	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	0.2	0.0014	NSL	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	40	37	NSL	40	µg/L	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	3	0.071	NSL	3	µg/L	--	--	--	--	--	--	--	--	--	--	--
Herbicides (SW8151A)																
(2-methyl-4-chlorophenoxy)acetic acid	NSL	7.5	NSL	7.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-T	NSL	160	NSL	160	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TP (silvex)	50	110	NSL	50	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-D	70	170	NSL	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-DB	NSL	450	NSL	450	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dicamba	NSL	570	NSL	570	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dinoseb	7	15	NSL	7	µg/L	--	--	--	--	--	--	--	--	--	--	--
MCPP	NSL	16	NSL	16	µg/L	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)																
1,1,1-Trichloroethane	200	8,000	200	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-tetrachloroethane	NSL	0.076	4.6	0.076	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane	NSL	10,000	730,000	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	0.28	NSL	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	NSL	2.8	4,900	2.8	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	7	280	7	7	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	70	1.2	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.2	0.00033	0.2	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.05	0.0075	0.05	0.05	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	600	300	600	600	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	5	0.17	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	5	0.85	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NSL	NSL	730	730	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	75	0.48	75	75	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	NSL	5,600	15,000	5,600	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	NSL	38	120	38	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NSL	6,300	2,000	2,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acetone	NSL	14,000	22,000	14,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzene	5	0.46	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	NSL	83	980	83	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	80	0.13	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromoform	80	3.3	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	NSL	7.5	34	7.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	NSL	810	2,400	810	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	5	0.46	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	100	78	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	NSL	21,000	9,800	9,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloroform	80	0.22	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	NSL	190	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	70	36	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-dichloropropene	NSL	0.47	1.7	0.47	µg/L	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	NSL	13,000	120,000	13,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	80	0.87	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	NSL	200	4,900	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	700	1.5	700	700	µg/L	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	NSL	450	2,400	450	µg/L	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	NSL	NSL	10,000	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	NSL	14	240	14	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	5	11	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	MW-07	MW-07	MW-07	MW-07	MW-07	MW-08	MW-08	MW-08	MW-08	MW-08	MW-08
					Sample Name	MW-07-183	MW-07-193	MW-07-203	MW-07-213	MW-07-223	MW-08	MW-08-156	MW-08-166	MW-08-176	MW-08-186	MW-08-196
					Parent Sample ID											
					Sample Date	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/16/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
o-Xylene	NSL	190	10,000	190	µg/L	--	--	--	--	--	--	--	--	--	--	--
Styrene	100	1,200	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	5	11	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Toluene	1,000	1,100	1,000	1,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	100	360	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-dichloropropene	NSL	0.47	9.1	0.47	µg/L	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	5	0.49	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	NSL	410	NSL	410	µg/L	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	2	0.019	2	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	10,000	190	NSL	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds (SW8270D)																
1,1'-Biphenyl	NSL	0.83	12,000	0.83	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,2-oxybis(1-chloropropane)	NSL	710	13	13	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NSL	1,200	2,400	1,200	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NSL	4.1	24	4.1	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	NSL	46	73	46	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	NSL	360	490	360	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	NSL	39	49	39	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NSL	0.24	1.3	0.24	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NSL	0.049	1.3	0.049	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	NSL	750	2,000	750	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	NSL	91	120	91	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	NSL	36	98	36	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	NSL	930	1,200	930	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	NSL	190	7.3	7.3	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NSL	0.31	49	0.31	µg/L	--	--	--	--	--	--	--	--	--	--	--
3&4-methylphenol	NSL	930	NSL	930	µg/L	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	NSL	0.13	2	0.13	µg/L	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NSL	1.7	7.3	1.7	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NSL	1.5	2.4	1.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-chloro-3-methylphenol	NSL	1,400	120	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	NSL	0.37	4.6	0.37	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	NSL	3.8	46	3.8	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	NSL	1,900	2,400	1,900	µg/L	--	--	--	--	--	--	--	--	--	--	--
Anthracene	NSL	1,800	7,300	1,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NSL	0.03	9.1	0.03	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	0.2	0.025	0.2	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	NSL	120	730	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	NSL	2.5	91	2.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzyl butyl phthalate	NSL	16	480	16	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy) methane	NSL	59	0.83	0.83	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	MW-07	MW-07	MW-07	MW-07	MW-07	MW-08	MW-08	MW-08	MW-08	MW-08	MW-08
					Sample Name	MW-07-183	MW-07-193	MW-07-203	MW-07-213	MW-07-223	MW-08	MW-08-156	MW-08-166	MW-08-176	MW-08-186	MW-08-196
					Parent Sample ID											
					Sample Date	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020	12/16/2019	4/29/2020	4/29/2020	4/29/2020	4/29/2020	4/29/2020
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Bis(2-chloroethyl) ether	NSL	0.014	0.83	0.014	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	6	5.6	6	6	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NSL	NSL	46	46	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chrysene	NSL	25	910	25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	NSL	0.025	0.2	0.025	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	NSL	7.9	98	7.9	µg/L	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	NSL	15,000	20,000	15,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	NSL	NSL	20,000	20,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Di-n-Butyl phthalate	NSL	900	2,400	900	µg/L	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	NSL	200	240	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	NSL	800	980	800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Fluorene	NSL	290	980	290	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	1	0.0098	1	1	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	NSL	0.14	12	0.14	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	50	0.41	50	50	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	NSL	0.33	17	0.33	µg/L	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-c,d]pyrene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Isophorone	NSL	78	960	78	µg/L	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	NSL	0.12	490	0.12	µg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	NSL	0.14	49	0.14	µg/L	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodi-n-propylamine	NSL	0.011	0.13	0.011	µg/L	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	NSL	12	190	12	µg/L	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	0.041	1	1	µg/L	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	NSL	1,800	730	730	µg/L	--	--	--	--	--	--	--	--	--	--	--
Phenol	NSL	5,800	7,300	5,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Pyrene	NSL	120	730	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TX1005)																
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH (C12-C28)	NSL	1.3	0.98	0.98	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH (C28-C35)	NSL	0.8	0.98	0.8	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH-GRO (C6-C10)	NSL	0.0055	0.98	0.0055	mg/L	--	--	--	--	--	--	--	--	--	--	--
Anions (E300.0)																
Nitrate	10	32	10	10	mg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrate/Nitrite as N	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrogen as nitrite	1	2	NSL	1	mg/L	--	--	--	--	--	--	--	--	--	--	--
Sulfate	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Fixed Gas (RSK-175)																
Ethane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Ethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous																
Total Dissolved Solids (SM2540C)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Total Activated Carbon (SM5310D)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Cyanide (SW9012B)	200	1.5	NSL	200	µg/L	--	--	--	--	--	< 10 U	--	--	--	--	--

NOTES:
1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2020.
2. EPA Regional Screening Levels (RSLs) for Tap water (May 2020) for hazard index = 1 for non-carcinogens and a 10-6 cancer risk level for carcinoger
3. Texas Commission of Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 PCLs, updated November 2019.
4. The MCL has been selected as the project screening level. If no MCL has been established, the lower value of the Tap water RSL or TCEQ TRRP PCI
5. RSL value for total Chromium is not available, Chromium III value is presented.
-- = Not analyzed.
J = Estimated value.
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
Values exceeding the Project Screening level are boldfaced.

					Location ID	MW-08	WW-01	WW-01	WW-01	WW-01	WW-02	WW-02	WW-02	WW-02	WW-04	WW-04
					Sample Name	MW-08-206	WW-01	WW-01D	WW-01	WW-01D	WW-02	WW-02D	WW-02	WW-02D	WW-04	WW-04
					Parent Sample ID			WW-01		WW-01		WW-02		WW-02		
					Sample Date	4/29/2020	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/16/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Total Metals (SW6010C, SW6020C, SW7470A)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	--	< 500 U	< 500 U	< 20 U	< 20 U	< 500 U	< 500 U	< 20 U	< 20 U	< 500 U	< 20 U
Antimony	6	7.8	6	6	µg/L	--	< 50 U	< 50 U	< 5 U	< 5 U	< 50 U	< 50 U	< 5 U	< 5 U	< 50 U	< 5 U
Arsenic	10	0.052	10	10	µg/L	--	< 10 U	< 10 U	0.534 J	0.456 J	< 10 U	< 10 U	0.368 J	0.395 J	< 10 U	0.361 J
Barium	2,000	3,800	2,000	2,000	µg/L	--	39.8	40.4	40.5	39.1	43	43.1	42.4	41.5	40.8	40.1
Beryllium	4	25	4	4	µg/L	--	< 5 U	< 5 U	< 0.5 U	< 0.5 U	< 5 U	< 5 U	< 0.5 U	< 0.5 U	< 5 U	< 0.5 U
Cadmium	5	9.2	5	5	µg/L	--	< 5 U	0.3 J	< 1 U	< 1 U	< 5 U	0.3 J	< 1 U	< 1 U	0.4 J	< 1 U
Calcium	NSL	NSL	NSL	NSL	µg/L	--	68,300	68,600	69,500	70,400	70,100	71,600	69,100	68,800	65,400	65,700
Chromium[5]	100	22,000	100	100	µg/L	--	< 10 U	< 10 U	< 2 UJ	0.342 J	< 10 U	< 10 U	1.62 J	< 2 UJ	< 10 U	15.5
Cobalt	NSL	6	240	6	µg/L	--	< 10 U	< 10 U	< 0.3 U	< 0.3 U	< 10 U	< 10 U	< 0.3 U	< 0.3 U	< 10 U	< 0.3 U
Copper	1,300	800	1,300	1,300	µg/L	--	< 10 U	< 10 U	< 2 UJ	2.65 J	< 10 U	< 10 U	3.33 J	164 J	< 10 U	0.705 J
Iron	NSL	14,000	NSL	14,000	µg/L	--	< 400 U	< 400 U	< 10 U	< 10 U	< 400 U	< 400 U	< 10 U	< 10 U	62.4 J	117
Lead	15	15	15	15	µg/L	--	< 10 U	< 10 U	0.205 J	0.299 J	< 10 U	< 10 U	0.69 J	7.91 J	< 10 U	< 0.5 U
Magnesium	NSL	NSL	NSL	NSL	µg/L	--	15,200	15,400	16,000	16,000	12,900	13,000	13,600	13,500	14,300	14,000
Manganese	NSL	430	1,100	430	µg/L	--	< 10 U	< 10 U	< 1 U	< 1 U	0.4 J	0.4 J	1.5	1.89	< 10 U	1.6
Mercury	2	0.63	NSL	2	µg/L	--	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Nickel	NSL	390	490	390	µg/L	--	< 10 U	< 10 U	< 2 U	< 2 U	< 10 U	< 10 U	< 2 U	0.771 J	< 10 U	0.721 J
Potassium	NSL	NSL	NSL	NSL	µg/L	--	1,290	1,330	1,260	1,230	1,230	1,240	1,160	1,140	1,160	1,160
Selenium	50	100	50	50	µg/L	--	< 40 U	< 40 U	< 5 U	< 5 U	< 40 U	< 40 U	< 5 U	< 5 U	< 40 U	< 5 U
Silver	NSL	94	120	94	µg/L	--	< 10 U	< 10 U	< 1 U	< 1 U	< 10 U	< 10 U	< 1 U	< 1 U	< 10 U	< 1 U
Sodium	NSL	NSL	NSL	NSL	µg/L	--	12,500	12,700	11,600	11,700	9,890	10,000	9,070	9,050	8240 J	8,440
Thallium	2	0.2	2	2	µg/L	--	< 30 U	< 30 U	< 0.5 U	< 0.5 U	< 30 U	< 30 U	< 0.5 U	< 0.5 U	< 30 U	< 0.5 U
Vanadium	NSL	86	44	44	µg/L	--	2.3 J	2.4 J	3.24 J	2.89 J	2.3 J	2.1 J	2.49 J	2.56 J	2.8 J	3.38 J
Zinc	NSL	6,000	7,300	6,000	µg/L	--	< 30 U	< 30 U	8.25	7.78	< 30 U	< 30 U	19.1 J	227 J	13.9 J	8.75
Dissolved Metals (SW6010C, SW6020C, SW7470A, E218.6)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	--	< 500 U	< 500 U	< 20 U	< 20 U	< 500 U	< 500 U	< 20 U	< 20 U	< 500 U	< 20 U
Antimony	6	7.8	6	6	µg/L	--	< 50 U	< 50 U	< 5 U	< 5 U	< 50 U	< 50 U	< 5 U	< 5 U	< 50 U	< 5 U
Arsenic	10	0.052	10	10	µg/L	--	< 10 U	< 10 U	0.411 J	0.442 J	< 10 U	< 10 U	0.296 J	0.295 J	< 10 U	0.44 J
Barium	2,000	3,800	2,000	2,000	µg/L	--	40.6	40.9	40.4	39	43.5	43.5	41.1	41.6	41.4	42
Beryllium	4	25	4	4	µg/L	--	< 5 U	< 5 U	< 0.5 U	< 0.5 U	< 5 U	< 5 U	< 0.5 U	< 0.5 U	< 5 U	< 0.5 U
Cadmium	5	9.2	5	5	µg/L	--	0.3 J	0.3 J	< 1 U	< 1 U	0.3 J	< 5 U	< 1 U	< 1 U	< 5 U	< 1 U
Calcium	NSL	NSL	NSL	NSL	µg/L	--	69,400	69,200	69,500	68,900	70,900	70,000	69,100	72,100	65,400	65,000
Chromium[5]	100	22,000	100	100	µg/L	--	< 10 U	< 10 U	< 2 U	1.12 J	< 10 U	< 10 U	0.239 J	< 2 U	< 10 U	0.299 J
Chromium (hexavalent)	NSL	0.035	NSL	0.035	µg/L	**0.224 J**	--	--	**0.105**	**0.106**	--	--	**0.116**	**0.108**	--	**0.139**
Cobalt	NSL	6	240	6	µg/L	--	< 10 U	< 10 U	< 0.3 U	< 0.3 U	< 10 U	< 10 U	< 0.3 U	< 0.3 U	< 10 U	1.62
Copper	1,300	800	1,300	1,300	µg/L	--	< 10 U	< 10 U	< 2 U	< 2 U	< 10 U	< 10 U	1.89 J	< 2 U	< 10 U	< 2 U
Iron	NSL	14,000	NSL	14,000	µg/L	--	< 400 U	< 400 U	< 10 U	< 10 U	< 400 U	< 400 U	< 10 U	< 10 U	< 400 U	4.66 J
Lead	15	15	15	15	µg/L	--	< 10 U	< 10 U	0.507	< 0.5 U	< 10 U	< 10 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U
Magnesium	NSL	NSL	NSL	NSL	µg/L	--	15,300	15,600	16,000	16,000	13,000	13,100	13,600	14,100	14,400	13,700
Manganese	NSL	430	1,100	430	µg/L	--	0.5 J	< 10 U	< 1 UJ	< 1 UJ	0.4 J	0.4 J	1.51	1.42	< 10 U	2.61
Mercury	2	0.63	NSL	2	µg/L	--	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Nickel	NSL	390	490	390	µg/L	--	< 10 U	< 10 U	< 2 U	< 2 U	< 10 U	< 10 U	< 2 U	< 2 U	< 10 U	0.421 J
Potassium	NSL	NSL	NSL	NSL	µg/L	--	1,290	1,320	1,230	1,240	1,230	1,260	1,160	1,200	1,160	1,100
Selenium	50	100	50	50	µg/L	--	< 40 U	3.6 J	< 5 U	< 5 U	3.4 J	< 40 U	< 5 U	< 5 U	< 40 U	< 5 U
Silver	NSL	94	120	94	µg/L	--	< 10 U	< 10 U	< 1 U	< 1 U	< 10 U	< 10 U	< 1 U	< 1 U	< 10 U	< 1 U
Sodium	NSL	NSL	NSL	NSL	µg/L	--	13,200	13,200	11,600	11,700	10,300	10,300	9,120	9,460	8560 J	8,260
Thallium	2	0.2	2	2	µg/L	--	< 30 U	< 30 U	< 0.5 U	< 0.5 U	< 30 U	< 30 U	< 0.5 U	< 0.5 U	< 30 U	< 0.5 U
Vanadium	NSL	86	44	44	µg/L	--	2.3 J	2.5 J	3.22 J	3.18 J	2.5 J	2.4 J	2.52 J	2.61 J	2.8 J	3.31 J
Zinc	NSL	6,000	7,300	6,000	µg/L	--	< 30 U	< 30 U	< 5 U	< 5 U	< 30 U	< 30 U	16.5	15.3	12.5 J	8.63
Pesticides (SW8081B)																
4,4-DDD	NSL	0.032	NSL	0.032	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,4-DDE	NSL	0.046	NSL	0.046	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,4-DDT	NSL	0.23	NSL	0.23	µg/L	--	--	--	--	--	--	--	--	--	--	--
Aldrin	NSL	0.00092	NSL	0.00092	µg/L	--	--	--	--	--	--	--	--	--	--	--
alpha-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Beta-BHC	NSL	0.025	NSL	0.025	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	NSL	0.0018	NSL	0.0018	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	NSL	100	NSL	100	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	MW-08	WW-01	WW-01	WW-01	WW-01	WW-02	WW-02	WW-02	WW-02	WW-04	WW-04
					Sample Name	MW-08-206	WW-01	WW-01D	WW-01	WW-01D	WW-02	WW-02D	WW-02	WW-02D	WW-04	WW-04
					Parent Sample ID			WW-01		WW-01		WW-02		WW-02		
					Sample Date	4/29/2020	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/16/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Endosulfan II	NSL	100	NSL	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	NSL	110	NSL	110	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Gamma-BHC (Lindane)	0.2	0.042	NSL	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	0.4	0.0014	NSL	0.4	µg/L	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	0.2	0.0014	NSL	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	40	37	NSL	40	µg/L	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	3	0.071	NSL	3	µg/L	--	--	--	--	--	--	--	--	--	--	--
Herbicides (SW8151A)																
(2-methyl-4-chlorophenoxy)acetic acid	NSL	7.5	NSL	7.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-T	NSL	160	NSL	160	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TP (silvex)	50	110	NSL	50	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-D	70	170	NSL	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-DB	NSL	450	NSL	450	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dicamba	NSL	570	NSL	570	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dinoseb	7	15	NSL	7	µg/L	--	--	--	--	--	--	--	--	--	--	--
MCPP	NSL	16	NSL	16	µg/L	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)																
1,1,1-Trichloroethane	200	8,000	200	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-tetrachloroethane	NSL	0.076	4.6	0.076	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane	NSL	10,000	730,000	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	0.28	NSL	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	NSL	2.8	4,900	2.8	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	7	280	7	7	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	70	1.2	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.2	0.00033	0.2	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.05	0.0075	0.05	0.05	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	600	300	600	600	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	5	0.17	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	5	0.85	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NSL	NSL	730	730	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	75	0.48	75	75	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	NSL	5,600	15,000	5,600	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	NSL	38	120	38	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NSL	6,300	2,000	2,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acetone	NSL	14,000	22,000	14,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzene	5	0.46	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	NSL	83	980	83	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	80	0.13	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromoform	80	3.3	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	NSL	7.5	34	7.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	NSL	810	2,400	810	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	5	0.46	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	100	78	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	NSL	21,000	9,800	9,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloroform	80	0.22	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	NSL	190	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	70	36	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-dichloropropene	NSL	0.47	1.7	0.47	µg/L	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	NSL	13,000	120,000	13,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	80	0.87	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	NSL	200	4,900	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	700	1.5	700	700	µg/L	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	NSL	450	2,400	450	µg/L	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	NSL	NSL	10,000	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	NSL	14	240	14	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	5	11	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	MW-08	WW-01	WW-01	WW-01	WW-01	WW-02	WW-02	WW-02	WW-02	WW-04	WW-04
					Sample Name	MW-08-206	WW-01	WW-01D	WW-01	WW-01D	WW-02	WW-02D	WW-02	WW-02D	WW-04	WW-04
					Parent Sample ID			WW-01		WW-01		WW-02		WW-02		
					Sample Date	4/29/2020	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/16/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
o-Xylene	NSL	190	10,000	190	µg/L	--	--	--	--	--	--	--	--	--	--	--
Styrene	100	1,200	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	5	11	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Toluene	1,000	1,100	1,000	1,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	100	360	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-dichloropropene	NSL	0.47	9.1	0.47	µg/L	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	5	0.49	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	NSL	410	NSL	410	µg/L	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	2	0.019	2	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	10,000	190	NSL	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds (SW8270D)																
1,1'-Biphenyl	NSL	0.83	12,000	0.83	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,2-oxybis(1-chloropropane)	NSL	710	13	13	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NSL	1,200	2,400	1,200	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NSL	4.1	24	4.1	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	NSL	46	73	46	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	NSL	360	490	360	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	NSL	39	49	39	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NSL	0.24	1.3	0.24	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NSL	0.049	1.3	0.049	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	NSL	750	2,000	750	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	NSL	91	120	91	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	NSL	36	98	36	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	NSL	930	1,200	930	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	NSL	190	7.3	7.3	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NSL	0.31	49	0.31	µg/L	--	--	--	--	--	--	--	--	--	--	--
3&4-methylphenol	NSL	930	NSL	930	µg/L	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	NSL	0.13	2	0.13	µg/L	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NSL	1.7	7.3	1.7	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NSL	1.5	2.4	1.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-chloro-3-methylphenol	NSL	1,400	120	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	NSL	0.37	4.6	0.37	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	NSL	3.8	46	3.8	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	NSL	1,900	2,400	1,900	µg/L	--	--	--	--	--	--	--	--	--	--	--
Anthracene	NSL	1,800	7,300	1,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NSL	0.03	9.1	0.03	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	0.2	0.025	0.2	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	NSL	120	730	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	NSL	2.5	91	2.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzyl butyl phthalate	NSL	16	480	16	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy) methane	NSL	59	0.83	0.83	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	MW-08	WW-01	WW-01	WW-01	WW-01	WW-02	WW-02	WW-02	WW-02	WW-04	WW-04
					Sample Name	MW-08-206	WW-01	WW-01D	WW-01	WW-01D	WW-02	WW-02D	WW-02	WW-02D	WW-04	WW-04
					Parent Sample ID			WW-01		WW-01		WW-02		WW-02		
					Sample Date	4/29/2020	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/15/2019	4/15/2019	12/16/2019	12/16/2019	4/16/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Bis(2-chloroethyl) ether	NSL	0.014	0.83	0.014	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	6	5.6	6	6	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NSL	NSL	46	46	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chrysene	NSL	25	910	25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	NSL	0.025	0.2	0.025	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	NSL	7.9	98	7.9	µg/L	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	NSL	15,000	20,000	15,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	NSL	NSL	20,000	20,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Di-n-Butyl phthalate	NSL	900	2,400	900	µg/L	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	NSL	200	240	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	NSL	800	980	800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Fluorene	NSL	290	980	290	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	1	0.0098	1	1	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	NSL	0.14	12	0.14	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	50	0.41	50	50	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	NSL	0.33	17	0.33	µg/L	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-c,d]pyrene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Isophorone	NSL	78	960	78	µg/L	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	NSL	0.12	490	0.12	µg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	NSL	0.14	49	0.14	µg/L	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodi-n-propylamine	NSL	0.011	0.13	0.011	µg/L	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	NSL	12	190	12	µg/L	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	0.041	1	1	µg/L	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	NSL	1,800	730	730	µg/L	--	--	--	--	--	--	--	--	--	--	--
Phenol	NSL	5,800	7,300	5,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Pyrene	NSL	120	730	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TX1005)																
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH (C12-C28)	NSL	1.3	0.98	0.98	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH (C28-C35)	NSL	0.8	0.98	0.8	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH-GRO (C6-C10)	NSL	0.0055	0.98	0.0055	mg/L	--	--	--	--	--	--	--	--	--	--	--
Anions (E300.0)																
Nitrate	10	32	10	10	mg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrate/Nitrite as N	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrogen as nitrite	1	2	NSL	1	mg/L	--	--	--	--	--	--	--	--	--	--	--
Sulfate	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Fixed Gas (RSK-175)																
Ethane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Ethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous																
Total Dissolved Solids (SM2540C)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Total Activated Carbon (SM5310D)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Cyanide (SW9012B)	200	1.5	NSL	200	µg/L	--	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U

NOTES:
1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2020.
2. EPA Regional Screening Levels (RSLs) for Tap water (May 2020) for hazard index = 1 for non-carcinogens and a 10-6 cancer risk level for carcinoger
3. Texas Commission of Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 PCLs, updated November 2019.
4. The MCL has been selected as the project screening level. If no MCL has been established, the lower value of the Tap water RSL or TCEQ TRRP PCI
5. RSL value for total Chromium is not available, Chromium III value is presented.
-- = Not analyzed.
J = Estimated value.
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
Values exceeding the Project Screening level are boldfaced.

					Location ID	WW-07	WW-07	WW-09	WW-09	WW-09	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Sample Name	WW-07	WW-07	WW-9	WW-09	WW-09D	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Parent Sample ID					WW-09						
					Sample Date	4/16/2019	12/17/2019	4/17/2019	12/17/2019	12/17/2019	4/17/2019	12/17/2019	4/16/2019	4/17/2019	12/17/2019	4/16/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Total Metals (SW6010C, SW6020C, SW7470A)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	< 500 U	< 20 U	< 500 U	< 20 U	15.6 J	< 500 U	< 20 U	< 500 U	< 500 U	< 20 U	< 500 U
Antimony	6	7.8	6	6	µg/L	< 50 U	< 5 U	< 50 U	< 5 U	< 5 U	< 50 U	< 5 U	< 50 U	< 50 U	< 5 U	< 50 U
Arsenic	10	0.052	10	10	µg/L	< 10 U	0.453 J	< 10 U	0.399 J	0.432 J	< 10 U	0.359 J	< 10 U	3.3 J	0.382 J	< 10 U
Barium	2,000	3,800	2,000	2,000	µg/L	41.7	39.7	36.7	43	37.3	35.8	35.3	32.7	43.1	43.3	46.9
Beryllium	4	25	4	4	µg/L	< 5 U	< 0.5 U	< 5 U	< 0.5 U	< 0.5 U	< 5 U	< 0.5 U	< 5 U	< 5 U	< 0.5 U	< 5 U
Cadmium	5	9.2	5	5	µg/L	0.3 J	< 1 U	< 5 U	< 1 U	< 1 U	0.3 J	< 1 U	0.5 J	< 5 U	< 1 U	0.3 J
Calcium	NSL	NSL	NSL	NSL	µg/L	69,900	69,400	68,500	70,000	68,900	71,200	68,500	67,500	72,200	71,300	68,300
Chromium[5]	100	22,000	100	100	µg/L	< 10 U	0.321 J	< 10 U	0.563 J	1.2 J	< 10 U	0.347 J	< 10 U	< 10 U	< 2 U	< 10 U
Cobalt	NSL	6	240	6	µg/L	< 10 U	< 0.3 U	< 10 U	< 0.3 U	< 0.3 U	< 10 U	< 0.3 U	< 10 U	< 10 U	< 0.3 U	< 10 U
Copper	1,300	800	1,300	1,300	µg/L	< 10 U	48	< 10 U	2.55 J	4.99 J	< 10 U	0.821 J	< 10 U	< 10 U	3.2	< 10 U
Iron	NSL	14,000	NSL	14,000	µg/L	< 400 U	10.8	< 400 U	12.1	14.7	< 400 U	11.6	268 J	< 400 U	< 10 U	135 J
Lead	15	15	15	15	µg/L	< 10 U	7.84	< 10 U	11.1 J	3.57 J	< 10 U	0.298 J	< 10 U	< 10 U	0.417 J	< 10 U
Magnesium	NSL	NSL	NSL	NSL	µg/L	15,700	15,600	17,200	16,700	16,400	17,900	18,800	17,600	15,000	14,300	14,600
Manganese	NSL	430	1,100	430	µg/L	< 10 U	< 1 U	0.6 J	0.264 J	0.236 J	< 10 U	0.524 J	4.3 J	< 10 U	< 1 U	0.5 J
Mercury	2	0.63	NSL	2	µg/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Nickel	NSL	390	490	390	µg/L	< 10 U	1 J	< 10 U	< 2 U	< 2 U	< 10 U	< 2 U	< 10 U	< 10 U	< 2 U	< 10 U
Potassium	NSL	NSL	NSL	NSL	µg/L	1,330	1,340	1,430	1450 J	1390 J	1,410	1370 J	1,400	1,270	1,270	1,170
Selenium	50	100	50	50	µg/L	< 40 U	< 5 U	< 40 U	< 5 U	< 5 U	< 40 U	< 5 U	< 40 U	< 40 U	< 5 U	< 40 U
Silver	NSL	94	120	94	µg/L	< 10 U	< 1 U	< 10 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	< 10 U	< 1 U	< 10 U
Sodium	NSL	NSL	NSL	NSL	µg/L	10100 J	9,400	11,400	11,100	10,100	9,380	9,120	9030 J	10,200	10,200	9550 J
Thallium	2	0.2	2	2	µg/L	< 30 U	< 0.5 U	< 30 U	< 0.5 U	< 0.5 U	< 30 U	< 0.5 U	< 30 U	< 30 U	< 0.5 U	< 30 U
Vanadium	NSL	86	44	44	µg/L	2.5 J	2.65 J	1.5 J	2.29 J	2.21 J	1.7 J	2.35 J	0.6 J	2.8 J	3.11 J	2.4 J
Zinc	NSL	6,000	7,300	6,000	µg/L	8.2 J	65.2	185	105	95.2	12.3 J	7.98	204	5.2 J	1.83 J	< 30 U
Dissolved Metals (SW6010C, SW6020C, SW7470A, E218.6)																
Aluminum	NSL	20,000	24,000	20,000	µg/L	< 500 U	< 20 U	< 500 U	< 20 U	< 20 U	< 500 U	< 20 U	< 500 U	< 500 U	< 20 U	< 500 U
Antimony	6	7.8	6	6	µg/L	< 50 U	< 5 U	< 50 U	< 5 U	< 5 U	< 50 U	< 5 U	< 50 U	< 50 U	< 5 U	< 50 U
Arsenic	10	0.052	10	10	µg/L	< 10 U	0.498 J	< 10 U	0.35 J	0.411 J	< 10 U	0.293 J	< 10 U	< 10 U	0.482 J	< 10 U
Barium	2,000	3,800	2,000	2,000	µg/L	41.3	39.7	35.3	34.3	36.8	37.2	34.5	32.8	43.1	40.2	46.1
Beryllium	4	25	4	4	µg/L	< 5 U	< 0.5 U	< 5 U	< 0.5 U	< 0.5 U	< 5 U	< 0.5 U	< 5 U	< 5 U	< 0.5 U	< 5 U
Cadmium	5	9.2	5	5	µg/L	0.4 J	< 1 U	< 5 U	< 1 U	< 1 U	< 5 U	< 1 U	0.6 J	< 5 U	< 1 U	0.3 J
Calcium	NSL	NSL	NSL	NSL	µg/L	69,100	68,400	68,500	68,400	67,500	71,400	68,900	68,300	71,800	69,600	67,700
Chromium[5]	100	22,000	100	100	µg/L	< 10 U	0.431 J	< 10 U	0.375 J	0.265 J	< 10 U	0.267 J	< 10 U	< 10 U	0.253 J	< 10 U
Chromium (hexavalent)	NSL	0.035	NSL	0.035	µg/L	--	**0.196**	--	**0.067**	**0.065**	--	**0.067**	--	--	**0.139**	--
Cobalt	NSL	6	240	6	µg/L	< 10 U	< 0.3 U	< 10 U	< 0.3 U	0.142 J	< 10 U	< 0.3 U	< 10 U	< 10 U	< 0.3 U	< 10 U
Copper	1,300	800	1,300	1,300	µg/L	< 10 U	6.23	< 10 U	1.3 J	1.25 J	< 10 U	0.364 J	< 10 U	< 10 U	2.33	< 10 U
Iron	NSL	14,000	NSL	14,000	µg/L	< 400 U	< 10 U	< 400 U	4.68 J	8.3 J	< 400 U	< 10 U	< 400 U	< 400 U	< 10 U	< 400 U
Lead	15	15	15	15	µg/L	< 10 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 10 U	< 10 U	< 0.5 U	< 10 U
Magnesium	NSL	NSL	NSL	NSL	µg/L	15,500	15,600	17,100	18,000	18,000	18,000	18,400	17,600	14,900	14,200	14,700
Manganese	NSL	430	1,100	430	µg/L	< 10 U	< 1 U	0.5 J	0.287 J	0.293 J	< 10 U	< 1 U	3.1 J	< 10 U	0.299 J	< 10 U
Mercury	2	0.63	NSL	2	µg/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Nickel	NSL	390	490	390	µg/L	< 10 U	< 2 U	< 10 U	< 2 U	< 2 U	< 10 U	< 2 U	< 10 U	< 10 U	0.32 J	< 10 U
Potassium	NSL	NSL	NSL	NSL	µg/L	1,320	1,270	1,370	1340 J	1350 J	1,430	1410 J	1,420	1,260	1,200	1,200
Selenium	50	100	50	50	µg/L	< 40 U	< 5 U	< 40 U	< 5 U	< 5 U	< 40 U	< 5 U	< 40 U	< 40 U	< 5 U	< 40 U
Silver	NSL	94	120	94	µg/L	< 10 U	< 1 U	< 10 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	< 10 U	< 1 U	< 10 U
Sodium	NSL	NSL	NSL	NSL	µg/L	10300 J	9,380	9,370	9,790	9,550	9,830	9,310	9440 J	10,600	10,200	9880 J
Thallium	2	0.2	2	2	µg/L	< 30 U	< 0.5 U	< 30 U	< 0.5 U	< 0.5 U	**4.2 J**	< 0.5 U	< 30 U	< 30 U	< 0.5 U	< 30 U
Vanadium	NSL	86	44	44	µg/L	2.4 J	2.9 J	1.5 J	2.18 J	2.22 J	1.6 J	2.24 J	< 10 U	2.4 J	2.94 J	2.6 J
Zinc	NSL	6,000	7,300	6,000	µg/L	8.8 J	8.77	140	73.1	71	9.3 J	8.18	180	5 J	< 5 U	< 30 U
Pesticides (SW8081B)																
4,4-DDD	NSL	0.032	NSL	0.032	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,4-DDE	NSL	0.046	NSL	0.046	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,4-DDT	NSL	0.23	NSL	0.23	µg/L	--	--	--	--	--	--	--	--	--	--	--
Aldrin	NSL	0.00092	NSL	0.00092	µg/L	--	--	--	--	--	--	--	--	--	--	--
alpha-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--	--	--	--	--	--
alpha-Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Beta-BHC	NSL	0.025	NSL	0.025	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
delta-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	NSL	0.0018	NSL	0.0018	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	NSL	100	NSL	100	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	WW-07	WW-07	WW-09	WW-09	WW-09	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Sample Name	WW-07	WW-07	WW-9	WW-09	WW-09D	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Parent Sample ID					WW-09						
					Sample Date	4/16/2019	12/17/2019	4/17/2019	12/17/2019	12/17/2019	4/17/2019	12/17/2019	4/16/2019	4/17/2019	12/17/2019	4/16/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Endosulfan II	NSL	100	NSL	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	NSL	110	NSL	110	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	2	2.3	NSL	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Gamma-BHC (Lindane)	0.2	0.042	NSL	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	0.4	0.0014	NSL	0.4	µg/L	--	--	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	0.2	0.0014	NSL	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	40	37	NSL	40	µg/L	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	3	0.071	NSL	3	µg/L	--	--	--	--	--	--	--	--	--	--	--
Herbicides (SW8151A)																
(2-methyl-4-chlorophenoxy)acetic acid	NSL	7.5	NSL	7.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-T	NSL	160	NSL	160	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TP (silvex)	50	110	NSL	50	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-D	70	170	NSL	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-DB	NSL	450	NSL	450	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dicamba	NSL	570	NSL	570	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dinoseb	7	15	NSL	7	µg/L	--	--	--	--	--	--	--	--	--	--	--
MCPP	NSL	16	NSL	16	µg/L	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)																
1,1,1-Trichloroethane	200	8,000	200	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-tetrachloroethane	NSL	0.076	4.6	0.076	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane	NSL	10,000	730,000	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	0.28	NSL	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	NSL	2.8	4,900	2.8	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	7	280	7	7	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	70	1.2	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.2	0.00033	0.2	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.05	0.0075	0.05	0.05	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	600	300	600	600	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	5	0.17	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	5	0.85	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NSL	NSL	730	730	µg/L	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	75	0.48	75	75	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	NSL	5,600	15,000	5,600	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	NSL	38	120	38	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NSL	6,300	2,000	2,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acetone	NSL	14,000	22,000	14,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzene	5	0.46	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	NSL	83	980	83	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	80	0.13	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromoform	80	3.3	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	NSL	7.5	34	7.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	NSL	810	2,400	810	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	5	0.46	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	100	78	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	NSL	21,000	9,800	9,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloroform	80	0.22	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	NSL	190	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	70	36	70	70	µg/L	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-dichloropropene	NSL	0.47	1.7	0.47	µg/L	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	NSL	13,000	120,000	13,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	80	0.87	80	80	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	NSL	200	4,900	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	700	1.5	700	700	µg/L	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	NSL	450	2,400	450	µg/L	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	NSL	NSL	10,000	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	NSL	14	240	14	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	5	11	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	WW-07	WW-07	WW-09	WW-09	WW-09	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Sample Name	WW-07	WW-07	WW-9	WW-09	WW-09D	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Parent Sample ID					WW-09						
					Sample Date	4/16/2019	12/17/2019	4/17/2019	12/17/2019	12/17/2019	4/17/2019	12/17/2019	4/16/2019	4/17/2019	12/17/2019	4/16/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
o-Xylene	NSL	190	10,000	190	µg/L	--	--	--	--	--	--	--	--	--	--	--
Styrene	100	1,200	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	5	11	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Toluene	1,000	1,100	1,000	1,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	100	360	100	100	µg/L	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-dichloropropene	NSL	0.47	9.1	0.47	µg/L	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	5	0.49	5	5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	NSL	410	NSL	410	µg/L	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	2	0.019	2	2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	10,000	190	NSL	10,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds (SW8270D)																
1,1'-Biphenyl	NSL	0.83	12,000	0.83	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,2-oxybis(1-chloropropane)	NSL	710	13	13	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NSL	1,200	2,400	1,200	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NSL	4.1	24	4.1	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	NSL	46	73	46	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	NSL	360	490	360	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	NSL	39	49	39	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NSL	0.24	1.3	0.24	µg/L	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NSL	0.049	1.3	0.049	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	NSL	750	2,000	750	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	NSL	91	120	91	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	NSL	36	98	36	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	NSL	930	1,200	930	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	NSL	190	7.3	7.3	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NSL	0.31	49	0.31	µg/L	--	--	--	--	--	--	--	--	--	--	--
3&4-methylphenol	NSL	930	NSL	930	µg/L	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	NSL	0.13	2	0.13	µg/L	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NSL	1.7	7.3	1.7	µg/L	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NSL	1.5	2.4	1.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-chloro-3-methylphenol	NSL	1,400	120	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	NSL	0.37	4.6	0.37	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	NSL	3.8	46	3.8	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	NSL	1,900	2,400	1,900	µg/L	--	--	--	--	--	--	--	--	--	--	--
Anthracene	NSL	1,800	7,300	1,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NSL	0.03	9.1	0.03	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	0.2	0.025	0.2	0.2	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	NSL	120	730	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	NSL	2.5	91	2.5	µg/L	--	--	--	--	--	--	--	--	--	--	--
Benzyl butyl phthalate	NSL	16	480	16	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy) methane	NSL	59	0.83	0.83	µg/L	--	--	--	--	--	--	--	--	--	--	--

					Location ID	WW-07	WW-07	WW-09	WW-09	WW-09	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Sample Name	WW-07	WW-07	WW-9	WW-09	WW-09D	WW-10	WW-10	WW-11	WW-16	WW-16	WW-17
					Parent Sample ID					WW-09						
					Sample Date	4/16/2019	12/17/2019	4/17/2019	12/17/2019	12/17/2019	4/17/2019	12/17/2019	4/16/2019	4/17/2019	12/17/2019	4/16/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Bis(2-chloroethyl) ether	NSL	0.014	0.83	0.014	µg/L	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	6	5.6	6	6	µg/L	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NSL	NSL	46	46	µg/L	--	--	--	--	--	--	--	--	--	--	--
Chrysene	NSL	25	910	25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	NSL	0.025	0.2	0.025	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	NSL	7.9	98	7.9	µg/L	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	NSL	15,000	20,000	15,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	NSL	NSL	20,000	20,000	µg/L	--	--	--	--	--	--	--	--	--	--	--
Di-n-Butyl phthalate	NSL	900	2,400	900	µg/L	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	NSL	200	240	200	µg/L	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	NSL	800	980	800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Fluorene	NSL	290	980	290	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	1	0.0098	1	1	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	NSL	0.14	12	0.14	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	50	0.41	50	50	µg/L	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	NSL	0.33	17	0.33	µg/L	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-c,d]pyrene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--	--	--	--	--	--
Isophorone	NSL	78	960	78	µg/L	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	NSL	0.12	490	0.12	µg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	NSL	0.14	49	0.14	µg/L	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodi-n-propylamine	NSL	0.011	0.13	0.011	µg/L	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	NSL	12	190	12	µg/L	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	0.041	1	1	µg/L	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	NSL	1,800	730	730	µg/L	--	--	--	--	--	--	--	--	--	--	--
Phenol	NSL	5,800	7,300	5,800	µg/L	--	--	--	--	--	--	--	--	--	--	--
Pyrene	NSL	120	730	120	µg/L	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TX1005)																
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH (C12-C28)	NSL	1.3	0.98	0.98	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH (C28-C35)	NSL	0.8	0.98	0.8	mg/L	--	--	--	--	--	--	--	--	--	--	--
TPH-GRO (C6-C10)	NSL	0.0055	0.98	0.0055	mg/L	--	--	--	--	--	--	--	--	--	--	--
Anions (E300.0)																
Nitrate	10	32	10	10	mg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrate/Nitrite as N	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Nitrogen as nitrite	1	2	NSL	1	mg/L	--	--	--	--	--	--	--	--	--	--	--
Sulfate	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Fixed Gas (RSK-175)																
Ethane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Ethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Methane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous																
Total Dissolved Solids (SM2540C)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Total Activated Carbon (SM5310D)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--	--	--	--	--	--
Cyanide (SW9012B)	200	1.5	NSL	200	µg/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U

NOTES:
1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2020.
2. EPA Regional Screening Levels (RSLs) for Tap water (May 2020) for hazard index = 1 for non-carcinogens and a 10-6 cancer risk level for carcinoger
3. Texas Commission of Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 PCLs, updated November 2019.
4. The MCL has been selected as the project screening level. If no MCL has been established, the lower value of the Tap water RSL or TCEQ TRRP PCI
5. RSL value for total Chromium is not available, Chromium III value is presented.
-- = Not analyzed.
J = Estimated value.
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
Values exceeding the Project Screening level are boldfaced.

					Location ID	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Sample Name	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Parent Sample ID						
					Sample Date	12/17/2019	4/16/2019	4/16/2019	4/17/2019	4/17/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Total Metals (SW6010C, SW6020C, SW7470A)											
Aluminum	NSL	20,000	24,000	20,000	µg/L	< 20 U	< 500 U	< 500 U	< 500 U	< 500 U	< 20 U
Antimony	6	7.8	6	6	µg/L	< 5 U	< 50 U	**6.1 J**	< 50 U	< 50 U	< 5 U
Arsenic	10	0.052	10	10	µg/L	0.412 J	< 10 U	< 10 U	< 10 U	< 10 U	0.297 J
Barium	2,000	3,800	2,000	2,000	µg/L	44	75.5	63.6	83.6	45.2	41.1
Beryllium	4	25	4	4	µg/L	< 0.5 U	< 5 U	0.7 J	< 5 U	< 5 U	< 0.5 U
Cadmium	5	9.2	5	5	µg/L	< 1 U	0.6 J	1.1 J	< 5 U	< 5 U	< 1 U
Calcium	NSL	NSL	NSL	NSL	µg/L	68,100	45,000	22,400	121,000	82,700	73,900
Chromium[5]	100	22,000	100	100	µg/L	0.347 J	< 10 U	1.7 J	< 10 U	< 10 U	0.309 J
Cobalt	NSL	6	240	6	µg/L	< 0.3 U	< 10 U	1.3 J	< 10 U	< 10 U	< 0.3 U
Copper	1,300	800	1,300	1,300	µg/L	1.1 J	< 10 U	< 10 U	< 10 U	< 10 U	0.584 J
Iron	NSL	14,000	NSL	14,000	µg/L	3.59 J	2,430	**45,200**	< 400 U	184 J	41.4
Lead	15	15	15	15	µg/L	< 0.5 U	< 10 U	**16**	< 10 U	< 10 U	1.35
Magnesium	NSL	NSL	NSL	NSL	µg/L	13,900	23,400	12,200	13,100	13,500	15,000
Manganese	NSL	430	1,100	430	µg/L	< 1 U	28.1	136	0.4 J	1.3 J	0.697 J
Mercury	2	0.63	NSL	2	µg/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Nickel	NSL	390	490	390	µg/L	< 2 U	< 10 U	< 10 U	< 10 U	< 10 U	< 2 U
Potassium	NSL	NSL	NSL	NSL	µg/L	1,170	4,380	1,770	2,030	1,330	1260 J
Selenium	50	100	50	50	µg/L	< 5 U	< 40 U	< 40 U	< 40 U	< 40 U	< 5 U
Silver	NSL	94	120	94	µg/L	< 1 U	< 10 U	< 10 U	< 10 U	< 10 U	< 1 U
Sodium	NSL	NSL	NSL	NSL	µg/L	9,640	21600 J	23300 J	19,800	11,400	9,920
Thallium	2	0.2	2	2	µg/L	< 0.5 U	< 30 U	< 30 U	< 30 U	< 30 U	< 0.5 U
Vanadium	NSL	86	44	44	µg/L	3.17 J	< 10 U	10.3	2.9 J	2.1 J	2.3 J
Zinc	NSL	6,000	7,300	6,000	µg/L	5.84	95.9	2,950	19.3 J	217	212
Dissolved Metals (SW6010C, SW6020C, SW7470A, E218.6)											
Aluminum	NSL	20,000	24,000	20,000	µg/L	< 20 U	< 500 U	< 500 U	< 500 U	< 500 U	< 20 U
Antimony	6	7.8	6	6	µg/L	< 5 U	< 50 U	4.1 J	< 50 U	< 50 U	< 5 U
Arsenic	10	0.052	10	10	µg/L	0.447 J	< 10 U	< 10 U	3 J	< 10 U	0.268 J
Barium	2,000	3,800	2,000	2,000	µg/L	43.7	73.5	62.1	70.3	44.8	39.8
Beryllium	4	25	4	4	µg/L	< 0.5 U	< 5 U	0.8 J	< 5 U	< 5 U	< 0.5 U
Cadmium	5	9.2	5	5	µg/L	< 1 U	0.5 J	0.7 J	< 5 U	< 5 U	< 1 U
Calcium	NSL	NSL	NSL	NSL	µg/L	64,200	44,200	22,300	121,000	81,400	74,300
Chromium[5]	100	22,000	100	100	µg/L	0.566 J	< 10 U	1.8 J	< 10 U	< 10 U	0.89 J
Chromium (hexavalent)	NSL	0.035	NSL	0.035	µg/L	**0.125**	--	--	--	--	**0.099**
Cobalt	NSL	6	240	6	µg/L	1.54	< 10 U	1 J	< 10 U	< 10 U	< 0.3 U
Copper	1,300	800	1,300	1,300	µg/L	0.952 J	< 10 U	< 10 U	< 10 U	< 10 U	0.797 J
Iron	NSL	14,000	NSL	14,000	µg/L	20.4	1,620	**33,500**	< 400 U	< 400 U	7.35 J
Lead	15	15	15	15	µg/L	< 0.5 U	< 10 U	12.5	< 10 U	< 10 U	< 0.5 U
Magnesium	NSL	NSL	NSL	NSL	µg/L	13,500	22,900	12,200	13,100	13,400	15,000
Manganese	NSL	430	1,100	430	µg/L	2.62	28.4	106	< 10 U	0.8 J	0.493 J
Mercury	2	0.63	NSL	2	µg/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Nickel	NSL	390	490	390	µg/L	< 2 U	< 10 U	< 10 U	< 10 U	< 10 U	< 2 U
Potassium	NSL	NSL	NSL	NSL	µg/L	1,090	4,260	1,810	2,020	1,320	1290 J
Selenium	50	100	50	50	µg/L	< 5 U	< 40 U	< 40 U	< 40 U	< 40 U	< 5 U
Silver	NSL	94	120	94	µg/L	< 1 U	< 10 U	< 10 U	< 10 U	< 10 U	< 1 U
Sodium	NSL	NSL	NSL	NSL	µg/L	9,350	21600 J	23700 J	19,900	11,300	10,000
Thallium	2	0.2	2	2	µg/L	< 0.5 U	< 30 U	< 30 U	< 30 U	< 30 U	< 0.5 U
Vanadium	NSL	86	44	44	µg/L	3.05 J	< 10 U	7.4 J	3.1 J	1.3 J	2.26 J
Zinc	NSL	6,000	7,300	6,000	µg/L	11.1	55.4	2,240	17.9 J	182	209
Pesticides (SW8081B)											
4,4-DDD	NSL	0.032	NSL	0.032	µg/L	--	--	--	--	--	--
4,4-DDE	NSL	0.046	NSL	0.046	µg/L	--	--	--	--	--	--
4,4-DDT	NSL	0.23	NSL	0.23	µg/L	--	--	--	--	--	--
Aldrin	NSL	0.00092	NSL	0.00092	µg/L	--	--	--	--	--	--
alpha-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--
alpha-Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--
Beta-BHC	NSL	0.025	NSL	0.025	µg/L	--	--	--	--	--	--
Chlordane	2	0.02	NSL	2	µg/L	--	--	--	--	--	--
delta-BHC	NSL	0.0072	NSL	0.0072	µg/L	--	--	--	--	--	--
Dieldrin	NSL	0.0018	NSL	0.0018	µg/L	--	--	--	--	--	--
Endosulfan I	NSL	100	NSL	100	µg/L	--	--	--	--	--	--

					Location ID	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Sample Name	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Parent Sample ID						
					Sample Date	12/17/2019	4/16/2019	4/16/2019	4/17/2019	4/17/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Endosulfan II	NSL	100	NSL	100	µg/L	--	--	--	--	--	--
Endosulfan sulfate	NSL	110	NSL	110	µg/L	--	--	--	--	--	--
Endrin	2	2.3	NSL	2	µg/L	--	--	--	--	--	--
Endrin aldehyde	2	2.3	NSL	2	µg/L	--	--	--	--	--	--
Endrin ketone	2	2.3	NSL	2	µg/L	--	--	--	--	--	--
Gamma-BHC (Lindane)	0.2	0.042	NSL	0.2	µg/L	--	--	--	--	--	--
Heptachlor	0.4	0.0014	NSL	0.4	µg/L	--	--	--	--	--	--
Heptachlor epoxide	0.2	0.0014	NSL	0.2	µg/L	--	--	--	--	--	--
Methoxychlor	40	37	NSL	40	µg/L	--	--	--	--	--	--
Toxaphene	3	0.071	NSL	3	µg/L	--	--	--	--	--	--
Herbicides (SW8151A)											
(2-methyl-4-chlorophenoxy)acetic acid	NSL	7.5	NSL	7.5	µg/L	--	--	--	--	--	--
2,4,5-T	NSL	160	NSL	160	µg/L	--	--	--	--	--	--
2,4,5-TP (silvex)	50	110	NSL	50	µg/L	--	--	--	--	--	--
2,4-D	70	170	NSL	70	µg/L	--	--	--	--	--	--
2,4-DB	NSL	450	NSL	450	µg/L	--	--	--	--	--	--
Dicamba	NSL	570	NSL	570	µg/L	--	--	--	--	--	--
Dichlorprop	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--
Dinoseb	7	15	NSL	7	µg/L	--	--	--	--	--	--
MCPP	NSL	16	NSL	16	µg/L	--	--	--	--	--	--
Volatile Organic Compounds (SW8260C)											
1,1,1-Trichloroethane	200	8,000	200	200	µg/L	--	--	--	--	--	--
1,1,2,2-tetrachloroethane	NSL	0.076	4.6	0.076	µg/L	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane	NSL	10,000	730,000	10,000	µg/L	--	--	--	--	--	--
1,1,2-Trichloroethane	5	0.28	NSL	5	µg/L	--	--	--	--	--	--
1,1-Dichloroethane	NSL	2.8	4,900	2.8	µg/L	--	--	--	--	--	--
1,1-Dichloroethene	7	280	7	7	µg/L	--	--	--	--	--	--
1,2,4-Trichlorobenzene	70	1.2	70	70	µg/L	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.2	0.00033	0.2	0.2	µg/L	--	--	--	--	--	--
1,2-Dibromoethane	0.05	0.0075	0.05	0.05	µg/L	--	--	--	--	--	--
1,2-Dichlorobenzene	600	300	600	600	µg/L	--	--	--	--	--	--
1,2-Dichloroethane	5	0.17	5	5	µg/L	--	--	--	--	--	--
1,2-Dichloroethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--
1,2-Dichloropropane	5	0.85	5	5	µg/L	--	--	--	--	--	--
1,3-Dichlorobenzene	NSL	NSL	730	730	µg/L	--	--	--	--	--	--
1,4-Dichlorobenzene	75	0.48	75	75	µg/L	--	--	--	--	--	--
2-Butanone	NSL	5,600	15,000	5,600	µg/L	--	--	--	--	--	--
2-Hexanone	NSL	38	120	38	µg/L	--	--	--	--	--	--
4-Methyl-2-pentanone	NSL	6,300	2,000	2,000	µg/L	--	--	--	--	--	--
Acetone	NSL	14,000	22,000	14,000	µg/L	--	--	--	--	--	--
Benzene	5	0.46	5	5	µg/L	--	--	--	--	--	--
Bromochloromethane	NSL	83	980	83	µg/L	--	--	--	--	--	--
Bromodichloromethane	80	0.13	80	80	µg/L	--	--	--	--	--	--
Bromoform	80	3.3	80	80	µg/L	--	--	--	--	--	--
Bromomethane	NSL	7.5	34	7.5	µg/L	--	--	--	--	--	--
Carbon disulfide	NSL	810	2,400	810	µg/L	--	--	--	--	--	--
Carbon tetrachloride	5	0.46	5	5	µg/L	--	--	--	--	--	--
Chlorobenzene	100	78	100	100	µg/L	--	--	--	--	--	--
Chloroethane	NSL	21,000	9,800	9,800	µg/L	--	--	--	--	--	--
Chloroform	80	0.22	80	80	µg/L	--	--	--	--	--	--
Chloromethane	NSL	190	70	70	µg/L	--	--	--	--	--	--
cis-1,2-dichloroethene	70	36	70	70	µg/L	--	--	--	--	--	--
cis-1,3-dichloropropene	NSL	0.47	1.7	0.47	µg/L	--	--	--	--	--	--
Cyclohexane	NSL	13,000	120,000	13,000	µg/L	--	--	--	--	--	--
Dibromochloromethane	80	0.87	80	80	µg/L	--	--	--	--	--	--
Dichlorodifluoromethane	NSL	200	4,900	200	µg/L	--	--	--	--	--	--
Ethylbenzene	700	1.5	700	700	µg/L	--	--	--	--	--	--
Isopropylbenzene	NSL	450	2,400	450	µg/L	--	--	--	--	--	--
m,p-Xylene	NSL	NSL	10,000	10,000	µg/L	--	--	--	--	--	--
Methyl tert-butyl ether	NSL	14	240	14	µg/L	--	--	--	--	--	--
Methylene Chloride	5	11	5	5	µg/L	--	--	--	--	--	--

					Location ID	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Sample Name	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Parent Sample ID						
					Sample Date	12/17/2019	4/16/2019	4/16/2019	4/17/2019	4/17/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
o-Xylene	NSL	190	10,000	190	µg/L	--	--	--	--	--	--
Styrene	100	1,200	100	100	µg/L	--	--	--	--	--	--
Tetrachloroethene	5	11	5	5	µg/L	--	--	--	--	--	--
Toluene	1,000	1,100	1,000	1,000	µg/L	--	--	--	--	--	--
trans-1,2-dichloroethene	100	360	100	100	µg/L	--	--	--	--	--	--
trans-1,3-dichloropropene	NSL	0.47	9.1	0.47	µg/L	--	--	--	--	--	--
Trichloroethene	5	0.49	5	5	µg/L	--	--	--	--	--	--
Vinyl acetate	NSL	410	NSL	410	µg/L	--	--	--	--	--	--
Vinyl chloride	2	0.019	2	2	µg/L	--	--	--	--	--	--
Xylenes, Total	10,000	190	NSL	10,000	µg/L	--	--	--	--	--	--
Semivolatile Organic Compounds (SW8270D)											
1,1'-Biphenyl	NSL	0.83	12,000	0.83	µg/L	--	--	--	--	--	--
2,2-oxybis(1-chloropropane)	NSL	710	13	13	µg/L	--	--	--	--	--	--
2,4,5-Trichlorophenol	NSL	1,200	2,400	1,200	µg/L	--	--	--	--	--	--
2,4,6-Trichlorophenol	NSL	4.1	24	4.1	µg/L	--	--	--	--	--	--
2,4-Dichlorophenol	NSL	46	73	46	µg/L	--	--	--	--	--	--
2,4-Dimethylphenol	NSL	360	490	360	µg/L	--	--	--	--	--	--
2,4-Dinitrophenol	NSL	39	49	39	µg/L	--	--	--	--	--	--
2,4-Dinitrotoluene	NSL	0.24	1.3	0.24	µg/L	--	--	--	--	--	--
2,6-Dinitrotoluene	NSL	0.049	1.3	0.049	µg/L	--	--	--	--	--	--
2-Chloronaphthalene	NSL	750	2,000	750	µg/L	--	--	--	--	--	--
2-Chlorophenol	NSL	91	120	91	µg/L	--	--	--	--	--	--
2-Methylnaphthalene	NSL	36	98	36	µg/L	--	--	--	--	--	--
2-Methylphenol	NSL	930	1,200	930	µg/L	--	--	--	--	--	--
2-Nitroaniline	NSL	190	7.3	7.3	µg/L	--	--	--	--	--	--
2-Nitrophenol	NSL	0.31	49	0.31	µg/L	--	--	--	--	--	--
3&4-methylphenol	NSL	930	NSL	930	µg/L	--	--	--	--	--	--
3,3'-Dichlorobenzidine	NSL	0.13	2	0.13	µg/L	--	--	--	--	--	--
3-Nitroaniline	NSL	1.7	7.3	1.7	µg/L	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NSL	1.5	2.4	1.5	µg/L	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--
4-chloro-3-methylphenol	NSL	1,400	120	120	µg/L	--	--	--	--	--	--
4-Chloroaniline	NSL	0.37	4.6	0.37	µg/L	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NSL	NSL	0.061	0.061	µg/L	--	--	--	--	--	--
4-Nitroaniline	NSL	3.8	46	3.8	µg/L	--	--	--	--	--	--
Acenaphthene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--
Acenaphthylene	NSL	530	1,500	530	µg/L	--	--	--	--	--	--
Acetophenone	NSL	1,900	2,400	1,900	µg/L	--	--	--	--	--	--
Anthracene	NSL	1,800	7,300	1,800	µg/L	--	--	--	--	--	--
Benzo[a]anthracene	NSL	0.03	9.1	0.03	µg/L	--	--	--	--	--	--
Benzo[a]pyrene	0.2	0.025	0.2	0.2	µg/L	--	--	--	--	--	--
Benzo[b]fluoranthene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--
Benzo[g,h,i]perylene	NSL	120	730	120	µg/L	--	--	--	--	--	--
Benzo[k]fluoranthene	NSL	2.5	91	2.5	µg/L	--	--	--	--	--	--
Benzyl butyl phthalate	NSL	16	480	16	µg/L	--	--	--	--	--	--
Bis(2-chloroethoxy) methane	NSL	59	0.83	0.83	µg/L	--	--	--	--	--	--

					Location ID	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Sample Name	WW-17	WW-19	WW-20	WW-21	WW-22	WW-23
					Parent Sample ID						
					Sample Date	12/17/2019	4/16/2019	4/16/2019	4/17/2019	4/17/2019	12/17/2019
Analyte	**EPA MCL [1]**	**EPA Tap water RSL [2]**	**TCEQ Tier 1 PCL [3] $^{GW}GW_{Ing}$**	**Project Screening Level [4]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Bis(2-chloroethyl) ether	NSL	0.014	0.83	0.014	µg/L	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	6	5.6	6	6	µg/L	--	--	--	--	--	--
Carbazole	NSL	NSL	46	46	µg/L	--	--	--	--	--	--
Chrysene	NSL	25	910	25	µg/L	--	--	--	--	--	--
Dibenz[a,h]anthracene	NSL	0.025	0.2	0.025	µg/L	--	--	--	--	--	--
Dibenzofuran	NSL	7.9	98	7.9	µg/L	--	--	--	--	--	--
Diethyl phthalate	NSL	15,000	20,000	15,000	µg/L	--	--	--	--	--	--
Dimethyl phthalate	NSL	NSL	20,000	20,000	µg/L	--	--	--	--	--	--
Di-n-Butyl phthalate	NSL	900	2,400	900	µg/L	--	--	--	--	--	--
Di-n-octyl phthalate	NSL	200	240	200	µg/L	--	--	--	--	--	--
Fluoranthene	NSL	800	980	800	µg/L	--	--	--	--	--	--
Fluorene	NSL	290	980	290	µg/L	--	--	--	--	--	--
Hexachlorobenzene	1	0.0098	1	1	µg/L	--	--	--	--	--	--
Hexachlorobutadiene	NSL	0.14	12	0.14	µg/L	--	--	--	--	--	--
Hexachlorocyclopentadiene	50	0.41	50	50	µg/L	--	--	--	--	--	--
Hexachloroethane	NSL	0.33	17	0.33	µg/L	--	--	--	--	--	--
Indeno[1,2,3-c,d]pyrene	NSL	0.25	9.1	0.25	µg/L	--	--	--	--	--	--
Isophorone	NSL	78	960	78	µg/L	--	--	--	--	--	--
Naphthalene	NSL	0.12	490	0.12	µg/L	--	--	--	--	--	--
Nitrobenzene	NSL	0.14	49	0.14	µg/L	--	--	--	--	--	--
n-Nitrosodi-n-propylamine	NSL	0.011	0.13	0.011	µg/L	--	--	--	--	--	--
n-Nitrosodiphenylamine	NSL	12	190	12	µg/L	--	--	--	--	--	--
Pentachlorophenol	1	0.041	1	1	µg/L	--	--	--	--	--	--
Phenanthrene	NSL	1,800	730	730	µg/L	--	--	--	--	--	--
Phenol	NSL	5,800	7,300	5,800	µg/L	--	--	--	--	--	--
Pyrene	NSL	120	730	120	µg/L	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TX1005)											
Total Petroleum Hydrocarbons (TPH)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--
TPH (C12-C28)	NSL	1.3	0.98	0.98	mg/L	--	--	--	--	--	--
TPH (C28-C35)	NSL	0.8	0.98	0.8	mg/L	--	--	--	--	--	--
TPH-GRO (C6-C10)	NSL	0.0055	0.98	0.0055	mg/L	--	--	--	--	--	--
Anions (E300.0)											
Nitrate	10	32	10	10	mg/L	--	--	--	--	--	--
Nitrate/Nitrite as N	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--
Nitrogen as nitrite	1	2	NSL	1	mg/L	--	--	--	--	--	--
Sulfate	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--
Fixed Gas (RSK-175)											
Ethane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--
Ethene	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--
Methane	NSL	NSL	NSL	NSL	µg/L	--	--	--	--	--	--
Miscellaneous											
Total Dissolved Solids (SM2540C)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--
Total Activated Carbon (SM5310D)	NSL	NSL	NSL	NSL	mg/L	--	--	--	--	--	--
Cyanide (SW9012B)	200	1.5	NSL	200	µg/L	< 10 U	< 10 R	< 10 U	< 10 U	< 10 U	< 10 U

NOTES:
1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2020.
2. EPA Regional Screening Levels (RSLs) for Tap water (May 2020) for hazard index = 1 for non-carcinogens and a 10-6 cancer risk level for carcinogen
3. Texas Commission of Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 PCLs, updated November 2019.
4. The MCL has been selected as the project screening level. If no MCL has been established, the lower value of the Tap water RSL or TCEQ TRRP PCI
5. RSL value for total Chromium is not available, Chromium III value is presented.
-- = Not analyzed.
J = Estimated value.
NSL = No screening level.
R = Rejected data.
U = Not detected above the method detection limit.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
Values exceeding the Project Screening level are boldfaced.

APPENDIX A

SITE PHOTOGRAPHS

*Photo 1. View of fence installation from Potranco Road, south facing (*Date: 4 April 2019).

Photo 2. View of crew installing new barbed wire and fence fabric on the north fence line (Date: 4 April 2019).

Photo 3. MW-2 well installation along the southeast corner of the site (Date: 3 April 2019)

Photo 4. MW-2 soil borings from 0'-30' (Date: 3 April 2019).

Photo 5. MW-2 well installation completed with concrete (Date: 3 April 2019).

Photo 6. Offsite tap sampling taken from WW-01, southwest from site location (Date: 15 April 2019).

Photo 7. Offsite tap sampling from WW-07, west of site location (Date: 16 April 2019).

Photo 8. Low Flow sampling on MW-01 (Date: 15 April 2019).

Photo 9. Offsite tap resampling of WW-02, south of site location (Date: 30 September 2019).

Photo 10. Offsite tap resampling of WW-10, northwest of site location (Date: 30 September 2019).

Photo 11. Mowing overgrown brush near WW-04 situated along the northwest corner of site (Date: September-October 2019).

Photo 12. Mid-mowing of overgrown brush inside the fence of the site (Date: September-October 2019).

Photo 13. Post mowing of overgrown brush inside the fence of the site (Date: September-October 2019).

Photo 14. Soil cuttings of PMW-6 from Phase II drilling activities (Date: 8 October 2019).

Photo 14. Phase II drilling activities on MW-1 facing north towards Potranco Road (Date: 10 October 2019).

Photo 15. Multiple drums of IDW from soil cuttings stored onsite (Date: December 2019).

Photo 16. Offsite tap sampling of WW-01, southwest of site location (Date: 16 December 2019).

Photo 17. Offsite tap sampling of WW-16, east of site location (Date: 17 December 2019).

Photo 18. Low Flow sampling of MW-08 located on the northeast fence line of site (Date: 16 December 2019).

Photo 19. Low Flow sampling of MW-06 situated at the center of the fenced site (Date: 17 December 2019).

Photo 20. PDB deployment of MW-7 located along the East fence line (Date: 8 April 2020).

Photo 21. Post PDB deployment of MW-8 located along the East fence line (Date: 8 April 2020).

Photo 22. PDB sampling of MW-6 situated at the center of the fenced site (Date: 28 April 2020).

Photo 23. PDB sampling of MW-8 located along the East fence line (Date: 29 April 2020).

Photo 24. IDW removal from site (Date: April 2020).

APPENDIX B

LOGBOOKS AND COMPLETED FIELD FORMS

Phase 1 RI Field Activities

Field Event 1 (March/April 2019)

2

CONTENTS

PAGE	REFERENCE	DATE

Location San Antonio, TX Date 4/19/19

Project / Client RCME

~~0700~~ AS

0630 leave EA Dallas for San Antonio

1200 arrive @ site

1230 Calibrate ultrameter

ph 7: ~~6.837~~

ph 4: ~~4.044~~

ph 10: 10

cond: 1.413 ms

temp: 23.0

1330 leave site to get ice

1345 leave gas station to site

1400 leave site for MW-01

1425 Start purge time

– ultrameter initially out of calibration of EA

1455 sample MW-01

1500 leave MW-01 for MW-02

1510 arrive at MW-02

~~1800~~ 1810 leave MW-02

1700 Pack coolers

1830 leave site for hotel

4/19/19

Rite in the Rain

Location San Antonio, TX Date 4/16/19

Project / Client RCMF

0700 leave hotel to get supplies
0710 arrive at walmart
0740 leave walmart
0745 arrive at site
0800 calibrate ultrameter
ph 4: 4
ph 7: 7
ph 10: 10
Cond 1,413 uS: 1,413
0830 arrive @ WW-07
0910 Sample WW-07
0930 leave WW-07 for WW-04
0945 arrive at WW-04
1010 Sample WW-04
*Working w/ Edwards Aquifer Authority and San Antonio Water System
~~with~~ Both EAA + SAWS taking samples*
1100 arrive at WW-17
1150 sample WW-17
1230 get lunch
1300 arrive on site
1335 collect IDW-W-01
1351 left site
1630 arrive @ [redacted] for well sampling

Location San Antonio TX Date 4/16/19

Project / Client RCMF

1640 begin well purge
1700 end purge
1705 Sample collection
1717 back on site
1740 leave site to hotel to pack coolers
1840 leave site to FedEx
1900 leave Fedex, end work day

4/16/19
AS

6

Location San Antonio, TX Date 4/17/19

Project / Client RCMF

0830 arrive on site
0840 Bump test
ph 7: 6.94
ph 4: 4.00
ph 10: 9.97
cond 1413: 1418 uS
0845 arrive at WW-16
0935 Sample WW-16
0935 Leave WW-16
1000 arrive at Lit Lions WW-09
1040 sample WW-09
1050 Leave WW-09, Lock for wells
1130 Get access to collect samples at (b) (6) [redacted]
1200 Sample WW-21
1250 Leave for WW-10, (b) (6) [redacted]
(b) (6) [redacted]
1300 arrive at WW-10
1330 Sample WW-10
1350 Leave WW-10
1510 Leave for EA Dallas
2100 arrive EA Dallas

4/17/19 AS

7

Location Date

Project / Client

Rite in the Rain

RCMF

No 1

RIVER CITY
METAL FINISHING

Rite in the Rain®
ALL-WEATHER
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FIELD BOOK
№ 550F

No. 1

№ 550F-Environmental-Pab-4 3/4"x 7 1/2
32281 55021
ISBN 978-1-932149-50-0

28

Location San Antonio, Bexar Co, TX Date 4/15/2019

Project / Client River City Metal Finishing / EPA Reg. 6

R. Guth / R. Barker / M. Briceno

11:48 - Arrive on-site.
11:55 Brief EAA on general plan.
12:15 - H&S Meeting
12:19 - Prep sample teams / calibrate Instruments.
12:30 - YSI-556 (C2201)
calibrate ph (tripple point)
conductivity & ORP.
1300 - Gauge MW-01, first low-flow locate.
DTW = 17.07' btoc.

13:40 - Set up for low-flow of MW-01.
13:50 - Start purge of MW-01
14:30 - Start sampling MW-01 / MW-01-D
16:38 - Finish (b) (6) [redacted]
17:15 - Collect Equipment Rinsate ER-190415
18:15 Gauge new MW's
MW-04 — DTW: 29.29' TOC TD = 31.31
MW-05 — DTW = 30.48' TOC
MW-02 — DTW = 30.17' TOC
MW-03 — DTW = 29.52' TOC
18:38 - Depart site for Fed Ex
18:56 - Drop off coolers at FedEx

4-15-2019

29

Location San Antonio, Bexar Co, TX Date 4/16/2019

Project / Client River City Metal Finishing / EPA Reg. 6

R. Guth / R. Barker - GW Sampling

07:40 - Arrive on-site
08:15 EAA Top team on-site.
08:30 - Depart site for Alamo fireworks well.
08:42 - EAA about to start purge (b) (6) [redacted]
Purge @ 150.8
DTW = 119.56
8:44 Pump on @ ~ 2.5 gpm
total depth of well: 400' bgs
09:30 - Stop in @ (b) (6) [redacted]
& inquire about access
- Get signed access agreement.
- Would like us to contact @ 1300 tomorrow
09:40 - Go to (b) (6) [redacted]
9:54 - Get signed access from Mr (b) (6) [redacted] (MW-11)
10:14 - Sample (b) (6) [redacted] for TM, Dissolved TM, Cyanide & Cr6
10:20 - Return to Alamo Fireworks
10:47 Sample "MW-19", well @ (b) (6) [redacted] EAA also collecting numerous samples here.
11:30 Return to site & await (b) (6) [redacted]
12:40 - Go to (b) (6) [redacted]

Rain or the Rain

Location San Antonio, Bexar Co, TX Date 4/16/2019
Project / Client River City Metal Finishing / EPA Reg. 6
R Gotta - GW Sampling

12:43 - owner (b) (6) @ (b) (6) [redacted]
would like to look over access agreement.
12:49 - stop by (b) (6) [redacted] for access.
- no answer
12:55 - Proceed to (b) (6) [redacted]
13:45 - No success yet @ (b) (6) [redacted]
they will call when access is given.
- Check @ remaining two locations
(b) (6) [redacted] says No to sampling; says we sampled two years ago and never again.
- (b) (6) [redacted] - no answer at door.
15:25 - Collect IDW-S-01
15:32 - Collect IDW-S-02
15:36 - Collect IDW-S-03
15:42 - Collect IDW-S-04
note: IDW-W-01 was collected at 1535
18:30 - off site to hotel for sample ship prep, then fedex.
19:15 - Samples delivered to fedex - end today's log

Location San Antonio, Bexar Co, TX Date 17 April 19'
Project / Client River City Metal Finishing / EPA Region 6
R. Gotta & R. Baker - GW sampling

07:55 - Arrive on-site.
08:30 - Calibrate the meter.
09:00 - R. Baker & I Go search for new wells around Cod Creek neighborhood and areas North & East of site
10:56 - No wells observed in cod creek neighborhood, aside from #1 & #2 (supply)
11:00 - Start looking North East of site for alternate sample locations
11:25 - Get signed access for a well located at (b) (6) [redacted] LN
owner is (b) (6) [redacted]
PHONE # (b) (6) [redacted]
- only way to sample well is after large storage tank; not ideal sample location.
- Owner says he may put a tap after well & before tank soon.
11:50 - Get signed access for a well located at (b) (6) [redacted] Ln.
Owner is (b) (6) [redacted]
PHONE # (b) (6) [redacted]
- Will go ahead and sample now; per request
12:18 - Sample above well (WW-22), see field data sheet

Rite in the Rain

Location San Antonio, Bexar Co., T Date 17 April 19

Project / Client Rainbow City Metal Findsburg / EPA R6

R. Gull / R. Barker

12:40 - Meet up with Jason Stroup so he can GPS WW-21

12:55 - Go GPS WW-19 (Alamo Fireworks)

13:20 - Return to RCMF Site & Prep sample cooler.

14:00 - Cooler prepared return to hotel

15:00 - head to Fed Ex with final Cooler of this event

15:30 - Depart Fed Ex for other site.

- No further field activities this event.

- Updated EA PM prior to final cooler delivery - no more sampling this event.

17 April 2019

Location Date

Project / Client

Rite in the Rain

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CONTENTS

PAGE	REFERENCE	DATE

Location San Antonio, Bexar Co., TX Date 4-01-2019

Project / Client River City Metal Finishing / EPA Reg. 6
SBs/MWs

0655 leave EA (138 632) EA19
1115 Stop @ hotel HASP, Field book, etc.
1130 @ site; Vortex Drlg @ site (1141763)
(Robert Joiner, Brian Murray). MKelly
+ Todd Nickerson mark SB/MW
locations w/ GPS. Vortex leaves for lunch.
~1200 MKelly leave for lunch.
~1245 Back @ site. MK, Todd N. Will
Sunter, Drew Simon, Bob Barker @
site
~1300 Vortex Back
Safety Meeting.
Darren Harris (Geotech) stops @ site;
update on surveyors (tomorrow). Get
key to Portajohn.
Unload trucks / set up tables (Command
Post).
Setup @ SB-01 w/ Geoprobe 7822DT
1333 Hammer 0-5' SB-01 see Field
boring log for descriptions (MKelly)
Todd N Drew S Bob B processing
samples. Will G on scribe.
1345 TD @ 15'. Additional pushes for
volume (2nd 0-5' third 0-2' twice).

Location San Antonio, Bexar Co. TX Date 4-1-19

Project / Client River City Metal Finishing / EPA Reg. 6

SBs/MWs

3- encores (VOCs)
2- " (TPH)
1- 4oz jar dR Hex Cr
1- 8oz dR moisture, Cyanide
1- 16oz dR Metals, SVOA

SB-02 * third push 0-2 / twice (use same tube for 2 pushes).

59° mostly clear & sunny. (64°/53°)
wind 3-5mph (South) 34% Humidity
P=30.21"

1530 Collect Equipment Rinseate off drive Shoe.
* Sample intervals: 0-0.5; 0.5-2.0, 2.0-5.0, + TD (2ft [illegible] 1345)
Screening ~~for~~ w/ PID; non detect so far.

~~1340~~ Move to SB-03 + Hammer 0-5
1540m (see field boring log for descriptions)
Refusal @ 8 ft (wht Rock, Chalk)
1620 Stop Sampling for 1st day, Pack coolers

Location San Antonio, Bexar Co. TX Date 4-0-19

Project / Client River City Metal Finishing / EPA Reg 6

1645 Drillers off site
Finish packing coolers.
Load trucks.
1725 leave site (114177.2)
1730 Gas.
~1800 Stop & eat
1930 @ Hotel (114190.3)

4-01-2019

Location San Antonio, Bexar Co, TX Date April 2, 2019
Project / Client River City Metal Finishing / EPA Reg. 6

0703 leave hotel (114192.5)
0738 @ site (114204.8)
(0705) Earlier, sent Bob Owens (EA) photos of SB locations outside south fence (Callowood St). w/ San. Sewer flags/paint & manhole.
(0715) on phone → He says okay to move 15' SB (04) inside fence but wants to Hand Auger 5' SBs (09 & 10) to get samples of drainage area between fence & street.
~0800 Driller (Vortex) @ site.
Discuss SB locations & sewer line. They pull manhole cover & determine sewer line parallels edge of Road & SB location off to North. And sewer line @ least 5 ft deep. Driller feels he can use Geoprobe to 5 ft.
Will do SB-04 (15 ft) first & then 5 ft-ers outside fence.
Weather: 38°F clear & sunny wind ~5 mph W
79% Humidity P=30.24" ↑

MK

Location San Antonio 4-4-2019
Project / Client River City
MK SBs

0829 Hammer 0-5
See field boring log for other info. * Move a little to fence line, away from sewer line
0925 2nd push to 5 ft for volume, 2 pushes to 2' (stacked in 1 liner)

MK

0922 Hammer 0-5 SB-09 (5')
see field boring log for descriptions. extra ~~volume~~ MK pushes for volume (same as above).
Note: Darren Harris (Etech) onsite, overseeing fencing company, conducts safety mtg.

MK

1022 Hammer 0-5 SB-10 (5')
see field boring log. Extra pushes for volume (same as above.
1037 Hammer 0-5 SB-06 (5')
* same as above *.
1115 lunch
1145 Back
1200 DTW MW-01 16.55' toc / TD=27.27' TO
(0.010" screen 15'-25' bgs) MW-01

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 4-2-2019

Project / Client River City Metal Finishing / EPA Reg. 6

SBs

1230 Hammer 0-5' SB-05 (w/ xtra volume) (moved location ~5ft south off of crushed LS parking pad w/ Geotextile). See Field boring log for description MK

SB-07

1304 Hammer 0-5'
2nd push 0-5
push twice 0-2 (stacked)
See Field boring log for description
WEATHER MK

1305 63°F clear & sunny (Few thin clouds) (74°/59°) wind 5mph SSE 2mk
28% Humidity. P = 30.22" ↓ MK

1330 SB-08 Hammer 0-5' (See Field boring log for descriptions)
2nd push 0-5 for volume
2-0'-2' pushes (stacked). MK

1400 Last SB will start on MWs tomorrow. Finish processing samples & Pack coolers.

[signature]

Location San Antonio, Bexar Co., TX Date 4-2-2019

Project / Client River City Metal Finishing / EPA Reg. 6

MK uses GPS to ~~locate~~ Record MK actual locations of SBs; enter as sb1, sb2, etc.
Also, record Sanitary Sewer as follows:
SS-mh1 = San. Sewer Manhole site back gate
SS-mh2 = " " " NE (on Tallowood)
(center of manhole lids)
SS-co1 = San. sewer clean out 1 site
SS-co2 = " " " 2 Auto Shop
SS-Flag = San. Sewer line locator Flag
Finish packing coolers
1545 Coolers to Fed Ex.
Fence crew still on site.
1700 Fence crew leaves
1700 EA leaves site (114206.7)

[signature]

EA: MKelly, W Santer, T Nickerson, D Simon, B Barker
Vortex: Robert Joiner, Brian Muzny, David Lozano
JC Tree Service: Hermando Valdez, David Valdez, Juan Noriega, Josh Kelly (Fence Building)
Surveyors: Nicholas Dominguez, Juan Elizondo (Elizondo & Assoc.)
Etech: Darren Harris

[signature]

4-2-2019

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 4-3-2019

Project / Client River City Metal Finishing / EPA Reg. 6

0655 leave hotel (114219.2)

0723 @ site (114232.4)

~~Ann~~ MKelly, T Nickerson, W Ganter, D Simon, B Barker (EA); Darren Harris (Etech) @ site.

0745 Vortex arrives; Robert Joiner, Brian Muzny, David Lozano

0800 Safety Mtg.

MK, W Ganter, R Joiner discuss drlg & sampling.

Intervals: 0-0.5, 0.5-2.0, water, TD.

Setting 4" wells w/ TD of 30 ft (WG confirmed w/ Ryan Guth) (25-30')

Driller plans to drill pilot hole w/ ~~4~~ 6" Continuous Flight Augers (CFA), then ream-out w/ 8" HSA.

Will collect shallow samples for lab w/ split spoon (for VOC/TPH plugs) & shovel/grab for other (metals, SVOCs, etc.)

Grab samples for descriptions.

Well construction:

4" PVC - 10'-15' screen (0.010")

2.5' sump; centralizers top & bottom of screen & 1/2 way on blank.

20/40 sand.

Mobile Drill B-61

Location San Antonio, Bexar Co. Date 4-3-2019

Project / Client River City Metal Finishing

MW-02

0819 Hammer Split Spoon 0-2

Drilling w/ CFA; grab samp 2 for lab submission.

Continue w/ CFAs; see field boring log for descriptions & other info. (Grab Samples).

~~0857~~ MK

0910 Grab 25-30 for lab samples; Cuttings hot/slightly steaming.

No obvious indication of water level; Cuttings sl moist/clumping.

Pull CFAs & Go in w/ 8" Hollow Stem Augers (HSA) w/ wooden plug in bit.

0920 Reamout w/ HSAs

0950 @ 15 ft

1001 @ 25 ft

~~1010~~ MK 1015 @ 30 ft / TD

MW-02

1020 Pull HSAs

1033 HSAs out; Install well

Hole open to 27.5' (loose fill)

2.5' sump, 15' screen (0.010" slots)

10' Blank. = 27.5' PVC in hole

centralizer @ top of sump & top of screen.

1040 Install Sand (20/40). * With pointed endcap, TD @ 28' BGS. * (to TOC).

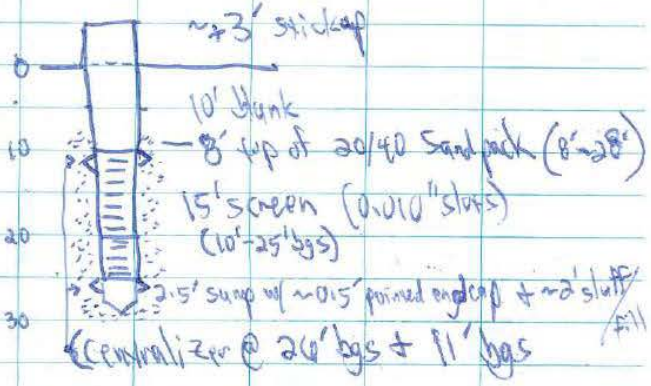
Rite in the Rain

Location San Antonio, Bexar Co., TX Date 4-3-2019

Project / Client River City Metal Finishing / EPA Reg. 6

MW-02

MW-02 : 4" PVC



5' Bentonite Chips (3'-8')

3' Concrete / upright steel cover (6"x6"x5')

Weather: 64° cloudy/overcast (72°/59°)
wind 8 mph SE ~~[illegible]~~
67% Humidity, P = 30.10" ↑
(vsl mist ; ~40% chance of Rain)

1105 Lower Mast; Move Rig
1115 Raise mast @ MW-05 (NE)
(Will drill / install same as MW-02)

Location San Antonio, Bexar Co., TX Date 4-3-2019

Project / Client RCMF / EPA Region 6

MW-05

1121 Hammer SpSp 0-2' ; For VOC/TPH plugs
collect 0-0.5 & 0.5-2.0 Grab (shovel)
for other analyses. Continue w/ CFAs
1132 @ 10 ft ; See field boring log.
1141 @ 20 ft ; Stop for lunch.
1233 Back to drlg (@ 20 ft)
1237 @ 25 ft
1242 @ 30 ft (Grab sample for TD (28-30')
Pull CFAs
Go in w/ HSAs / wooden plug & Ream out
~1250 Ream out w/ HSAs
1305 @ 20 ft
1317 @ 25 ft
1323 @ 30 ft / TD
1335 Pulling HSAs
1141 HSAs out of hole. Set Well.
Hole open to 30 ft bgs.
Set well same as MW-02; 4" PVC
Blank +3 to -10 bgs
screen -10 to -25 bgs (0.010" slots)
sump + endcap -25 to -28 bgs
20/40 Sand Pack -8 to -30 (no sluff)
Bentonite chips -3 to -8
Set steel cover (~+3') w/ concrete 0 to -3

MW-05

Rite in the Rain

Location San Antonio, Bexar Co. TX Date 4-3-19

Project / Client River City Metal Finishing / EPA Reg. 6

MW-03

1420 Lay down mast / move Rig off hole
Will decon ~~HSA~~ augers; also,
move drums w/ Geoprobe.
Set Up @ MW-03 (Back gate)
plan to drill down to 30 ft w/ CFAs,
will Ream out w/ HSAs tomorrow.
see Field boring log for descriptions
1457 Hammer sp Sp 0-2 (For VOC/TPH)
Grab cuttings for other.
Continue drlg w/ 4" CFAs
1508 Grab 5', See Field boring log for
descriptions & other info.
1526 @ 15'
1537 @ 20' ; Hard drlg (harder than 02 or 05)
1610 @ 30' TD
Pull CFAs; Place full drum
over hole.
Crew works on well pads & decoming.
EA: Finish processing samples
& Pack coolers.
1710 EA Crew takes Coolers to Fed Ex.
Vortex - Deconning Augers; working on pads
1810 Crew back from Fed Ex.

[signature]

Location San Antonio, Bexar Co. TX Date 4-3-19

Project / Client ~~RH~~ RCMF / EPA Region 6

1825 EA leaves site (114233.4)
1840 eat (114239.1)
2010 @ hotel (114247.2)

4-3-2019

Rite in the Rain

Location San Antonio, Bexar Co, TX Date 4-4-2019
Project / Client River City Metal Finishing / EPA Reg 6

0700 Leave hotel (114249.3)
0725 @ site (114 62.5)
0730 Safety Mtg: EA (M Kelly, T Nickerson, W Ganter, D Simon, B Barker) + Vortex Drlg (Robert Joiner, Brian Muzny, David Lozano).
Rig over MW-03; pull drum off of hole + go in w/ HSAs to Ream-out. (Robert J + David L.), Brian M working ~~out~~ MK on pads.
* Checked openhole w/ interface probe, get response wet mud, no standing water *
0754 Begin Reaming out MW-03 w/ HSAs + wooden plug in bit
0800 (check MW-02; dry).
0804 MW-03; very hard @ ~12'; augers 'squeaking'
67° Hfog / clear-cloudy, sunny. (87°/66°)
5mph SSE. 87% Humidity. P=29.97"↑
0821 Conn. - 20 Ft
0837 Conn. - 25 Ft
~0900 @ 30 Ft
0905 Pull HSAs

Location San Antonio, Bexar Co, TX Date 4-4-2019
Project / Client River City Metal Finish. / EPA Reg. 6

MW-03
0911 HSAs out of hole.
Install 4" PVC
~~Sump + endcap~~ MK
Blank +3 - 10
Screen 10 - 25 (0.010" slots)
Sump/endcap 25 - 28
sluff/cavings 28 - 30
centralizers: 11, 26.
Pouring Sand Pack (8 - 28) 20/40
0930 Set steel upright cover in concrete (0-3)
(Bentonite chips: (3-8)
Concrete (0-3) Steel Cover (+3 to -2)
0940 Lay down mast
0950 Rig over MW-~~05~~ MK 04 (FOUR) (NWC)
1002 Raise Mast
1004 Hammer SpSp 0-2 (for VOCs / TPH)
Grab cuttings 0-0.5, 0.5-2.0 for sample jars.
Driller will start w/ HSAs (NOT CFAs) wooden plug in HSA bit.
See Field boring log for descriptions + info.
MW-04

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 4-4-19

Project / Client River City Metal Finish / EPA Reg 6

1010 On phone w/ Ryan Guth (EA).
Discuss wells, screen intervals, no water in -05, -02, -03. Probably need to add water + surge to break down mudcake on borehole walls.
Discuss MW-01: screen 15-25 bgs, water @ ~14' bgs.
Suggest Ryan G call Vortex to discuss developing/adding water + surging.
(Planned on sampling wells/GW in a couple of weeks.)

MK

MW-04 (NW, near front gate).

1015 @ 5' (see Field boring log).
1019 10'
1026 15'
1030 20'
1039 25'
1054 @ 30'/TD

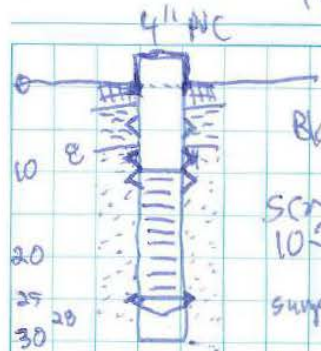
Hammer sp sp @ 30' for TPH/VOC plugs.
Collect soil off bit + augers for xtra volume (28'-30').
Install MW-04, same as others (sluff/cavings 28'-30').

[signature]

Location San Antonio, Bexar Co., TX Date 4-4-19

Project / Client River City Metal Finishing / EPA Region 6

WELL COMPLETIONS



Blank: ~+3' to 10' bgs

Screen 10'-25' bgs (0.010" slots)

sump/endcap 25'-28' bgs

MW-02, -03, -04
sluff/cavings 28'-30'
MW-05: no cavings
sand pack to 30' bgs

Upright steel cover ~+3 to -2' bgs (3'x3' x0.5')
concrete: 0 to -3' bgs
Bent. chips: -3 to -8 bgs
20/40 Sand: -8 to -28 (-30 in MW-05)
sluff/cavings: -28 to -30 (MW-02, -03, -04)
centralizers: 5, 11, 26

[signature]

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 4-4-2019

Project / Client River City Metal Finish. / EPA Region 6

1104 Voicemail From Bob Owens (EA-PM)

1121 Call Bob O' update on status (wells not making water; options for develop.). I will discuss w/ driller about developing/surging, etc.

~1130 MK & RJoiner (driller) discuss developing/surging wells (adding DI water, surging, pumping). He can't get Rig close enough to wells 5+2 because of bollards plus silt fence is in the way. Wells installed today (3,4) need to sit so conc pad can cure OR could pull pipe out while surging. (Could surge tomorrow.)

Drill crew leaves for lunch

1133 MKelly calls Bob O & discuss development issues.

1145 EA - lunch (MK, TN)

1215 EA - back

~1230 Vortex, MK → RJ. Suggest adding DI water to 2+5 & pump out w/ sub pump (since can't put Rig over well to surge.) & leave out 2 bollards @ 3+4, so could surge w/ Rig

MK

Location San Antonio, Bexar Co., TX Date 4-4-2019

Project / Client River City Metal Finishing / EPA Reg. 6

(surge w/ Rig) tomorrow

R Joiner calls his office - he & his crew are unavailable tomorrow; can't leave bollard holes open (drill today w/ Response). Can put DI water in wells & let soak & pump out next week (?).

1252 MK calls Bob O.; he wants pumping done this week/tomorrow so we don't have to mob someone next week.

1257 MK calls Coy/Vortex Drlg. He will see if he can get a crew out tomorrow. will call me back.

1320 Call from Coy/Vortex. He can get a crew out tomorrow, around noon OR just after.

1325 MK txts WHG: they will need to give Todd N Ride back to DFW (WG, Drew & Bob B are working on access for top sampling in RCMF area). No reason for Todd to stay.

1326 MK calls Bob O & update on plans. He agrees Todd N should return today, even if charged for hotel room.

MK

Rite in the Rain

Location San Antonio, Bexar Co., TX. Date 4-4-2019
Project / Client River City Metal Finishing / EPA Reg 6

1345 R Joiner back w/ ~~DZ~~ MK water Distilled water (Walmart) 25 ~~cases~~ Boxes MK / 3 gal per box
Will split between 4 wells;
18-19 gallons per well.
~1400 WG, DS, BB back @ site. Todd N has been attached signs on fence.
MK & RJ pour water in wells:
@ MW-05 (dry) TD = 31.7' toc
1415 Begin pouring water
1420 18 gallons in
1421 dtw = 21.5' toc
MK

@ MW-~~04~~ 02 (dry) TD = 31.5' toc
1425 Begin MK
1429 19 gallons in
1430 dtw = 28.3' toc
MW-02
MK

1430 WG, TN, DS, BB leave for DFW
MK

@ MW-03 (dry) TD = 31.6' toc
1435 Begin
1439 19 gallons in
1441 dtw = 28.9' toc
MK MK

Location San Antonio, Bexar Co., TX Date 4-4-2019
Project / Client River City Metal Finishing / EPA Reg. 6

@ MW-04 (dry) TD = 31.27' toc
~1444 Begin pouring
1448 19 gallons in
1449 dtw = 30.10' toc
MK

* NOTE: 8" hole, 2.611 gal/ft
18 gallons, ~6.8 ft (~7 ft water added)
19 gallons, ~7.2 ft
MK

Vortex crew; Finishing pads + bollards, picking up trash, equip, moving drums, etc.
1630 Vortex leaves site.
Gauge wells

			TOC
1638	MW05	dtw = 21.64' toc	(TD = 31.7')
1640	MW02	dtw = 19.44' toc	(TD = 31.5')
1641	MW03	dtw = 17.97' toc	(TD = 31.6')
1647	MW04	dtw = 18.99' toc	(TD = 31.3')

MK

* 4" CSG → 0.653 gal/ft
18 gallons ~ 27.5 ft
19 gallons ~ 29.1 ft
MK

[signature]

Location San Antonio, Bexar Co., TX Date 4-4-19

Project / Client River City Metal Finishing / EPA Reg 6

Gauge wells again water added (dtw - toc)

MW-02	19.44'	(1640)	19 gals
(TD=31.5')	19.47'	(1737)	@~1425 hours
screen 13.5 ~~31.5~~ 28.5			
MW-03	17.97'	(1644)	19 gals
(TD=31.6')	17.99'	(1739)	@~1435
screen 13.6-28.6			
MW-04	18.99'	(1647)	19 gals
(TD=31.3')	19.01'	(1742)	@~1445
screen 13.3-28.3			
MW-05	21.64'	(1638)	18 gals
(TD=31.7')	21.65'	(1734)	@~1425
screen 13.7-28.7			

MK

Take photos of site
Lock gates + porta John
1812 Call Ryan G + update
1830 leave site (114265.8)
eat. Home Depot.
2020 @ hotel (114274.2)

[signature]
4-4-2019

Location San Antonio, Bexar Co., TX Date 4-5-2019

Project / Client River City Metal Finishing / EPA 6

0900 ~~0845~~ MK leave hotel (114274.2)
0925 @ site (114282.2)
Gauge Wells:

MK

0946 MW-05 dtw = 21.79' toc
0948 MW-02 20.01' toc
0951 MW-03 18.27' toc
0954 MW-04 19.28' toc

MK

GPS MWs
GPS silt fences
~~SF~~ MK MK SF silts 1-4 = South fence
siltn 1-4 = North fence
PP - Power Pole (on site, no lines)
GPS driveway + LS pad @ front gate
drive 1+2 = concrete / asphalt
pad 1+2 = asphalt / LS pad
pad 3-6 = LS pad
GPS Gates:
front gate; 2 panels = 24'
point is midpoint of 2 gates
back gate; 1 panel = 12'
point is midpoint of 1 gate.

[signature]

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 4-5-2019
Project / Client River City Metal Finishing / EPA Reg 6

~1230 Vortex on site / well development with typhoon submersible pump.
@ MW-05
1248 dtw = 21.80' toc
1253 Begin pumping (650 ml / 5 sec ≈ 7.8 l/min)
see field data sheets (~2 gpm)
for parameters + other info.

@ MW-~~03~~-02
dtw = ~~20.4' toc~~ 19.9' toc
1322 begin pumping (see field data sheet)
@ MW-03
dtw = 18.09' toc
1342 Begin pumping (see field data sheet)
@ MW-04
dtw = 19.15' toc
1403 Begin pumping (see field data sheet)
1427 MKelly calls Bob Owens (EA-PM) to discuss development. @ each well, pumped dry, let recharge 5-10 minutes then pumped ~1 more gallon. (After turning off pump, water in tubing drained into well). Water levels are ~~in 13~~ MK inside sumps (~28'-31' toc). Plan to go back + pump each well

Location San Antonio, Bexar Co., TX Date 4-5-2019
Project / Client River City Metal Finishing / EPA Reg. 6

once more to confirm wells not recharging.
MK
1425 MW-05 dtw = 29.55'; removed 1 more gallon
1441 on phone w/ Ryan Fuch (EA-PM) repeat info related to Bob O.
1450 MW-02 pumped MK 1 more gallon 29.70' toc
1455 MW-03 dtw = 29.43' toc; remove 1 more gallon
1500 @ MW-04 dtw = 29.57' toc remove 1 more gallon.
1515 Vortex off site
~1545 MK: photos of fence/signs. Label all drums. Check well locks/gates.
MK ~~1620 leave site for DTW (114285.3)~~ MK
Final dtw
1523 MW-05 30.45' toc
1528 MW-02 30.64' toc
1531 MW-03 30.62' toc
1544 MW-04 30.27' toc
1620 leave site (114285.3)
2240 ~~1040~~ MK @ EA (114609.9)
[signature] 4-5-2019

Rite in the Rain

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/15/2019

Ground Water Collection Field Form

Well ID: MW-01 Sample ID: MW-01/MW-010? Sample Time: start @ 14:30

Casing diameter/type: 2" PVC
Well location:
Weather: Sunny ~80°F, lt winds to north
Screened interval(s): 15 - 25 (bgs) ~18 - 28' TOC
Sampling personnel: R. Barker & R Guth
Total depth: 25' bgs (~28'
Sampling method: Low-flow.
Initial depth to water (w/o pump): 17.07 toc
Water level indicator: Geotech 100' W-L
Final depth to water (w/o pump):
Water quality meter: YSI 556
Measuring point: North side of casing
Pump depth setting: 23'
Pump type/model: Pegasus Alexis peristaltic

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate ~~(L/min)~~ or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
13:50											Pump on
13:52	23.05	2.683	65.6	5.56	7.05	175.4	17.41	200	2.47	∅	Reduce flow, water is a pale
13:57	22.83	2.682	66.5	5.65	6.95	166.6	18.07	175	2.00	—	yellow color
14:02	22.88	2558	62.4	5.31	6.89	157	18.22	160	2.87	~1 gallon	Reduce flow rate
14:07	22.98	2557	62.7	5.30	6.90	152.7	18.36	100	2.75	—	" ~~hold @ 100 mL/min~~ RG
14:12	23.35	2545	63.1	5.21	6.90	145.7	18.58	100~90	2.60	~1.25 ?	hold flow rate.
14:17	23.26	2518	58.1	4.92	6.91	137.2	18.78	100~90	2.54	—	
14:22	23.37	2498	58.8	4.98	6.91	131.7	18.99	~90 mL/min	2.77	—	
14:27	23.21	2479	69.3	5.12	6.93	128.7	19.17	~90	2.54		
											Stabilized, start collecting samples

Note:
Parameter Stabilization Limits:
(3 consecutive readings) for percent difference type parameters
Percent difference formula =
ABS[((first reading - second reading)/first reading) x 100]
Ex: Readings 12, 16, 15, 13
((12-16)/12)*100 = 33% ((16-15)/16)*100 = 6%
((15-13)/15)*100 = 13% In example, stabilization has not occurred.

Analyses: (List those collected and indicate the number of containers)
VOCs ✓ SVOCs, Total Metals, Dissolved Metals, Cr6, Cyanide, Nitrate/Nitrite, Sulfate.

Recorded By: Ryan Guth.

001946

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/~~13~~/19

Tap Water Collection Field Form

Well ID: WW-01 **Sample ID:** WW-01 **Sample Time:** 1455

Well owner/location/residence: SW water company

Street address:

Filtration system? (circle one)	Y (N)	Sampling personnel:	J. Stroup, D. Simon
Start purge time:	1415	Weather:	Sunny 80°
End purge time:	1450	Purge Rate (gal/min):	1 gpm

Sample collected at (circle as appropriate): (Wellhead tap) In-line House tap

Field Parameters:

Time:	1420	1425	1430	1435	Within	Circle One:	
Specific Conductance:	510.5	510.9	509.7	511.9	10%	(us/cm)	ms/cm
pH:	5.50	6.34	6.35	6.78	+/- 0.5		
Temperature:	24.5	24.2	24.4	24.1	+/- 1 C	F°	(C°)
ORP:	145	111	119	110		mV	

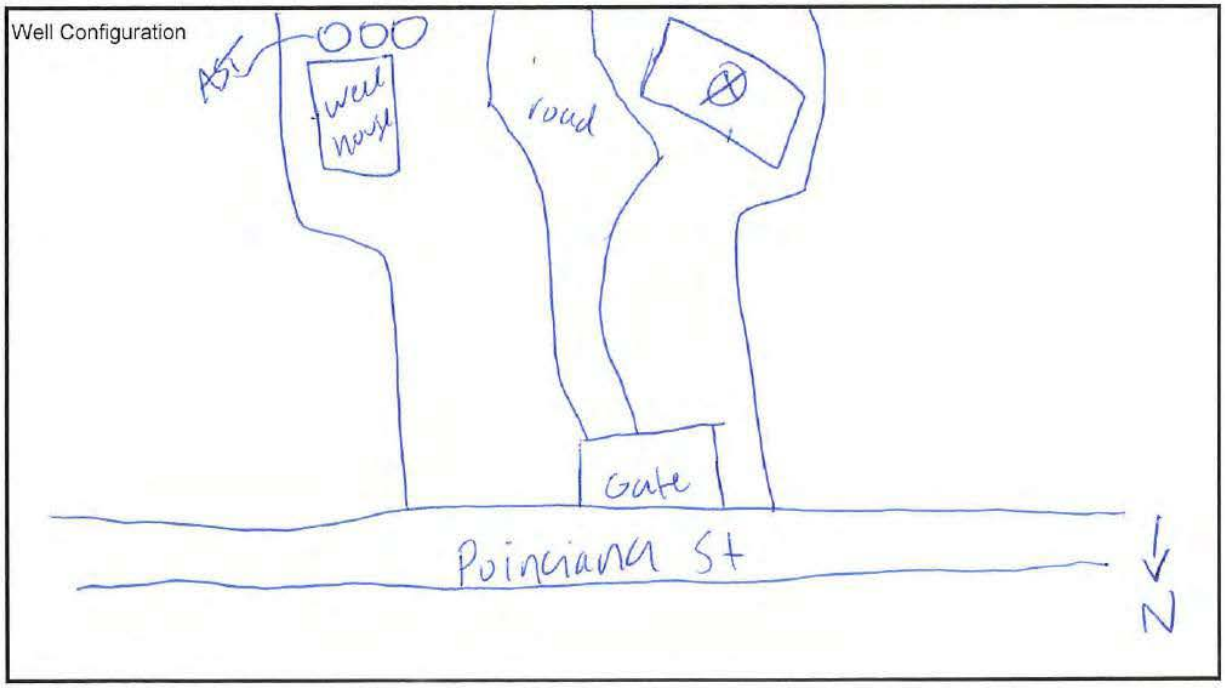
Notes/Comments: 133,000 GPM, Runs at least 10 hrs day

Ph @ 1420 very low, EAA is around 7 i recalibrate after this location

Time: 1440	SC 514.1	pH 7.10	Temp 24.1	ORP 106
1445	517.5	7.12	24.1	105

Analyses: (List those collected and indicate the number of containers)
VOCs DUP 2 Total metals, 2 Dissolved metals, 2 CN, 2 CR6

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 9/15/19

Tap Water Collection Field Form

Well ID: WW-02 **Sample ID:** WW-02 **Sample Time:** 1600

Well owner/location/residence: SW water ~~Company~~ Company 11926 Madrona

Street address:

Filtration system? (circle one) Y (N)	Sampling personnel: J. Stroup, D. Simon
Start purge time: 1530	Weather: Sunny, 85°
End purge time: 1557	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	Wellhead tap In-line House tap

Field Parameters:

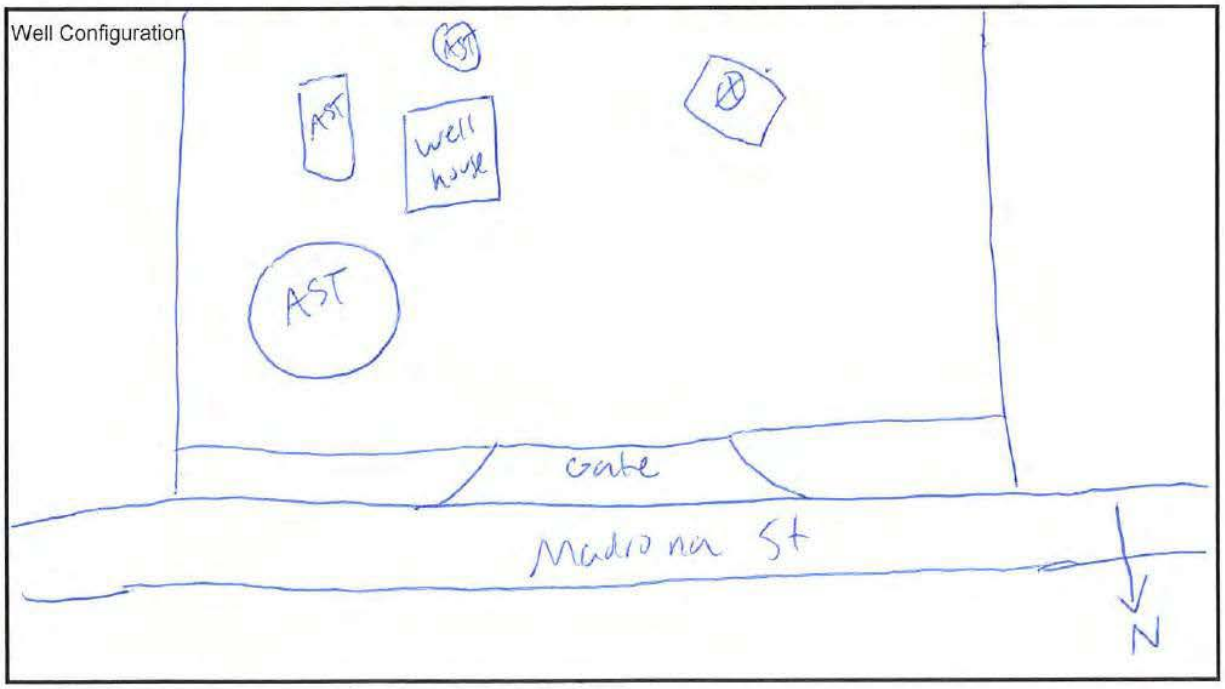
					Within	Circle One:	
Time:	1530	1535	1540	1545			
Specific Conductance:	511.5	512.9	512.7	513.8	10%	(us/cm)	ms/cm
pH:	6.97	6.93	6.93	7.06	+/- 0.5		
Temperature:	24.7	24.6	24.6	24.5	+/- 1 C	F°	(C°)
ORP:	196	163	152	132		mV	

Notes/Comments: Ran last 4 hours today, 189 gpm
EAA Start Purge Time: 1524; sample around 1550

SW water company contact # 210-275-9325
Matthew

Analyses: (List those collected and indicate the number of containers)
VOCs DUP 2 TOTAL metals, 2 Dissolved metals, 2 CN, 2 CR6

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/16/17

Tap Water Collection Field Form

Well ID: WW-04 **Sample ID:** WW-04 **Sample Time:** 1010

Well owner/location/residence: SAWS Mountain Laurel Ranch

Street address:

Filtration system? (circle one)	Y (N)	Sampling personnel:	J. Stroup, D. Simon
Start purge time:	0945	Weather:	
End purge time:	1005	Purge Rate (gal/min):	

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

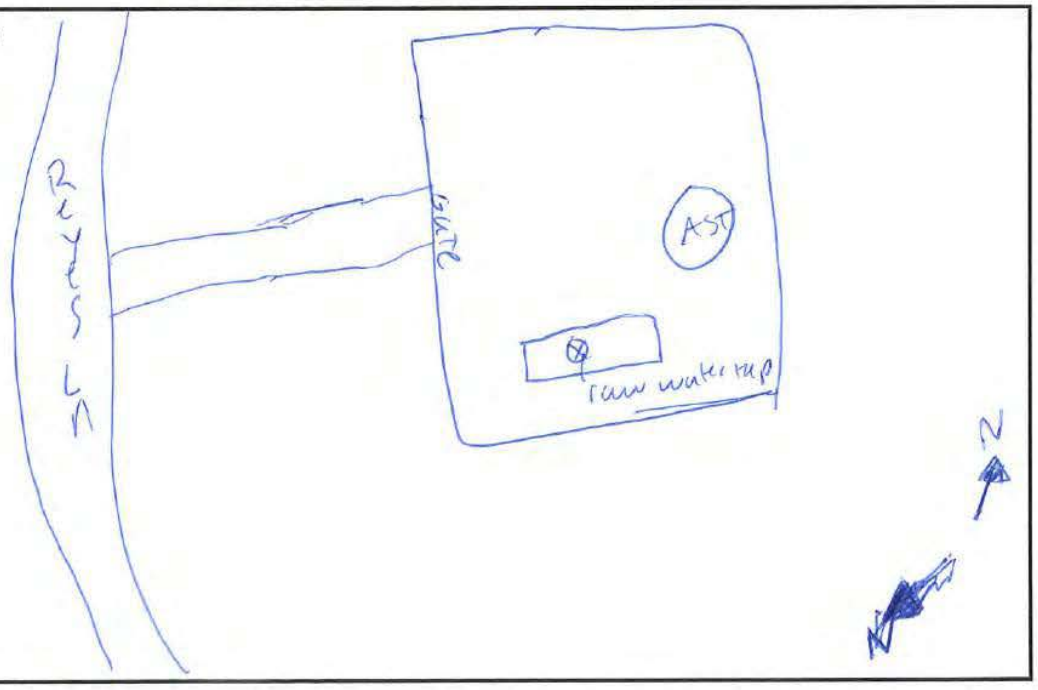
					Within	Circle One:	
Time:	0950	0955	1000	1005			
Specific Conductance:	486.3	482.7	482.8	482.6	10%	(us/cm)	ms/cm
pH:	7.20	7.15	7.15	7.14	+/- 0.5		
Temperature:	24.2	24.5	24.5	24.5	+/- 1 C	F°	(C°)
ORP:	98	87	81	80		mV	

Notes/Comments:

* EA + EAA collected from raw water tap
Productivity ≈ 232 gpm

Analyses: (List those collected and indicate the number of containers)
VOCs 1 Total Metals, 1 Dissolved Metals, 1 CRO, 1 Cyanide

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/12/19

Tap Water Collection Field Form

Well ID: WW-07 **Sample ID:** WW-07 **Sample Time:** 0910

Well owner/location/residence: SAWS Texas Research Park

Street address:

Filtration system? (circle one) Y (N) | Sampling personnel: J. Stroup, D. Simon

Start purge time: 0845 | Weather: Cloudy 65°

End purge time: 0905 | Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap (circled) In-line House tap

Field Parameters:

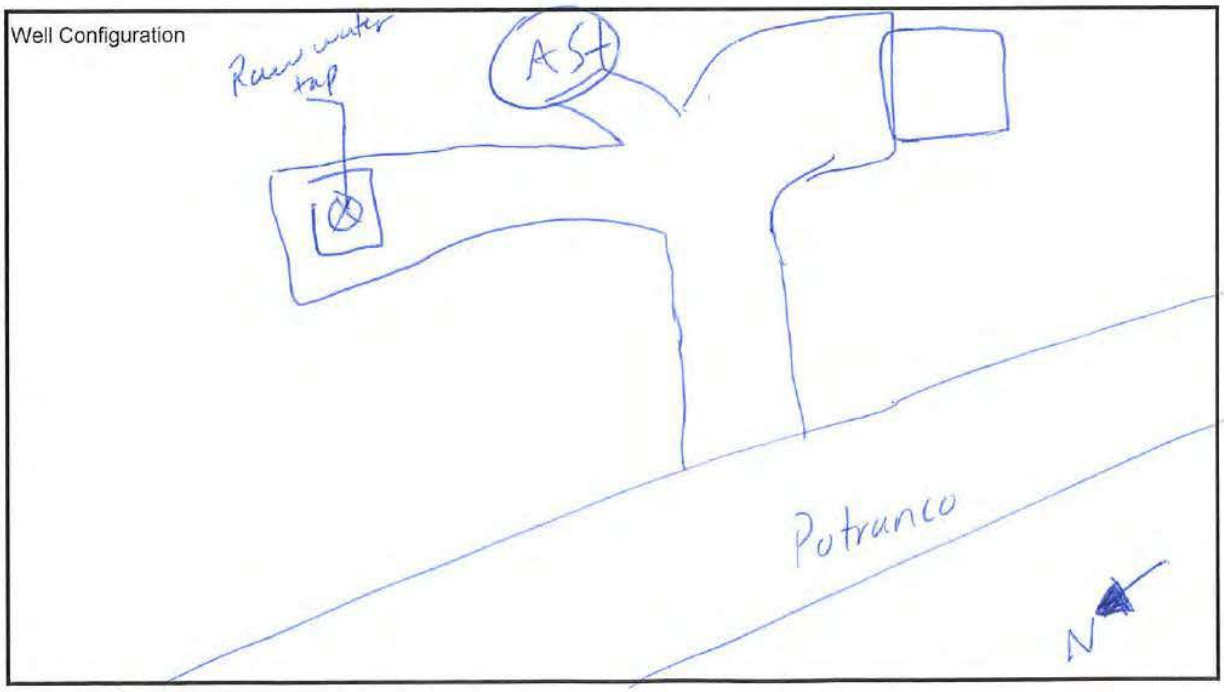
					Within	Circle One:	
Time:	0850	0855	0900	0905			
Specific Conductance:	525.5	523.7	523.2	523.6	10%	us/cm (circled)	ms/cm
pH:	7.09	7.12	7.11	7.12	+/- 0.5		
Temperature:	24.0	24.0	24.1	24.0	+/- 1 C	F°	C° (circled)
ORP:	161	157	154	150		mV	

Notes/Comments: Texas Research Well #1 *MS/MSD*

* Both EA & EAA collected from Raw water Tap
Production ≈ 2,100 GPM
EAA Sample Time 0915

Analyses: (List those collected and indicate the number of containers)
VOCs 3 Cyanide, 3 Hex Chrom

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/17/19

Tap Water Collection Field Form

Well ID: WW-09 **Sample ID:** WW-09 **Sample Time:** 1040

Well owner/location/residence: Little Lions Learning Academy

Street address: 127 Mindie Ln

Filtration system? (circle one) Y N	Sampling personnel: J. Stroup, D. Simon
Start purge time: 1013	Weather: Cloudy 72°
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	Wellhead tap In-line House tap

Field Parameters:

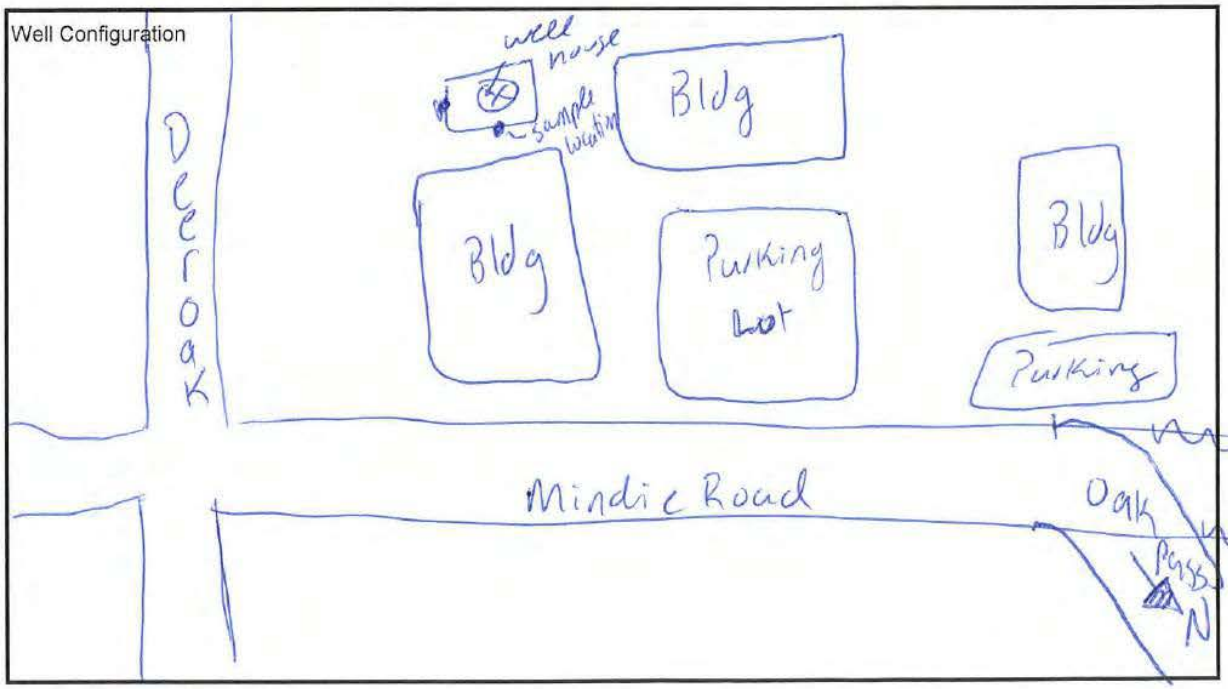
					Within	Circle One:	
Time:	1020	1025	1030	1035			
Specific Conductance:	524.7	524.3	524.3	524.4	10%	us/cm	ms/cm
pH:	7.23	7.17	7.16	7.17	+/- 0.5		
Temperature:	23.3	23.2	23.5	23.4	+/- 1 C	F°	C°
ORP:	100	93	89	93		mV	

Notes/Comments:

* have chlorination tank, sample location outside of well house
EAA sample 1030am

Analyses: (List those collected and indicate the number of containers)
VOCs 1 Hex chrom, 1 Total metal, 1 Dissolved Metal, 1 CN

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/17/19

Tap Water Collection Field Form

Well ID: WW-10 **Sample ID:** WW-10 **Sample Time:** 1330

Well owner/location/residence: [redacted] (b) (6)
Street address: [redacted] (b) (6)

Filtration system? (circle one) Y (N)	Sampling personnel: J. Stroup, D. Simon
Start purge time: 1305	Weather: Cloudy 75°
End purge time: 1325	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	Wellhead tap (circled) In-line House tap

Field Parameters:

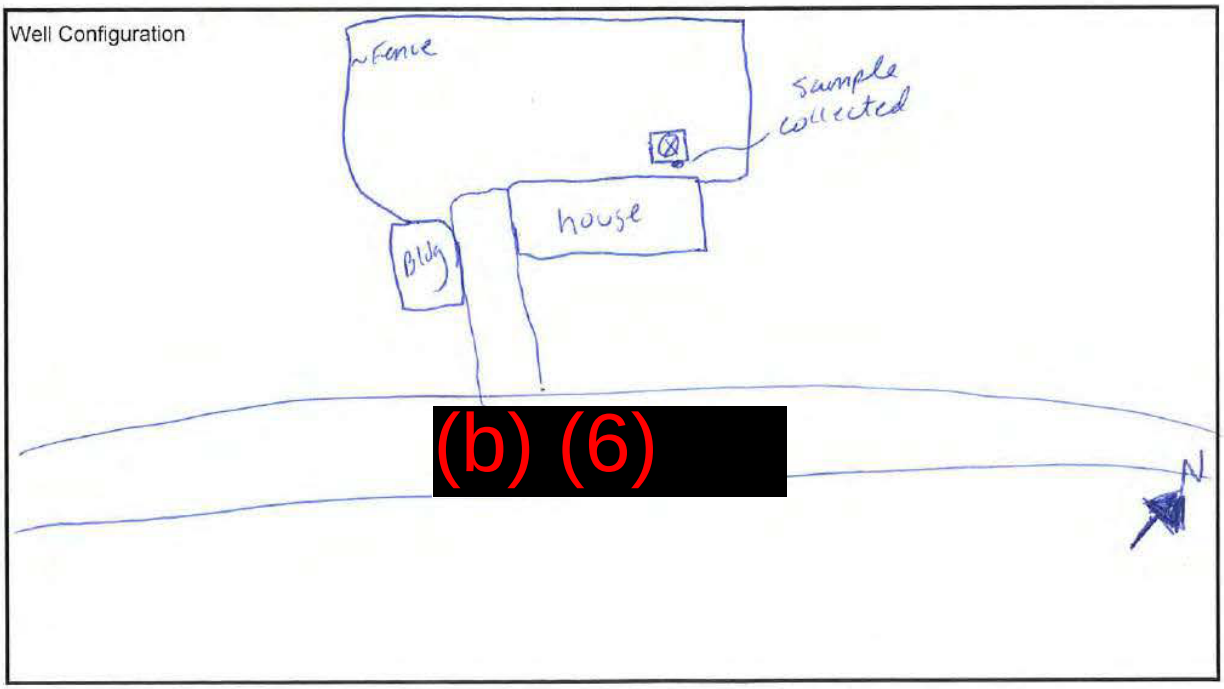
						Circle One:	
Time:	1310	1315	1320	1325	Within		
Specific Conductance:	527.5	527.4	526.0	526.8	10%	us/cm (circled)	ms/cm
pH:	7.29	7.19	7.12	7.07	+/- 0.5		
Temperature:	23.4	23.4	23.4	23.3	+/- 1 C	F° (circled)	C°
ORP:	86	89	89	90		mV	

Notes/Comments:

* EAA 1325 sample time
* sample collected outside of wellhouse

Analyses: (List those collected and indicate the number of containers)
VOCs 1 Total metal, 1 Dissolved metal, 1 CN, 1 CR6

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 16 APRIL

Tap Water Collection Field Form

WW-11 – RG 4/16/10

Well ID: WW-11 **Sample ID:** WW-11 **Sample Time:** 10:14

Well owner/location/residence: (b) (6) [redacted]

Street address: (b) (6) [redacted]

Filtration system? (circle one) Y (N) Sampling personnel: R. Guth & R. Barker

Start purge time: 10:00 Weather: Overcast – 70°F

End purge time: Purge Rate (gal/min): ~3 gpm

Sample collected at (circle as appropriate): Wellhead tap (In-line) House tap

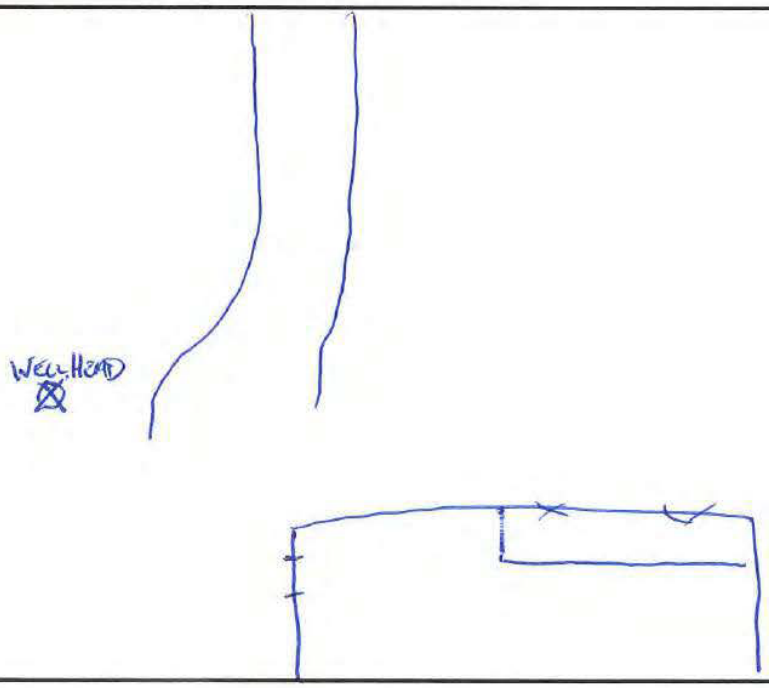
Field Parameters:

					Within	Circle One:	
Time:	10:02	10:05	10:08	10:11			
Specific Conductance:	513	511.3	514.5	514.6	10%	(us/cm)	ms/cm
pH:	6.30	6.94	7.16	7.41	+/- 0.5		
Temperature:	21.1	21.6	22.1	21.9	+/- 1 C	F°	C°
ORP:	87	62	54	[illegible]		(mV)	

Notes/Comments: Well supplies house + irrigation.

Analyses: (List those collected and indicate the number of containers)
~~VOCs~~, TM, Dissolved TM, Cr^6, Cyanide.

Well Configuration



Recorded By: R. Guth.

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/17/19

Tap Water Collection Field Form

Well ID: WW-16 **Sample ID:** WW-16 **Sample Time:** 0925

Well owner/location/residence: SAWS Northwest #16
Street address: 10371 Tippecanoe
Filtration system? (circle one) Y (N) | Sampling personnel: J. Stump, D. Simon
Start purge time: 0855 | Weather: Cloudy 72°
End purge time: | Purge Rate (gal/min):
Sample collected at (circle as appropriate): Wellhead tap In-line House tap

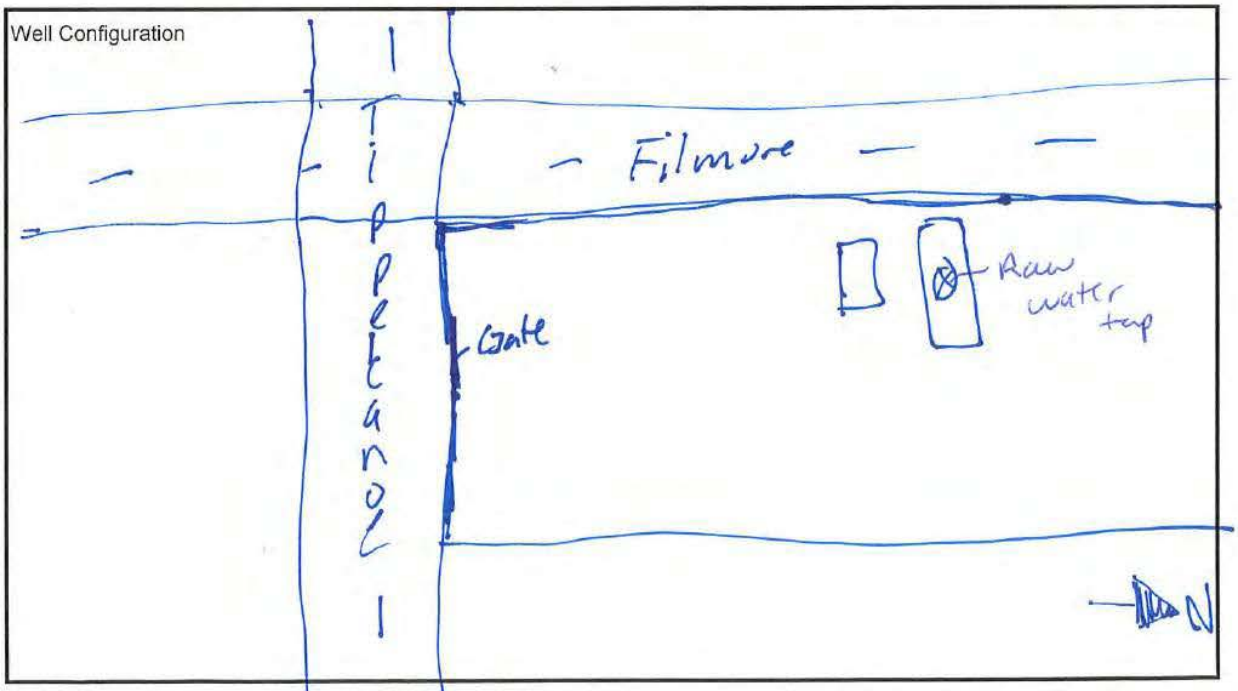
Field Parameters:

					Within	Circle One:	
Time:	0905	0910	0915	0920			
Specific Conductance:	513.9	513.9	512.6	513.8	10%	us/cm	ms/cm
pH:	7.12	7.09	7.13	7.11	+/- 0.5		
Temperature:	24.5	24.5	24.5	24.5	+/- 1 C	F°	C°
ORP:	114	110	113	114		mV	

Notes/Comments:
* Runs all the time, had main break on 4/16/19
FAA sample time 0920
GPM bouncing around ~~get~~ cannot get good reading

Analyses: (List those collected and indicate the number of containers)
VOCs 1 Hex Chrom, 1 Total metals, 1 Dissolved Metals, 1 cyanide

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/16/19

Tap Water Collection Field Form

Well ID: WW-17 **Sample ID:** WW-17 **Sample Time:** 1150

Well owner/location/residence: SAWS Northwest #17

Street address:

Filtration system? (circle one)	Y N	Sampling personnel:	J. Stroup, D. Simon
Start purge time:	1115	Weather:	
End purge time:	1145	Purge Rate (gal/min):	

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

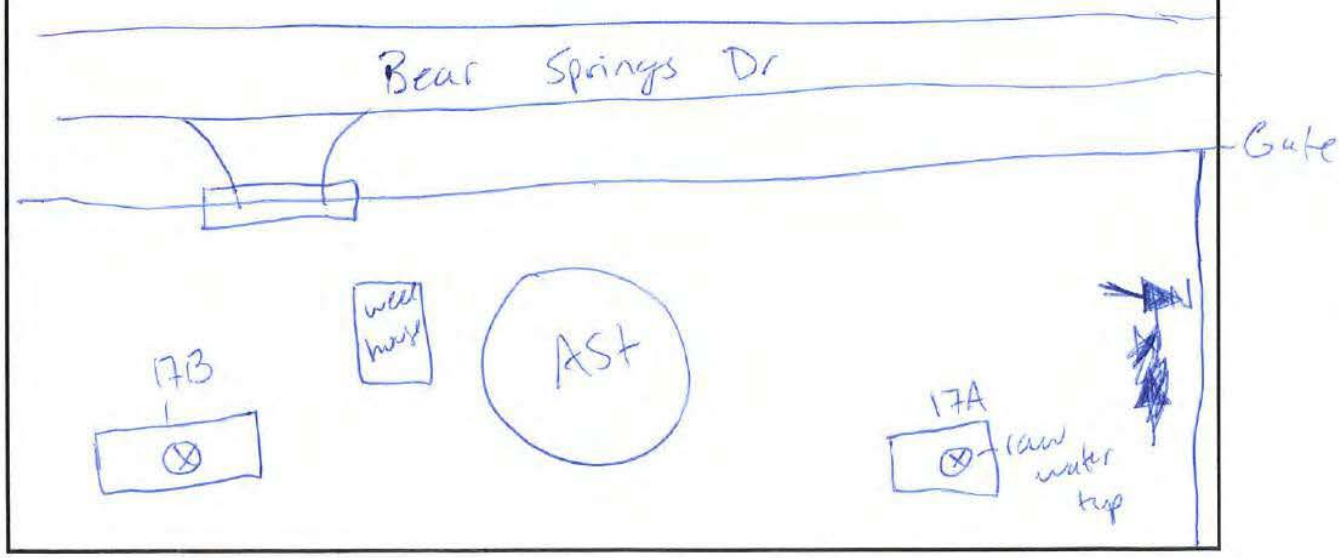
Time:	1117	1122	1127	1132	Within	Circle One:	
Specific Conductance:	499.2	498.4	498.6	500.1	10%	us/cm	ms/cm
pH:	7.23	7.29	7.22	7.24	+/- 0.5		
Temperature:	24.2	24.2	24.2	24.2	+/- 1 C	F°	C°
ORP:	114	171	139	227		mV	

Notes/Comments:

Productivity ≈ 1748 gpm, collecting from 17A
Collect Raw water tap

Analyses: (List those collected and indicate the number of containers)
VOCs 1 Total metals, 1 Dissolved metals, 1 Hex chrom, 1 Cyanide

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 16 April 2018

Tap Water Collection Field Form

↳ EAA - installed Pump

Well ID: WW-19 **Sample ID:** WW-19 **Sample Time:** 10:47

Well owner/location/residence: Alamo Fireworks

Street address: 11514 Potranco Road

Filtration system? (circle one) Y (N)	Sampling personnel: R. Goth + R. Baker
Start purge time: 08:44	Weather: Pt. Cloudy
End purge time:	Purge Rate (gal/min): 2.5 GPM
Sample collected at (circle as appropriate): (Wellhead tap)	In-line House tap

Field Parameters:

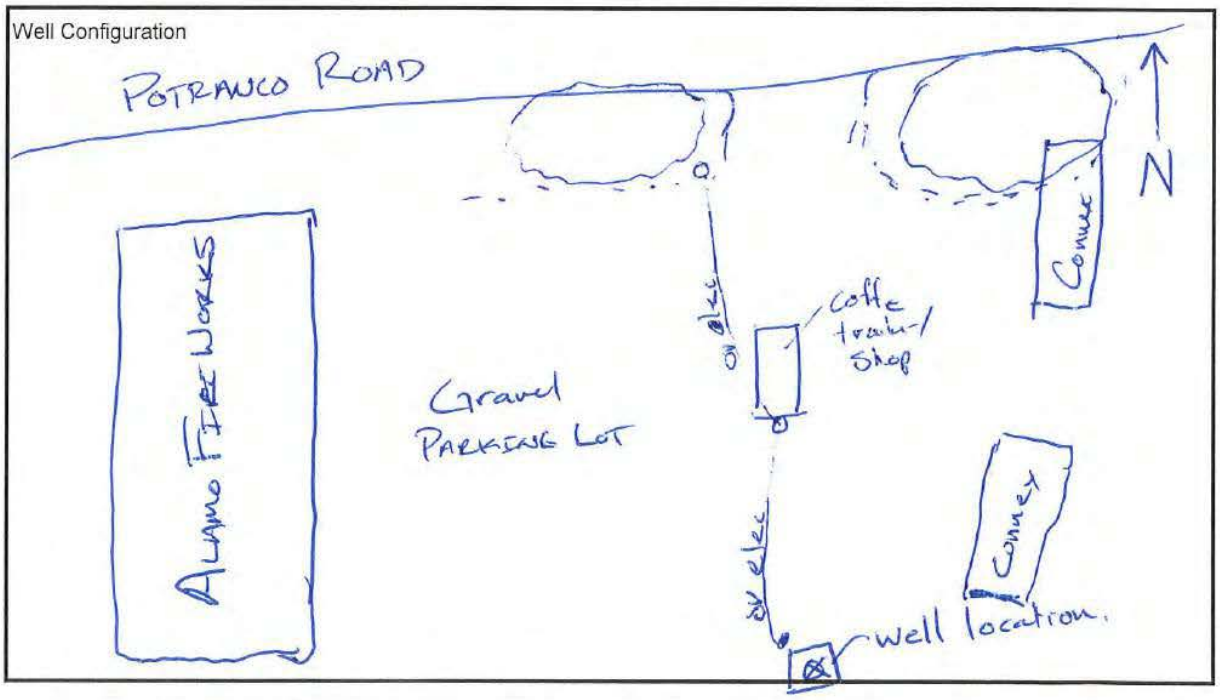
Time:	10:36	10:39	10:42	10:45	Within	Circle One:	
Specific Conductance:	510.7	511.7	5.13	512.2	10%	(us/cm)	ms/cm
pH:	8.18	8.17	8.18	8.24	+/- 0.5		
Temperature:	23.5	23.5	23.5	23.7	+/- 1 C	(F°)	C°
ORP:	-227	-227	-222	-227		(mV)	

Notes/Comments: EAA is pumping well with Submersible Pump.
DTW = 119.56, TD = 400' bgs, Pump @ 150.8'

Sub pump has dedicated tubing - EAA says they ran for 30m in liquinox & ~30-45 min in DI Water yesterday

Analyses: (List those collected and indicate the number of containers)
~~VOCs~~ Total Metals, Dissolved Metals, Cyanide, Cr^6

Well Configuration



Recorded By: Ryan Goth

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/16/19

Tap Water Collection Field Form

Well ID: WW-20 **Sample ID:** WW-20 **Sample Time:** 1705

Well owner/location/residence (b) (6) [redacted]

Street address: (b) (6) [redacted]

Filtration system? (circle one)	Y (N)	Sampling personnel:	J. Stump + R. Barker
Start purge time:	1640	Weather:	Sunny 81°
End purge time:	1700	Purge Rate (gal/min):	

Sample collected at (circle as appropriate): Wellhead tap (In-line) House tap

Field Parameters:

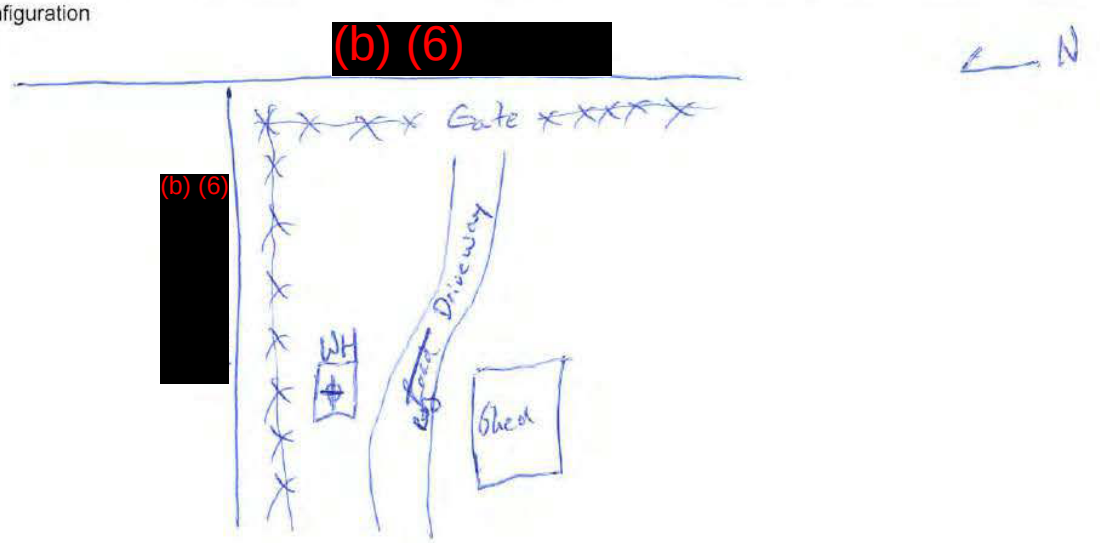
Time:	1645	1650	1655	1700	Within		Circle One:
Specific Conductance:	411.0	365.2	340.2	340.6	10%	us/cm	(ms/cm)
pH:	8.78	8.43	8.20	8.03	+/- 0.5		
Temperature:	23.7	24.4	24.6	24.4	+/- 1 C	F°	(C°)
ORP:	-128	-210	-220	-210		mV	

Notes/Comments: Mailing address (b) (6) [redacted]
Well is apx 800ft bgs, based on pulled pipe on the property.

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

(b) (6) [redacted]



Recorded By: Robert Barker

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/17/19

Tap Water Collection Field Form

Well ID: WW-21 Sample ID: WW-21 Sample Time: 1200

Well owner/location/residence: (b) (6) [redacted]

Street address: (b) (6) [redacted]

Filtration system? (circle one)	Y N	Sampling personnel:	J. Stroup, D. Simon
Start purge time:	1130	Weather:	Cloudy 76°
End purge time:		Purge Rate (gal/min):	
Sample collected at (circle as appropriate):		Wellhead tap	In-line House tap

Field Parameters:

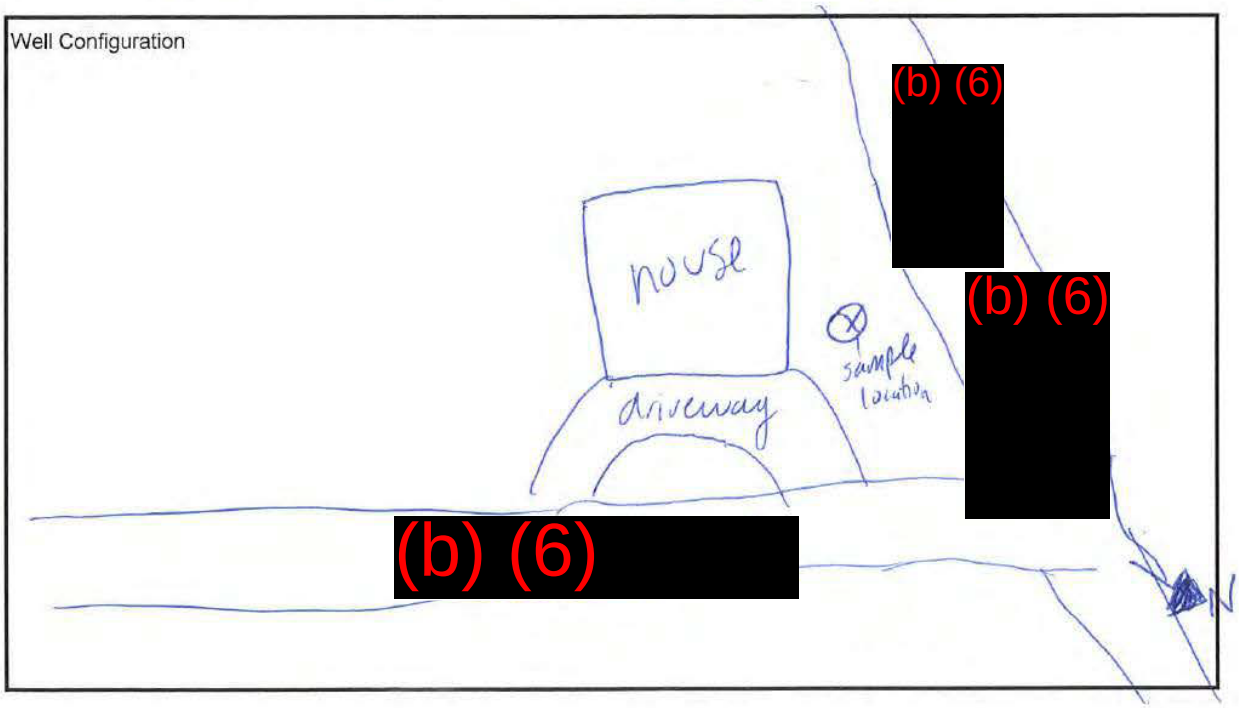
Time:	1140	1145	1150	1155	Within	Circle One:	
Specific Conductance:	766.5	770.2	769.0	769.5	10%	us/cm	ms/cm
pH:	6.93	6.83	6.82	6.84	+/- 0.5		
Temperature:	23.1	23.7	23.9	23.8	+/- 1 C	F°	C°
ORP:	110	105	102	103		mV	

Notes/Comments:

*EAA sample around 11

Analyses: (List those collected and indicate the number of containers)
VOCs 1 Dissolved metal, 1 Total metal, 1 CN, 1 CRB

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 17 April 2018

Tap Water Collection Field Form

Well ID: WW-22 Sample ID: WW-22 Sample Time: 12:18

Well owner/location/residence: (b) (6) [redacted]

Street address: (b) (6) [redacted]

Filtration system? (circle one) Y (N) Sampling personnel: R. Gatt & R. Barber

Start purge time: 11:55 Weather: Pt. Cloudy, ~ 72°F, lt Windy

End purge time: Purge Rate (gal/min): ~ 3gpm

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

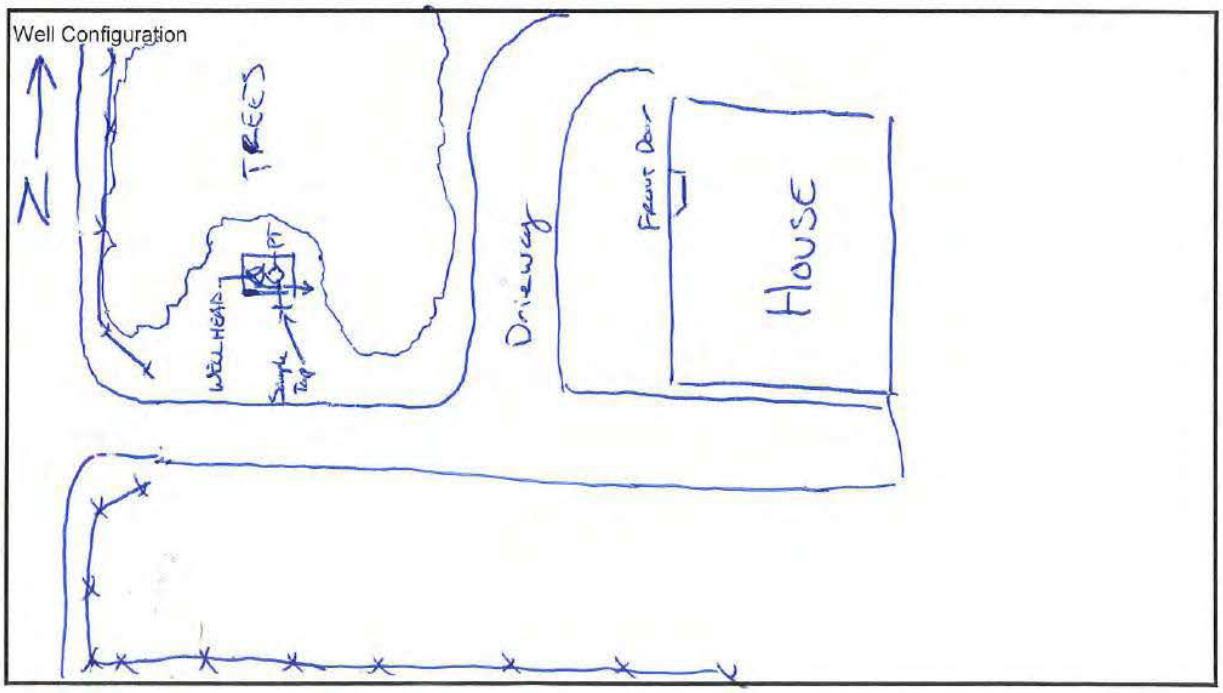
Field Parameters:

					Within	Circle One:	
Time:	12:00	12:03	12:06	12:09			
Specific Conductance:	554.6	555.3	555.9	555.9	10%	us/cm	ms/cm
pH:	6.85	7.51	7.91	8.04	+/- 0.5		
Temperature:	23.8	23.4	23.7	23.8	+/- 1 C	F°	C°
ORP:	17	45	-4	-3		mV	

Notes/Comments: DRP readings fluctuating (instrument?) 12:12 556.2, 23.7, 0, 8.15

Analyses: (List those collected and indicate the number of containers)
~~VOCs~~ TM, Dissolved TM, Cr6, Cyanide.

Well Configuration



Recorded By: Ryan Gatt

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/18/19

Tap Water Collection Field Form

Well ID: WW-03 **Sample ID:** WW-03 **Sample Time:** _____

Well owner/location/residence: _____

Street address: _____

Filtration system? (circle one) Y N	Sampling personnel:
Start purge time:	Weather:
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

					Within	Circle One:	
Time:							
Specific Conductance:					**10%**	us/cm	ms/cm
pH:					**+/- 0.5**		
Temperature:					**+/- 1 C**	F°	C°
ORP:						mV	

Notes/Comments:
No access
did not sample

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

Recorded By: _____

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/18/19

Tap Water Collection Field Form

Well ID: WW-05 **Sample ID:** WW-05 **Sample Time:** _____

Well owner/location/residence: _____

Street address: _____

Filtration system? (circle one) Y N	Sampling personnel:
Start purge time:	Weather:
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

					Within	Circle One:	
Time:							
Specific Conductance:					**10%**	us/cm	ms/cm
pH:					**+/- 0.5**		
Temperature:					**+/- 1 C**	F°	C°
ORP:						mV	

Notes/Comments:

no access
did not sample

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

Recorded By: _____

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/18/19

Tap Water Collection Field Form

Well ID: WW-12 **Sample ID:** WW-12 **Sample Time:** _____

Well owner/location/residence:

Street address:

Filtration system? (circle one) Y N	Sampling personnel:
Start purge time:	Weather:
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

					Within	Circle One:	
Time:							
Specific Conductance:					10%	us/cm	ms/cm
pH:					+/- 0.5		
Temperature:					+/- 1 C	F°	C°
ORP:						mV	

Notes/Comments:

no access
did not sample

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

Recorded By: _____

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/18/19

Tap Water Collection Field Form

Well ID: WW-13 **Sample ID:** WW-13 **Sample Time:** _____

Well owner/location/residence:

Street address:

Filtration system? (circle one) Y N	Sampling personnel:
Start purge time:	Weather:
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate): Wellhead tap	In-line House tap

Field Parameters:

					Within	Circle One:	
Time:							
Specific Conductance:					**10%**	us/cm	ms/cm
pH:					**+/- 0.5**		
Temperature:					**+/- 1 C**	F°	C°
ORP:						mV	

Notes/Comments:

no access
did not sample

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

Recorded By: _____

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/15/19

Tap Water Collection Field Form

Well ID: WW-14 **Sample ID:** WW-14 **Sample Time:** _____

Well owner/location/residence:

Street address:

Filtration system? (circle one) Y N	Sampling personnel:
Start purge time:	Weather:
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

					Within	Circle One:	
Time:							
Specific Conductance:					**10%**	us/cm	ms/cm
pH:					**+/- 0.5**		
Temperature:					**+/- 1 C**	F°	C°
ORP:						mV	

Notes/Comments:

no access
did not sample

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

Recorded By: _____

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 4/16/19

Tap Water Collection Field Form

Well ID: WW-15 **Sample ID:** WW-15 **Sample Time:** _____

Well owner/location/residence: _____

Street address: _____

Filtration system? (circle one) Y N	Sampling personnel:
Start purge time:	Weather:
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

					Within	Circle One:	
Time:							
Specific Conductance:					**10%**	us/cm	ms/cm
pH:					**+/- 0.5**		
Temperature:					**+/- 1 C**	F°	C°
ORP:						mV	

Notes/Comments:
* not operational

Analyses: (List those collected and indicate the number of containers)
VOCs

Well Configuration

Recorded By: _____

Phase 1 RI Field Activities

Field Event 2 (June 2019)

22

Location San Antonio Tx Date 6/20/19

Project / Client River City / Reg 6

W. Ganter

0830 Mw-04 Dtw: 30.86
Mw-03 29.64
Mw-02 31.09
Mw-05 31.44

0900 Sample Mw-04 - Cr^6 only
NTU 100.5
Cond 1446 ORP 65
Temp 25.6 PH 7.26

0915 Sample Mw-03 - Cr^6 + VOC msmsd Both
NTU 11.25
Cond 339.7 ORP 110
Temp 24.8 PH 7.11

0930 Sample Mw-02 Cr^6 only
NTU 65.9
Cond 367.7 ORP 135
Temp 25.8 PH 7.15

Location San Antonio Tx Date 6/20/19 wy 23

Project / Client River City / Reg 6

W. Ganter

0945 Sample Mw-05 Cr^6 ~~Half Bottle~~ wy
NTU 1358 Av
Temp 26.3 ORP 120
Cond 518.6 PH 7.29

about 40 mL

1000 All wells sampled until dry. WL below screen on all wells - No recharge

1005 31.66 Td Mw-03 31.23 dtw
31.49 Td Mw-02 31.30 dtw
31.71 Td Mw-05 31.49 dtw
31.29 Td Mw-04 31.10 dtw

W.G.
6/20/19

Rite in the Rain

Phase 2 RI Field Activities

Field Event 3 (September/Octobe2019)

6

Location San Antonio, TX Date 4/17/19

Project / Client RCMF

0830 arrive on site
0840 Bump test
ph 7: 6.94
ph 4: 4.00
ph 10: 9.97
cond 1413: 1418 [illegible]
0845 arrive at WW-16
0935 Sample WW-16
0935 Leave WW-16
1000 arrive at Lil Lions WW-09
1040 sample WW-09
1050 Leave WW-09, Lock for wells
1130 Get access to collect samples at (b) (6) [redacted]
1200 Sample WW-21
1230 Leave for WW-10, (b) (6) [redacted]
1300 arrive at WW-10
1330 Sample WW-10
1350 Leave WW-10
1510 Leave for EA Dallas
2100 arrive EA Dallas

4/17/19 [illegible]

7

Location San Antonio, Bexar Co, TX Date 09/30/2017

Project / Client River City Metals Finishing

Top Sampling; Andrew Simon and Jason Stump

1145 Arrive @ Hampton Inn to pick up sample kit shipped from laboratory; Andrew Simon (AS) and Jason Stump (JAS) print shipping fed Ex airbills at hotel.
1230 arrive @ Home Depot to ~~pur~~ AS purchase field supplies.
1245 AS talked to Southwest Water Supply (SWWS) Matt and said he would meet EA at 1230 at WW-02. on (b) (6) [redacted]
1313 EA arrive @ WW-02 to bump test equipment and prep supplies.
1340 Matt with SWWS arrive (b) (6) [redacted]
1349 start purge and parameters; well pump rate 195 gpm.
1409 end parameters
1415 sample collected @ WW-02 MS/MSD three 25 gal nonpreserved poly [illegible] 09/30/2019

Rite in the Rain

8

Location San Antonio, Bexar Co, TX Date 09/30/2019

Project / Client RCMF / EPA 6

Tap Sampling; JAS & AS

1420 depart WW-02; follow Matt to WW-01 on (b) (6) [redacted]

1427 start parameters at WW-01; JAS & AS

1442 end parameters; see datasheet for more information

1445 sample collected @ WW-01; 2 - 250ml nonpreserve poly for hexavalent chromium

1515 depart WW-01.

1537 arrive at WW-09; (b) (6) [redacted] lane; JAS & AS, weather partly cloudy, ≈ 95°F

1550 problem with Ph on ultrameter II; recalibrate meter; Ph is reading low intermittently all other parameters stable

1604 start parameters

1624 end parameters; see datasheet

1630 sample collected @ WW-09 1 - 250 ml nonpreserve poly for hex chrome

1640 arrive @ WW-10; (b) (6) [redacted] Pass; JAS & AS.

JA 9/30/19

9

Location San Antonio, Bexar Co, TX Date 9/30/19

Project / Client RCMF / EPA 6

Tap Sampling; JAS & AS

Ultrameter is still not functioning properly for Ph tried to call Ajax for tech support

1649 start parameters Ph is working better but still reading irradically

1709 end Parameters

1715 sample collected @ WW-10 1 - 250ml poly nonpreserve for hex chrome

1730 depart (b) (6) [redacted]

1750 arrive @ gas station to start filling out chain and packing sample cooler

1830 drop off samples at Fed Ex

1845 send email to lab with COC's and tracking ~~in~~ numbers.

1850 depart for hotel.

JA 9/30/19

Rite in the Rain

10

Location San Antonio, Bexar Co, TX Date 10/1/19

Project / Client RCMF / EPA 6

Tap Sampling; JAS & AS

0745 depart hotel for ~~Ted~~ home Depot. for tools to fix JAS replace battery in Ultrameter

0800 Health & safety review.

0820 work on Ultrameter; replace battery, call Ajax and they stated the ph sensor is going out; EA will use the hosbio that was rented for low flow to continue tap sampling.

0900 depart for (b) (6) [redacted] for access; ~~tat~~

1000 talk to tenants @ (b) (6) [redacted] about VI sampling next week.

1030 arrive back @ river city to look at site area to see about mowing; start calling rental companies to find equipment.

1130 arrive @ WW-04; (b) (6) [redacted] Lane; meet with Brad @ SAAWs weather ~ 90°F, partly cloudy, bump JAS calibrate Horiba water quality monitor model U-5000 JAS 10/1/19

Location San Antonio, Bexar Co, TX Date 10/1/19 11

Project / Client RCMF / EPA 6

Tap Sampling; JAS & AS

1157 SAAWs trying to get well picked on by opening ~~water~~ fire hydrant.

1203 start parameters; see datasheet for more information

1218 end parameters

1220 sample collected @ WW-04 1-250ml ~~p~~ non preserve poly. for hex chrome.

1225 depart WW-04

1237 arrive @ WW-07; (b) (6) [redacted] (b) (6) [redacted] Rd; JAS & AS

1246 start parameters; see data sheets

1301 end parameters.

1305 sampled WW-07 for hex chrome.

1311 depart WW-07

1327 arrive @ WW-~~15~~ 16; Filmont & Tippicanoe; JAS & AS

1350 sample collected WW-16 for hex chrome; see datasheet

1400 arrive @ WW-17; (b) (6) [redacted] (b) (6) [redacted] JAS 10/1/19

Rite in the Rain

12

Location San Antonio, Bexar Co. TX Date 10/1/19

Project / Client RCMF / EPA 6

Tap Sampling

1426 sampled WW-17 for hex Chrome; see datasheet for more information

1500 arrive @ WW-20; (b) (6) [redacted]

1512 fd to meet property owner

~~1509~~ Start parameters; see datasheet weather; partly cloudy ≈ 98°F

1527 end parameters

1530 sample collected @ WW-20 for hex Chrome

1545 depart for site

1600 arrive @ site; setup equipment for low flow sampling,

1615 setup @ MW-01: set end of tubing (sampling part one foot above bottom of well.) tubing set @ 27' btoc

1643 Start parameters; see data sheet for more information

1704 end parameters; gauged other wells see datasheet

1710 sample collected @ MW-01; Duplicate collected; MW-01D. 2-250ml nonpreserve poly for hex chrome analysis.;

1845 drop samples @ Fed Ex.

13

Location San Antonio, Bexar Co. TX Date 10/2/19

Project / Client RCMF / EPA 6

Tap Sampling

0645 depart for home depot to rent equipment

0840 arrive on site to start clearing

0845 health and safety review. AS & Its clear site with walk behind brush trimmers

~~1~~ 1400 depart for home depot to wash off equipment and return

1500 pick up additional supplies for removing larger trees in the fence and weeds that grass trimmers could not remove.

1545 return to site to finish clearing the fence and drop purge water into onsite drums.

1715 offsite

10/2/19

Rite in the Rain

RIVER CITY
METAL FINISHING

Rite in the Rain®
ALL-WEATHER
ENVIRONMENTAL
FIELD BOOK
№ 550F

No. 1

001973

Location San Antonio, Bexar Co. T Date 17 April 19

Project / Client River City Metal Finishing / EPA R6

R. Gully / R. Barker

12:40 - Meet up with Jaca Shoop so he can GPS WW-21

12:55 - Go GPS WW-19 (Alamo Fireworks)

13:20 - Return to RCMF Site & Prep sample coolers.

14:00 - Coolers prepared return to hotel

15:00 - head to Fed Ex with final Coolers of this event

15:30 - Depart Fed Ex for other site.

- No further field activities this event.

- Updated EA PM prior to final cooler delivery - no more sampling this event.

17 April 2019

Location San Antonio, Bexar Co. TX Date 8 Oct. '19

Project / Client River City Metal Finishing / EPA Reg. 6

Mark Kelly (MK)

0659 leave hotel (59083.5)

0717 @ site (59091.5)

open gate, Mark well locations.

0730 Ground Penetrating Radar Services (GPRS) @ site. Brandon Campos. Safety Mtg.

0740 GPRS clears well locations.

~0800 HCI arriving @ site; staging equipment. (Harrison-Cooper Drilling), Locations cleared by GPRS. (Did not locate septic tank or any other objects in central-south central part of site.)

0810 Safety Mtg / HCI

Ken Cooper, Kenny Cooper, David Lagoski, Sam Martinez.

0820 Use backhoe ~~[illegible]~~ to pull T-posts + lay down silt fence to access well locations. (PMW-07, near MW-05 + PMW-08 Tanker N)

0830 GPRS off site.

0840 USIC @ site; marks utilities in ROW (N fence line).

Move Rig to PMW-07; set up.

MMK

Rite in the Rain

Location San Antonio, Bexar Co, TX Date 8 Oct. '19

Project / Client River City Metals / EPA Region 6

PMW-07

~0900 clear by hand / drill out ~5' + set diverter. More in Backhoe.

~0910 Begin drilling w/ 6" PDC bit. Catch 5' grab / strainer samples. See field boring log for info.

0915 @ 20': Adding water for dust control.

Driller: Δ from clay to LS @ ~12'

0922 Drilling.

0927 @ 30'

0930 @ 40': Driller: Δ in drill Rate / harder formation @ 35' (Top of Austin Chalk). Clean out hole (COH). (Kau)

0936 Call Ryan Guth (mobile) - leave msg

0938 Call Pat Appell (mobile) - msg

0939 Call Pat A (direct): Update him on status + plans.

- Top Anacacho (Pecan Gap) @ ~12'
- Top Austin Chalk @ 35'.
- will set surface casing to 40' bgs (have 20' joints).

[signature]

Location San Antonio, Bexar Co, TX Date 8 Oct '19

Project / Client River City Metals / EPA Region 6

PMW-07

HCI drilling out / widening hole w/ 12" PDC bit.

1003 TD @ 41' w/ 12" PDC. Driller confirms harder fm @ 35'. COH Pull drlg surface csg / diverter

1015 Go in w/ ~~10~~ 4" MK steel surface casing (8") (2-20 ft joints). Weld connection

1025 Welding

Weather: 69° (87°/68°) clear. Wind 10 mph NE. 70% Humid. P=30.06"

1033 Add 3 ft (8") stickup / weld.

Set 8" steel casing / add bent chips to annulus. Grouting well (driller confirmed w/ Pat A; pour grout Rather than pressure grout). ~~Mixing / pouring~~ MK ~~one wheelbarrow load~~ (Mixing w/ cmt mixer + pouring w/ wheelbarrow; minimal lag between loads). Adding Bent.

1106 Grout @ surface

1110 Lay down mast + move Rig to PMW-08 (north).

1130 Drilling w/ 6" PDC; see field boring log for info.

1136 @ 20'

[signature]

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 8 Oct 49

Project / Client River City Metal Finishing / EPA Reg. 6

~~AW~~ MK PMW-08

~1140 @ 40' - Harder drlg @ 35'/Top of Kau.
COH w/ 6" PDC Pickup 12" PDC

1200 Widen hole to 12"

1225 TOOH w/ 12" bit

1233 Go in w/ 8" steel casing

1240 Welding 2-20' joints
Weld 3ft stickup @ top.

1308 grout casing
Move Rig to PMW-06 (central)

~1330 Drilling w/ 6" PDC, see field boring log for info

1336 @ 20 ft

1343 @ 40', COH. switch to 12" bit

1350 Widen 6" hole to 12"

1414 TOOH w/ 12" bit

1424 Pick up 8" steel casing
Weld casing, stickup

1448 Grout steel casing

1505 lay down mast

1515 HCI off site

1545 leave site → WALMART (59091.6)

1645 hotel (59100.0)

MK 10-8-2019

Location San Antonio, Bexar Co., TX Date 9 Oct. 49

Project / Client RCMF / EPA Region III

Mark Kelly (MK)

0708 leave hotel (59100.0)

0726 @ site (59108.1)
unlock gate

0730 HCI arriving (Harrison-Cooper, Inc. Drlg)
Safety Meeting; MK, Ken Cooper, Kenny Cooper, ~~Ken Cooper~~, MK
Sam Martinez, David Lagoski.
MK

MK + drillers discuss MW-1 well pad (3" steel cover stickup; 'donut' style concrete pad @ surface). Able to move steel cover + conc; not very good seal @ surface. They think they can break-out concrete, 'jam' bentonite chips in annulus, MK (and maybe pour thin/wet grout to get more infiltration) and then replace concrete pad. Proceed to PMW-06 to drill out thru 8" steel casing (to 40' bsg) w/ 7 7/8" PDC bit. See field boring log for info

0818 Drilling, 40' - ? (↓)

MK

Location San Antonio, Bexar Co., TX Date 9-Oct-'19
Project / Client RiverCity Metal Finishing / EPA Reg. 6

PMW-06
0820 45' dry
0824 60' dry
@ 80' (~81'? - 80'-85') Moisture cuttings balling up; then back to dry - sl moist
0840 @ 100'
Text Pat Appg/ Ryan Guth ~ moisture, continuing down.
0847 @ 140'
0859 @ 160'
@ 170'/~171' Dk-Gry (Kef?) only ~ 2 ft, then back to lighty yellow as before.
Dk Gry N4/ . Silty, hrd, dry sl fissile? - massive.
0905 Stop @ 180' to see if hole makes water. (Driller' wait ~ 1 hour).
0906 Call Pat A: update on status/plans. Discuss MW-Soil Sampling
1000 Break connection @ Rig table to check for water; no response from probe.
1007 Call Pat A & Ryan G to discuss. Don't really want to go deeper;

Location San Antonio, Bexar Co., TX Date 9-Oct-'19
Project / Client RCMF / EPA Region 6

if ~~top of~~ Eagle Ford is @ 160'-200' @ top of hill (~ 500' (?) North), we may be in Eagle Ford now (?). If we go to 200' here, may be thru Kef + into Buda LS. (don't want that). If this well makes water, will probably be from moisture @ ~80'. Decide to stop @ 180' here (PMW-06) + move to PMW-08 + drill down from 40' to ?.
~1030 Trip out of Hole (TOOH)
1050 Hole open to ~172'; go in + Clean out Hole (COH).
~1100 As COH' some very moist cuttings (Roll into Ball). Some steam/vapor coming out of drill pipe.
1110 TOOH
82° cloudy (93°/80°) 8mph S
69% Humidity. P = 29.93" ↑
PMW-08
1145 Drilling 40' ↓; see Field boring log for details.
@ 80-90' sl moist; not as moist @ PMW-06.

Location San Antonio, Bexar Co, TX Date 9 Oct '19
Project / Client RiverCity-Metal Finishing / EPA Rg. 6

PMW-06

1201 Stop @ 120' & let well sit/water.
1220 tag bottom of drill pipe / inside bit.
No Response (~1' off bottom).
1235 Call Pat A/Ryan G. No indication of water; Plan to go back to drlg & stop @ gray (Ref.) or 180' max.
Okay w/ PA/RG.
Also, tell them Ken Cooper was asking for standby (1-2 hours) for time waiting on wells to charge.
1247 Back to drlg; 120' ↓
hit gray @ 147' (~3')
Back to yellow/brown @ ~150'
Stop @ 160 ft
1257 Call PA/RG & confirm.
Drilled out to 163 ft; hit another gray layer @ ~157 ft.
1330 Move Rig to PMW-07 (South)
1344 Drilling PMW-07 (40' ↓)
See field boring log for info.
1355 @ 60' Stop & clean out hole.
Moisture started ~70'.
1404 Drilling

Location San Antonio Bexar Co, TX Date 9 Oct. '19
Project / Client RCMF / EPA Region VI

PMW-07

very moist ~70'-80'. slightly moist-dry below.
1420 @ 140'; Stop to clean out hole.
Annulus of surface casing plugged w/ moist-wet cuttings; no Returns.
* Conc. pad was already installed @ this well/still wet (covered w/ plastic). Will need to let conc. dry before pulling last 40' of drill pipe & bit; will be pulling cuttings on top of bit out of casing, onto concrete.
~1430 Stop for the day
1436 Call Pat A; update on status & plans.
Also, septic tank (7' x 4')

Cement truck; GRAVEL.
Pat thinks fill w/ gravel; will call EPA-TOM first.
1445 NCI off site.
email from Ryan G.; EAA will be out to log a well tomorrow. May stop by today.

Location San Antonio, Bexar Co., TX. Date 9 Oct. '19
Project / Client River City Metal Finishing / EPA Reg. 6

~1500 EAA @ site.
Roger, Brent, Jessica.
Look @ cuttings for PMW-07 (to 140').
Also, some of gray cuttings from PMW-08 (TD = 160')
Discuss cuttings/wells; moisture @ ~80'
Look @ PMW-06 (TD = 180') as possible well to log. Gauge well; dtw = 175.9' toc (w/ ~3 ft stickup) (~7 ft water in hole).
1520 EAA off site.
1625 Call Ryan G + update on status/plans.
1700 leave site (59108.3)
1720 @ hotel (59116.0)

Mark Kelly
10-9-2019

Location San Antonio Bexar Co., TX. Date 10 Oct. '19
Project / Client RCMF. / EPA Region 6

0710 leave hotel (59119.3)
0725 @ site (59127.4)
Safety Mtg: M Kelly (EA), Ken Cooper, Kenny Cooper, Sam Martinez, Dave Lagoski (Harrison Cooper Inc - HCI).
0735 gauge MW-08 (N↑)
muddy; no measureable water (TD ≈ 166' toc)
0745 gauge MW-06 (central)
dtw = 169.66' toc (TD ~ 183' toc)
0800 HCI: Pull last 40 ft of drill pipe + bit from MW-07 (after letting cmt pad cure overnight); dislodges mud/cuttings on top of bit + unplugs 8" steel casing.
0805 2nd Roll off delivered.
3 yd³ 'pea' gravel delivered/dump in septic tank/fill tank + smooth out excess @ surface.
~0810 Drilling down @ #7 (from 140')
Text Pat Appel + Ryan Suth: water levels/TDs; mud in #8.
0825 @ 160', MW-7 (see field boring log).
~176' gray (LS? SH) marly

Rite in the Rain

Location San Antonio, Bexar Co., TX Date 10 Oct 19

Project / Client River City Metal Finishing / EPA Reg. 6

MW-7

@180' Stop. Call Pat A; go deeper.

0838 Drilling from 180'

0841 200'

0851 Call Pat A; go to 220' & stop; Discuss.

~0915 Edwards Aquifer Authority onsite; Joe Gonzales, Mariah Bonham, Ben Jacobson, Jake Peterson. Safety Meeting

~ ~~MK Call~~ EAA will video MW-6, then go in w/ caliper & Gamma Ray tool.

MK on phone w/ Pat A, Ryan G, Jay Snyder (EA-ABQ). Discussing going deeper OR stopping; want to make best attempt to install well that makes water. want to tag Eagleford SH (gray) under Austin Chalk (yell/brown, some gray). in order to confirm openhole thru-out Austin.

0920 Pat A calls back; go deeper until hit Eagleford SH. @ #7; will then consider going deeper in other 2.

[signature]

Location San Antonio, Bexar Co., TX Date 10 Oct. 19

Project / Client RCMF / EPA Region 6

Continue drilling MW-07. When turn air on, blowing up water (still @ ~220'). Text photo & message to Pat A, Ryan G, Jay S. confirming well making good water.

Driller continues blowing up water w/ Rig to Clean Out Hole / Air Lift cuttings. (EAA confirms Kef cuttings.)

* Several text messages / phone calls discussing drilling deeper in other wells etc. * (Pat Appell, Ryan Guth, Jay Snyder).

Driller has already pulled bollards @ MW-8 in anticipation of drlg deeper.

MK confers w/ EAA; how much Rathole do they need to see contact @ TD; tool ~6 ft tall; suggest 10 ft of Rathole (in case of carvings / sluff).

~1115 Will drill down another 10 ft to 230 ft in MW-7.

~1115 Will Re-enter MW-8 & drill down from 160' to ~200'-220' (tag Kef, then another 10 ft).

~1050 (Also, conferred w/ Pat A. about drilling Rathole IF 7 & 8 logged @ later date.)

[signature]

Rite in the Rain

Location San Antonio, Bexar Co. TX Date 10 Oct 19

Project / Client River City Metal Finishing / EPA Reg. 6

1130 Move Rig from MW-7 to MW-8 (MW-8 stopped @ ~~180~~ mk 160'; only sm mud on probe; not producing water @ measurable level) (MW-6 TDed @ 180'; has ~ 10-15 ft of water; will NOT go deeper.)

1209 Drilling/Deepening MW-8 from 160'

1210 @ 170'; See field boring log.

* EAA geophysical (Gamma Ray) log @ MW-6 indicates top of Austin (Kau) Chalk @ ~ 80' (First sign of moisture) ~~(This is ~ mk~~

* @ MW-7; top of Eagleford (Kef) was ~ 218'-220'; log for well across Road ([redacted] (b) (6) Grid # 68-35-4) shows top of Kef @ ~160'; ~60 ft difference due to dip + faulting. *

— EAA off site —

MW-8: @ ~ 205', blowing up water (note: first moisture/top of Kau? ~ 70'.)

210' Dry/SH.

TD @ 218' (Kelly down).

Mud [illegible]

Location San Antonio, Bexar Co. TX Date 10 Oct. 19

Project / Client RCMF / EPA Region 6

1230 @ MW-8; blowing up water/ Airlift - clean out hole.

1242 Call Ryan G + update on status, GammaRay @ #6, FM tops, water, etc.

1309 ~~Blowing~~ mk laydown mast.

1330 go in w/ swab @ MW-6.

MW-7 - bollards.

MW-1: Pull metal cover + concrete pad.

~~Rep~~ mk Place ~ 1/2-3/4 bag Bentonite chips @ surface (annulus around PVC).

Pour concrete pad @ MW-1.

1400 MW-6; go in w/ pump; fills drop pipe + hose (stretched to Rolloffs in NW corner of site); no discharge (not enough water to pump out?). ~30-35 gal. in well.

1445 → Bail MW-6; bails dry → 1520

~~1445~~ mk (after ~ 35 gallons).

Bailer: 3" diam., 6' long stainless steel.

HCI begins moving some equip (Rig, flatbed) off site (to lot down street).

1600 HCI off-site.

* DTW 1310 MW-6 = 168.9' toc

1315 MW-7 = 192.6' toc

1320 MW-1 = 18.6' toc.

Mud [illegible]

Rite in the Rain

Location San Antonio, Bexar Co, TX Date 10 Oct. '19
Project / Client River City Metal Finishing / EPA Reg. 6

MK

MW-6: top of Austin ~80' bgs
TD @ 180' bgs (183' toc)
water @ ~170' toc.
(*176.5', recharging after bailing*)
MW-7: top of Austin ~80' bgs
top Eagle Ford ~ 218'-220'
TD @ 230' *dtw = 170.78' toc*
MW-8 top of Austin ~ 70' bgs
top Eagle Ford ~ 210
TD @ 218' *dtw = 170.2' toc rising*
(*dtw measured @ end of day, ~1700)

MK

1725 leave site (59127.7)
1735 gas
1800 @ hotel (59137.2)

Mark Kelly
10-10-2019

Location San Antonio, Bexar Co, TX Date 11 Oct. '19
Project / Client RCMF / EPA Region VI

0715 leave hotel (59142.6)
0730 @ site (59150.6)
Safety Mtg: M. Kelly (EA), Ken Cooper, Kenny Cooper, Sam Martinez.
Bail MW-6: bailed dry, ~35 gal yesterday.
#6 dtw 170.03' toc
(#7 dtw = 165.4' toc)
Bail another ~35 gallons from MW-6, Bailed dry.
0815 Move to MW-7: Go in w/ pump.
0830 Pump not working.
Hook up new pump (out of box).
Go in well w new pump.
0903 Turn on new pump: Nothing.
0910 Checking generator / electrical
Generator good.
0930 Driller thinks too much mud / too thick to pump.
Pull pump & Bail.
0945 Call Tax A: no answer
0950 Text show of pump to Tax A & Ryan G.
(pump intake full of mud).
Begin Bailing MW-7
0955 Call Ryan G: no answer
Mark Kelly

Location San Antonio, Bexar Co., TX Date 11 Oct. '19

Project / Client River City Metal Finishing / EPA Reg. 6

Note: MW-7 & MW-8 were air lifted w/ Rig 45 minutes - 1 hour (removed about 10 backhoe buckets of water & mud each). Bailed ~ 50 gallons from MW-7 (today). Move to MW-8 & Bail.

~1030 Discuss w/ Ryan G development:
- HCI doesn't have brush for wells.
- no more pumps (trashed 2 already).
- Bail (water fairly clear @ #8 for 2-3 pails, then gets muddy; thin mud).

* Problem is mud on borehole walls getting in pump intake as it scrapes walls during installation.

~1050 Pat A. calls, discuss (same as above). ~~Wells sho~~ NK Water should be clear when sample in few weeks.

~~1000~~ Replace silt fence, use backhoe bucket to push T-posts. Zip-ties.

1100 HCI off site.

NK: IDW, site photos.

Mark Kelly

Location San Antonio, Bexar Co., TX Date 11 Oct. '19

Project / Client RCMF / EPA Region 6

1155 leave site (59150.6)
1213 hotel (check out (59158.3)
1230 leave hotel
1315 Stop - eat (New Braunfels)
1400 driving
1755 Stop - Gas (Itasca) (59400.7)
1909 @ EA - Lewisville (59475.9)

Mark Kelly
10-11-2019

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 10/1/19

Ground Water Collection Field Form

Well ID: MW-01 Sample ID: MW-01 Sample Time: 1710

Casing diameter/type: 2" PVC
Screened interval(s): 15-25' (bgs) 18-28 TOC
Total depth: 25' bgs
Initial depth to water (w/o pump): 18.25'
Final depth to water (w/o pump): 20.25
Measuring point: **North side of casing**

Well location:
Sampling personnel: J. Strong, D. Simon
Sampling method: Low-flow
Water level indicator: Heron
Water quality meter: YSI Horiba
Pump depth setting: 27'

Weather: Sunny 90°
Pump type/model: Pegasus Alexis

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	Temp (°C)	Conductivity (mS/cm) or (µS/cm)	DO (%)	DO (mg/L)	pH	ORP (mV)	Water Level (feet btoc)	Flow Rate (L/min) or (mL/min)	Turbidity (NTU)	Purge Volume (L) or (mL)	Additional Comments
1643	31.16	1.58	56.8	4.16	7.68	132	18.67	200	77		
1646	30.29	1.53	46.7	3.51	7.20	155	18.80	200	6.9		Duplicate collected
1649	28.95	1.55	46.4	3.56	7.10	164	19.02	200	7.1		
1652	28.67	1.55	45.4	3.49	7.07	168	19.35	180	8.3		
1655	28.56	1.55	44.8	3.45	7.05	172	19.46	100	7.3		
1658	28.78	1.53	43.8	3.36	7.04	174	19.65	100	7.2		
1701	29.02	1.50	44.1	3.38	7.04	175	19.78	100	6.0		
1704	29.19	1.47	44.5	3.40	7.06	177	19.93	200	6.0		
											TOTAL Purged ≈ 1 gallon
											Gauge other wells
											MW-03 - 29.22'
											MW-02 - 31.33'
											MW-05 - 31.49'
											MW-04 - 31.09'

Note:
Parameter Stabilization Limits:
(3 consecutive readings) for percent difference type parameters
Percent difference formula =
ABS[((first reading - second reading)/first reading) x 100]
Ex: Readings 12, 16, 15, 13
((12-16)/12)*100 = 33% ((16-15)/16)*100 = 6%
((15-13)/15)*100 = 13% In example, stabilization has not occurred.

Analyses: (List those collected and indicate the number of containers)
VOCs CR6-2

Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 9/30/19

Tap Water Collection Field Form

Well ID: WW-02 **Sample ID:** WW-02 **Sample Time:** 1415

Well owner/location/residence: SW Water Company
Street address: 11926 Madrona
Filtration system? (circle one) Y (N) Sampling personnel: J. Stroup, D. Simon
Start purge time: 1345 Weather: Sunny 94°
End purge time: 1420 Purge Rate (gal/min): 5gpm
Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

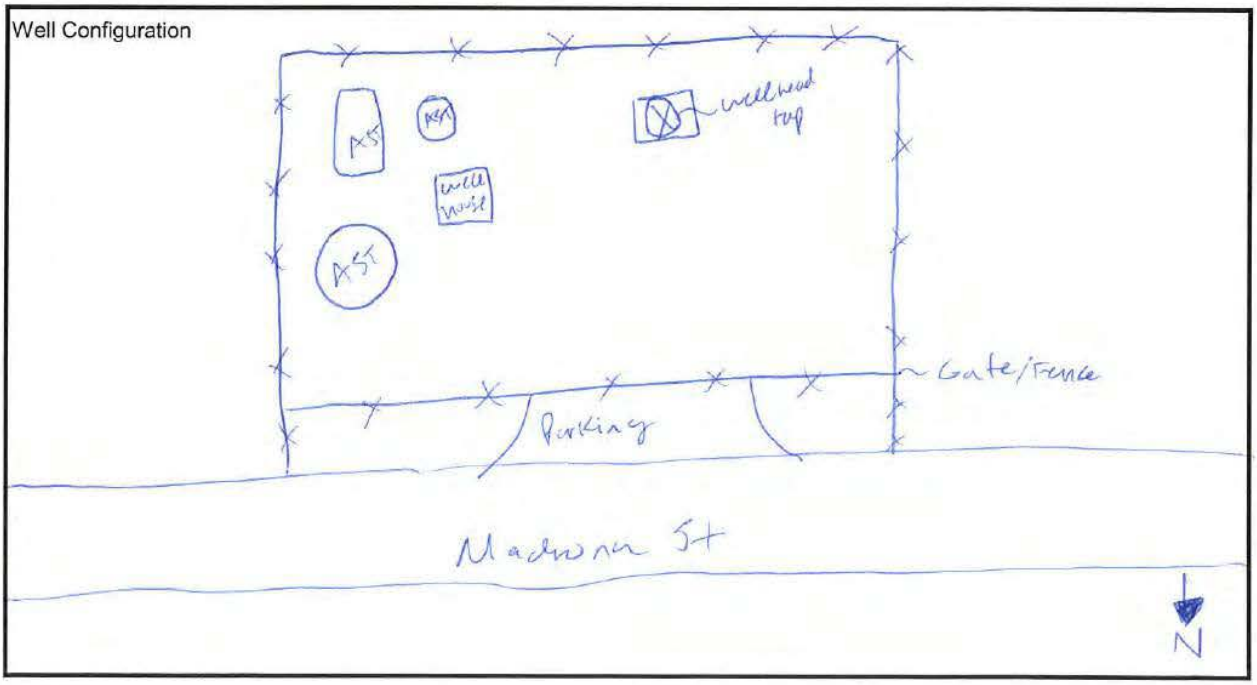
					Within		Circle One:	
Time:	1349	1354	1359	1404				1409
Specific Conductance:	530.4	501.8	502.4	502.9	10%	us/cm	ms/cm	503.9
pH:	5.89	6.46	6.70	6.92	+/- 0.5			6.96
Temperature:	25.6	24.8	24.6	24.6	+/- 1 C	F°	C°	24.7
ORP:	110	104	105	106		mV		109

Notes/Comments: *MS/MSD*

well purged at high rate prior to taking parameters
pump runs at 180 gpm

Analyses: (List those collected and indicate the number of containers)
VOCs CR6 - 3

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 9/30/19

Tap Water Collection Field Form

Well ID: WW-01 **Sample ID:** WW-01 **Sample Time:** 1445

Well owner/location/residence: SW Water Company
Street address: 12304 Poinciana
Filtration system? (circle one) Y (N) | Sampling personnel: J. Stroup, D. Simon
Start purge time: 1420 | Weather: Sunny 90°
End purge time: 1450 | Purge Rate (gal/min):
Sample collected at (circle as appropriate): (Wellhead tap) In-line House tap

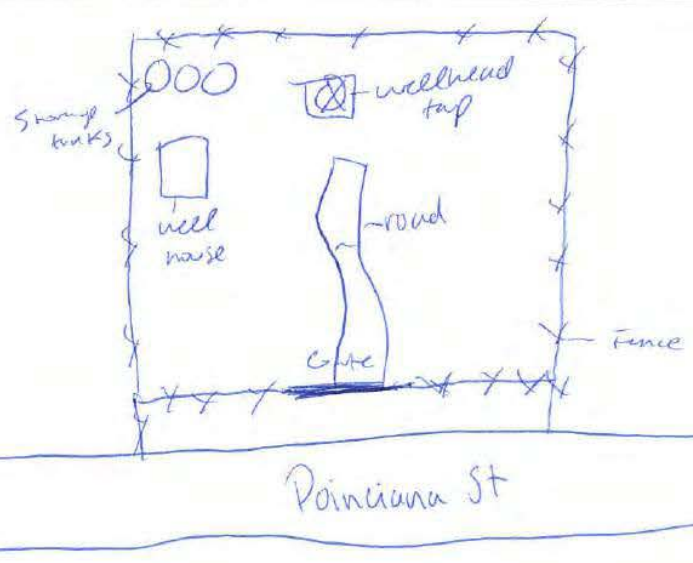
Field Parameters:

					Within	Circle One:	
Time:	1427	1432	1437	1442			
Specific Conductance:	536.1	540.2	539.3	538.1	10%	(µs/cm)	ms/cm
pH:	7.41	7.27	7.37	7.43	+/- 0.5		
Temperature:	24.5	24.7	24.6	24.4	+/- 1 C	F°	(C°)
ORP:	108	84	88	93		mV	

Notes/Comments: *DUP*
Pump runs at 125 gpm, purged prior to taking parameters

Analyses: (List those collected and indicate the number of containers)
VOCs CR6 - 2

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 9/30/19

Tap Water Collection Field Form

Well ID: WW-09 **Sample ID:** WW-09 **Sample Time:** 1630

Well owner/location/residence: Little Lions Academy
Street address: 1127 Mindie Ln
Filtration system? (circle one) (Y) N | Sampling personnel: J. Stroup, D. Simon
Start purge time: 1600 | Weather: Sunny 94°
End purge time: 1635 | Purge Rate (gal/min): 4 gpm
Sample collected at (circle as appropriate): (Wellhead tap) In-line House tap

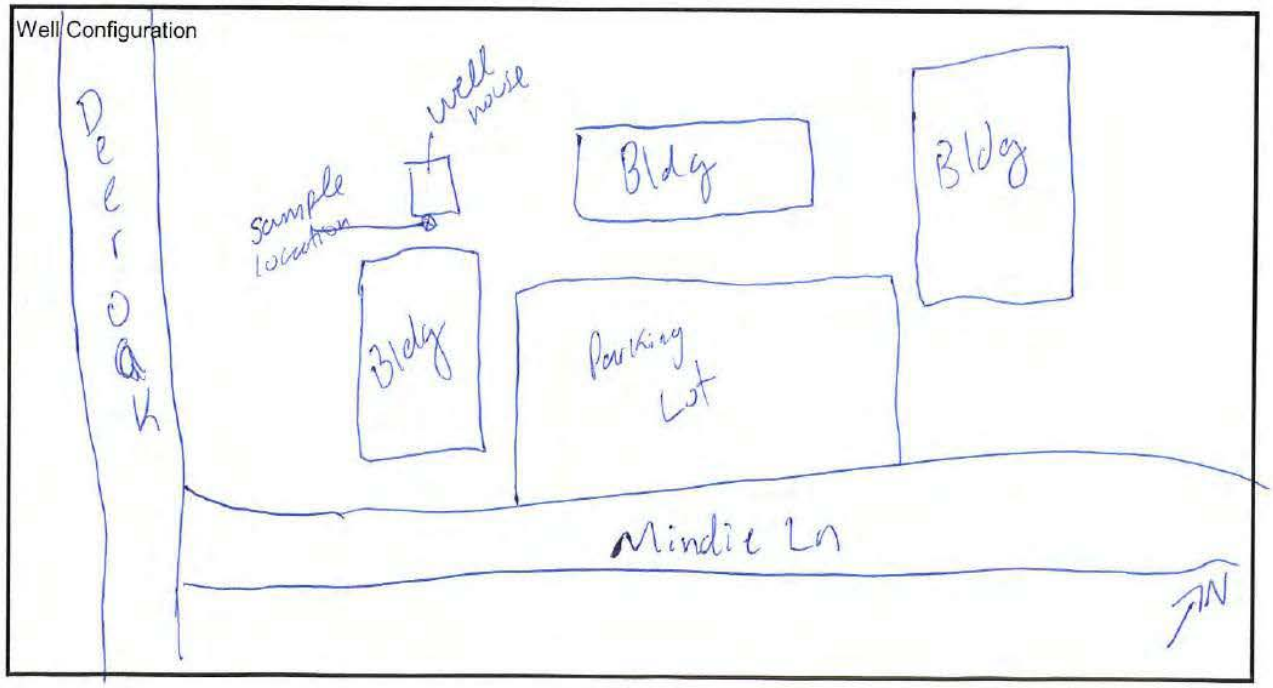
Field Parameters:

Time:	~~1537AS~~ 1604	1609	1614	1619	Within	Circle One:	1624
Specific Conductance:	521.7	520.8	520.4	519.8	10%	(us/cm) ms/cm	521.3
pH:	5.45	6.55	6.62	6.42	+/- 0.5		6.76
Temperature:	24.3	23.9	24.0	24.4	+/- 1 C / F°	(C°)	23.7
ORP:	144	124	118	110	mV		110

Notes/Comments:
Chlorine filtration, *re-calibrate prior to parameters

Analyses: (List those collected and indicate the number of containers)
VOCs CRO-2

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 9/30/19

Tap Water Collection Field Form

Well ID: WW-10 **Sample ID:** WW-10 **Sample Time:** 1715

Well owner/location/residence: (b) (6) [redacted]

Street address: (b) (6) [redacted]

Filtration system? (circle one) Y (N)	Sampling personnel: J. Stroud, D. Simon
Start purge time: 1635	Weather: Sunny 94°
End purge time: 1720	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	Wellhead tap (circled) In-line House tap

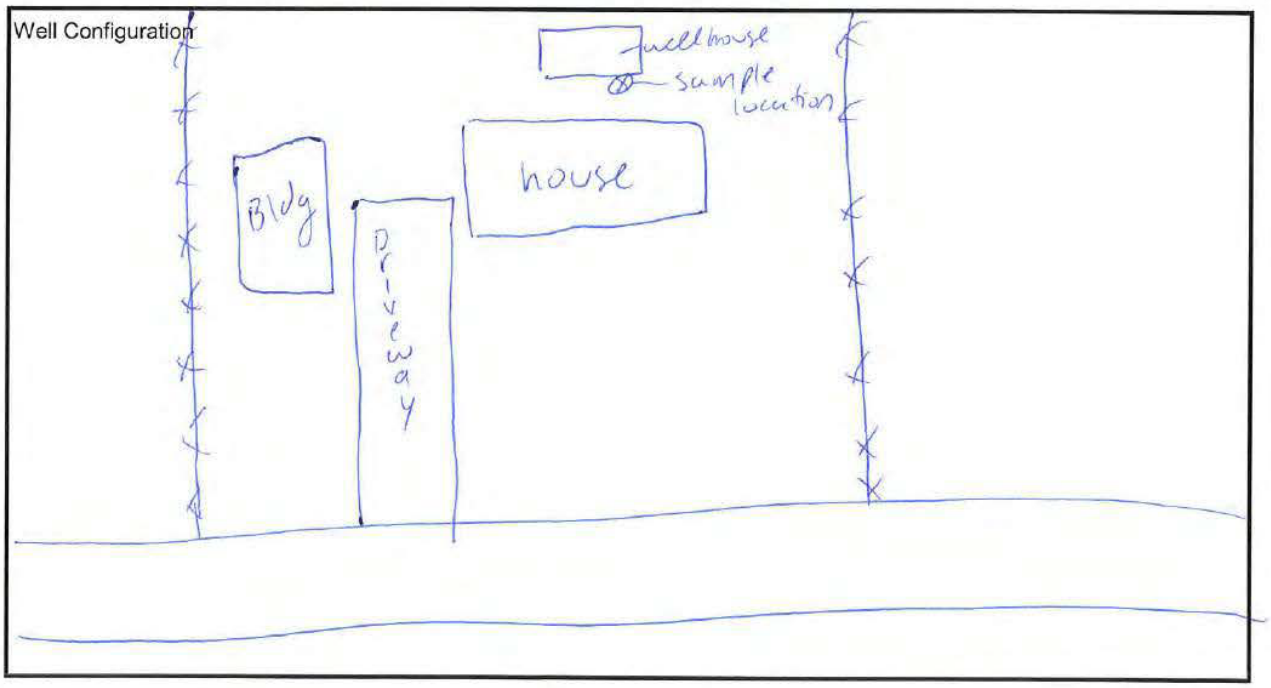
Field Parameters:

					Within	Circle One:		1709
Time:	1649	1654	1659	1704				
Specific Conductance:	523.4	524.4	523.5	524.5	10%	us/cm (circled)	ms/cm	524.5
pH:	6.41	7.01	6.91	6.50	+/- 0.5			6.67
Temperature:	24.7	23.3	23.3	23.3	+/- 1 C	F°	C° (circled)	23.2
ORP:	112	119	114	120		mV		119

Notes/Comments: pH probe on ultrameter not functioning properly / calibrated 2 times

Analyses: (List those collected and indicate the number of containers)
VOCs CRG-1

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 10/11/19

Tap Water Collection Field Form

Well ID: WW-04 **Sample ID:** WW-04 **Sample Time:** 1220

Well owner/location/residence: SAWS - Mountain Laurel Ranch
Street address: 2406 ~~Lee~~ Reyes Lane
Filtration system? (circle one) Y N | Sampling personnel: J. Stroup, D. Simon
Start purge time: 1155 | Weather: Cloudy 85°
End purge time: 1222 | Purge Rate (gal/min): 2 gpm
Sample collected at (circle as appropriate): Wellhead tap In-line House tap

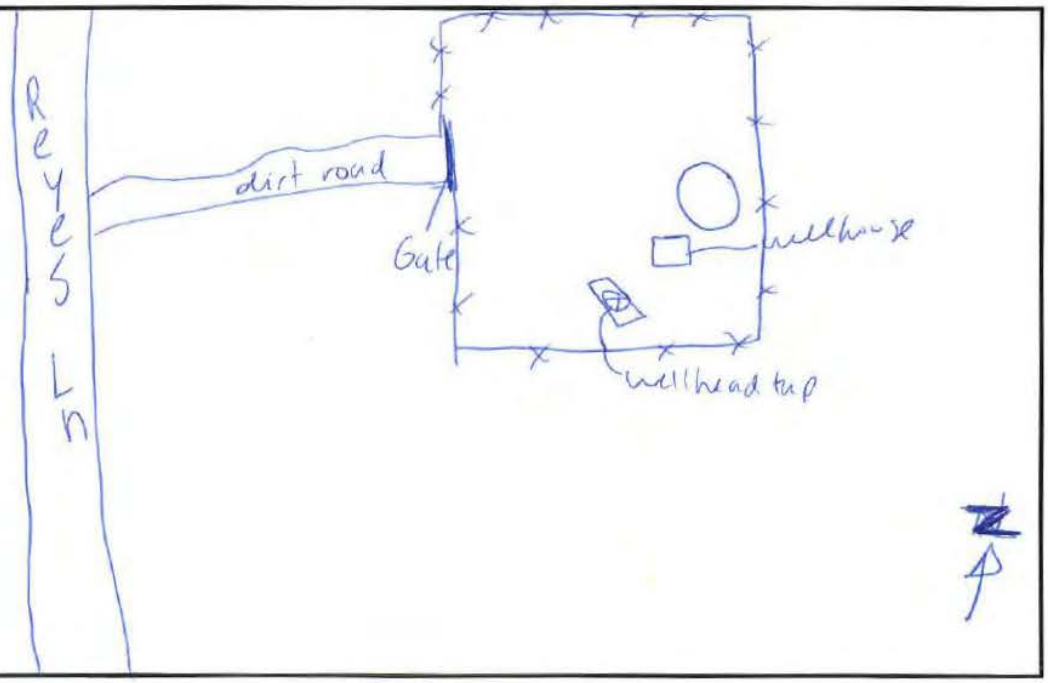
Field Parameters:

					Within		Circle One:
Time:	1203	1208	1213	1218			
Specific Conductance:	0.475	0.471	0.470	0.468	10%	us/cm	ms/cm
pH:	6.55	6.91	6.96	6.99	+/- 0.5		
Temperature:	26.36	26.22	26.35	25.97	+/- 1 C	F°	C°
ORP:	212	178	168	156		mV	

Notes/Comments:
pumped turned off for around a minute

Analyses: (List those collected and indicate the number of containers)
VOCs CR6 - 1

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 10/17/19

Tap Water Collection Field Form

Well ID: WW-07 **Sample ID:** WW-07 **Sample Time:** 1305

Well owner/location/residence: SAWS - Texas Research Park

Street address: 12840 Potranco Rd

Filtration system? (circle one) Y N | Sampling personnel: ~~Cloudy 85°~~ J. Stroup, D. Simon

Start purge time: 1236 | Weather: Cloudy 85°

End purge time: 1307 | Purge Rate (gal/min): 2 gpm

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

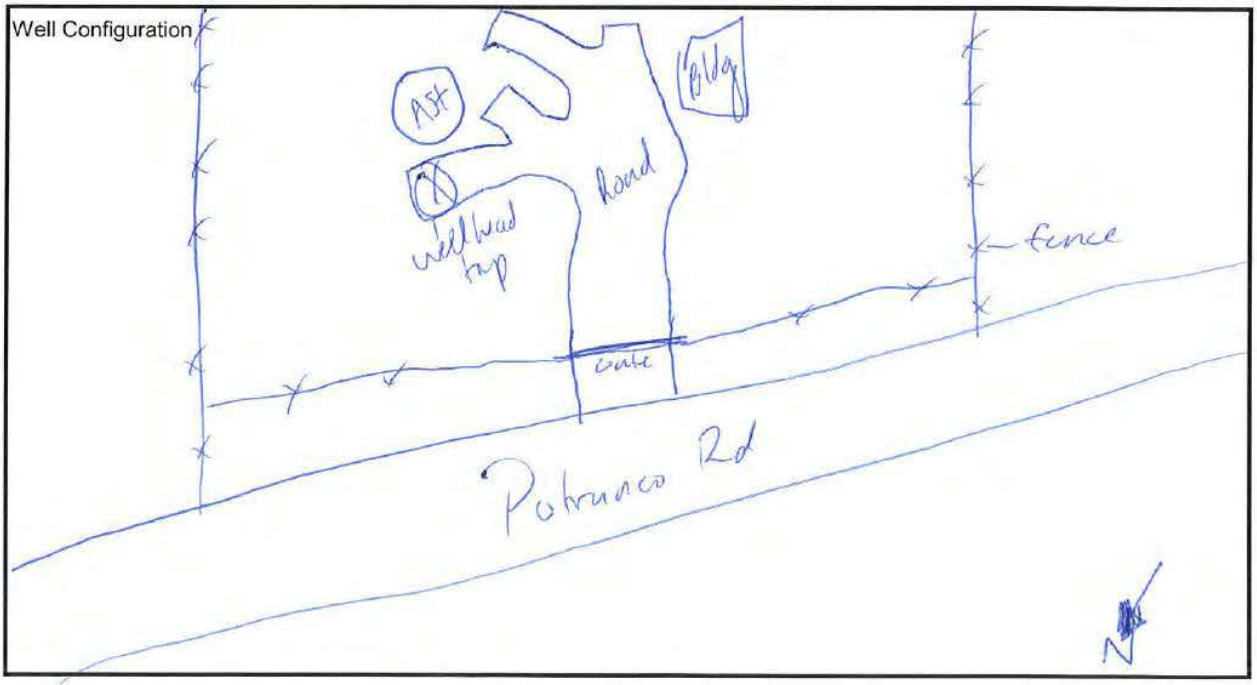
Field Parameters:

					Within	Circle One:	
Time:	1246	1251	1256	1301			
Specific Conductance:	0.495	0.496	0.496	0.497	10%	us/cm	ms/cm
pH:	7.07	7.00	7.04	7.02	+/- 0.5		
Temperature:	25.32	25.22	25.24	25.24	+/- 1 C	F°	C°
ORP:	647	686	631	613		mV	

Notes/Comments:

Analyses: (List those collected and indicate the number of containers)
VOCs CR6-1

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 10/11/19

Tap Water Collection Field Form

Well ID: WW-16 **Sample ID:** WW-16 **Sample Time:** 1350

Well owner/location/residence: Northwest Well #16 - SAWS

Street address: 10371 Tippecanoe

Filtration system? (circle one) Y (N)	Sampling personnel: J. Stroup, D. Simon
Start purge time: 1326	Weather: Partly Cloudy 90°
End purge time: 1352	Purge Rate (gal/min): 2 gpm
Sample collected at (circle as appropriate):	Wellhead tap (circled) In-line House tap

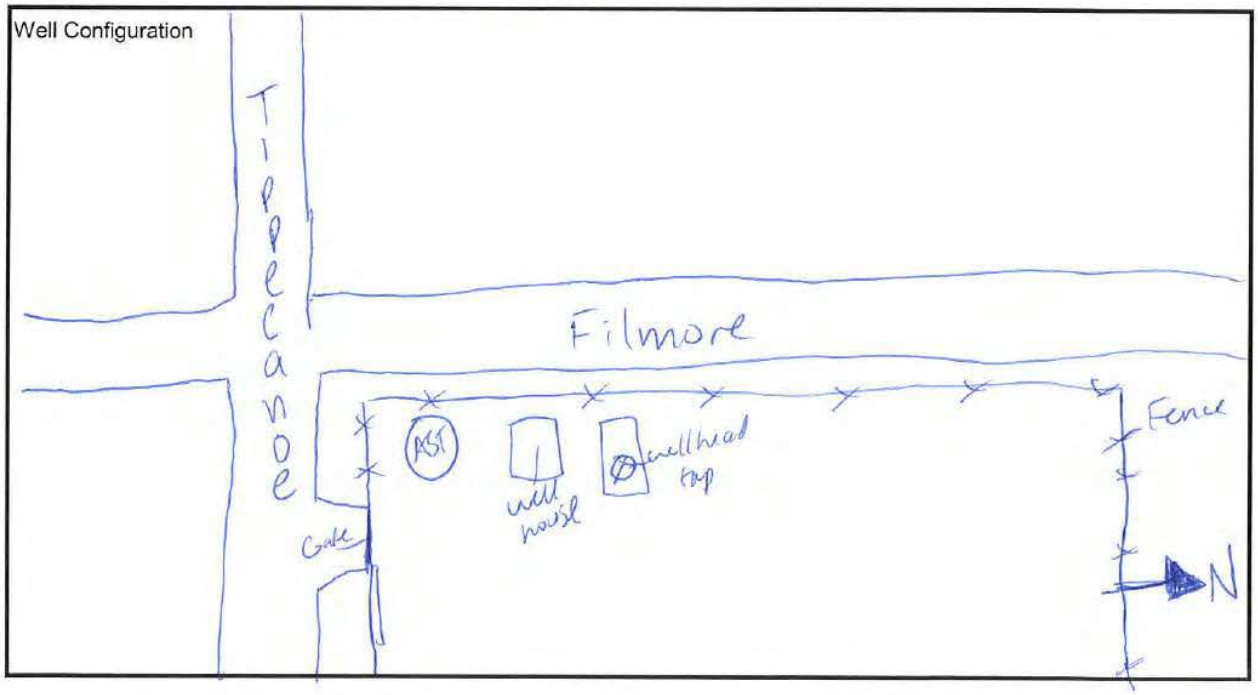
Field Parameters:

					Within		Circle One:
Time:	1332	1337	1342	1347			
Specific Conductance:	0.487	0.487	0.490	0.492	10%	us/cm	ms/cm (circled)
pH:	7.08	7.05	7.03	7.01	+/- 0.5		
Temperature:	25.55	25.54	25.49	25.51	+/- 1 C	F°	C° (circled)
ORP:	307	308	305	303		mV	

Notes/Comments:

Analyses: (List those collected and indicate the number of containers)
VOCs CRG-1

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 10/1/19

Tap Water Collection Field Form

Well ID: WW-17 **Sample ID:** WW-17 **Sample Time:** 1426

Well owner/location/residence: SAWS Northwest #17A
Street address: Bear springs Drive & Marbach Rd
Filtration system? (circle one) Y N Sampling personnel: J. Stroup, D. Simon
Start purge time: 1403 Weather: Partly Cloudy 85°
End purge time: 1428 Purge Rate (gal/min):
Sample collected at (circle as appropriate): Wellhead tap In-line House tap

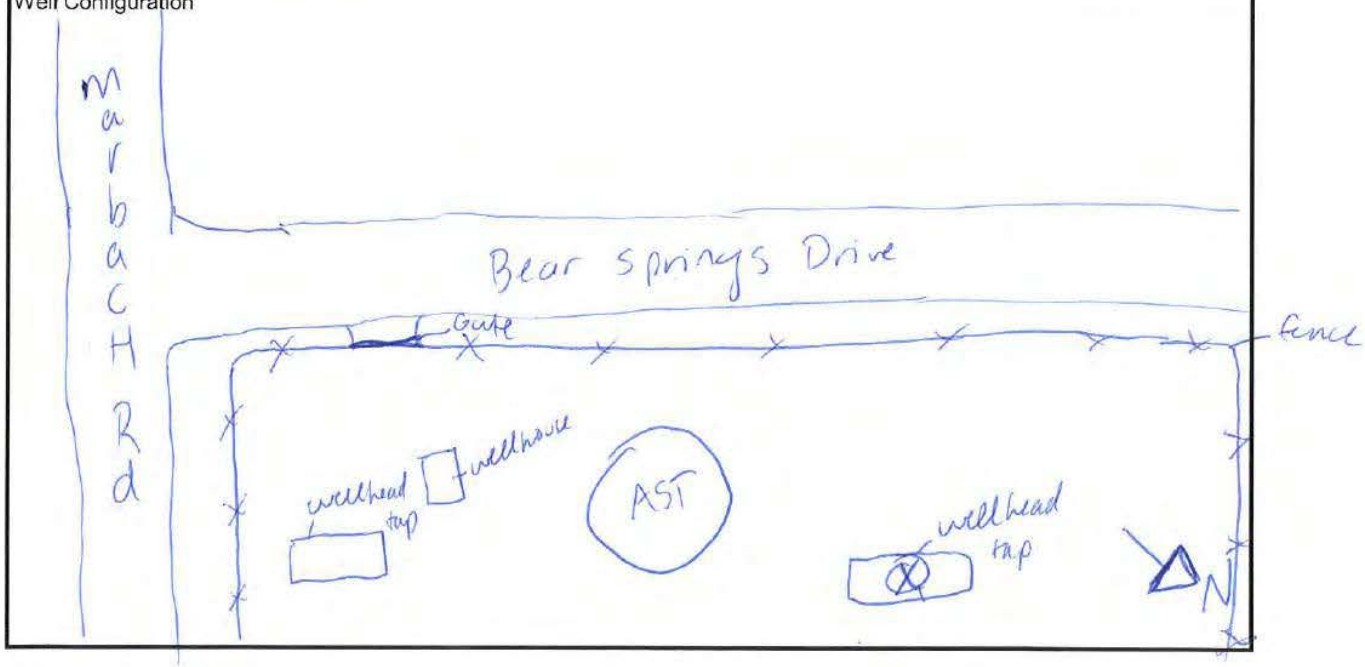
Field Parameters:

					Within		Circle One:
Time:	1409	1414	1419	1424			
Specific Conductance:	0.487	0.483	0.482	0.480	10%	us/cm	ms/cm
pH:	7.27	7.12	7.08	7.08	+/- 0.5		
Temperature:	25.45	25.33	25.26	25.17	+/- 1 C	F°	C°
ORP:	242	259	263	264		mV	

Notes/Comments:
Dumping prior to arrival, sampled 17A

Analyses: (List those collected and indicate the number of containers)
VOCs CR6 - 1

Well Configuration



Recorded By: D. Simon

River City Metal Finishing
Superfund Site
San Antonio, TX

Page: 1 of 1
Date: 10/1/19

Tap Water Collection Field Form

Well ID: WW-20 **Sample ID:** WW-20 **Sample Time:** 1530

Well owner/location/residence: (b) (6) [redacted]

Street address: (b) (6) [redacted]

Filtration system? (circle one)	Y N	Sampling personnel:	J. Stanley, D. Simon
Start purge time:	1509	Weather:	Sunny / Partly Cloudy 90°
End purge time:	1533	Purge Rate (gal/min):	3 gpm
Sample collected at (circle as appropriate):	Wellhead tap	In-line	House tap

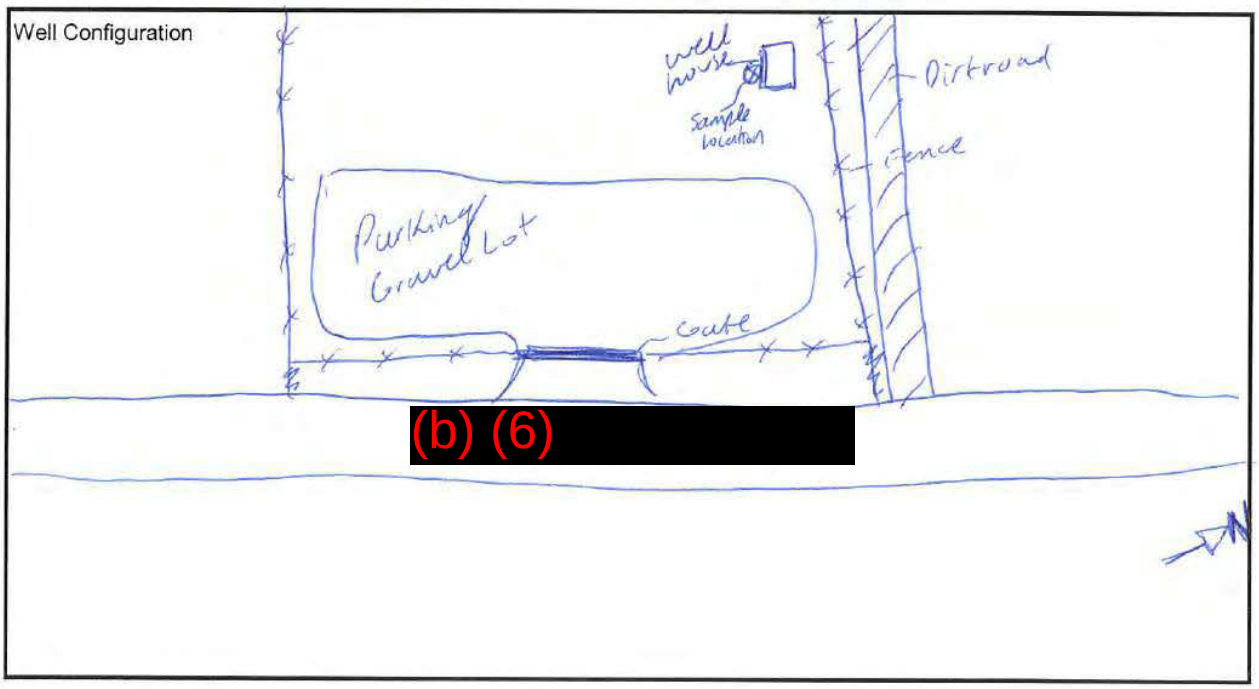
Field Parameters:

					Within		Circle One:
Time:	1512	1517	1522	1527			
Specific Conductance:	0.762	0.795	0.763	0.732	10%	us/cm	ms/cm
pH:	8.11	8.46	8.56	8.59	+/- 0.5		
Temperature:	25.09	25.07	25.20	25.22	+/- 1 C	F°	C°
ORP:	-87	-200	-254	-271		mV	

Notes/Comments:

Analyses: (List those collected and indicate the number of containers)
VOCs CR6-1

Well Configuration



Recorded By: D. Simon

Phase 2 RI Field Activities

Field Event 4 (December 2019)

Location Bexar San Antonio Date 12/16/19

Project / Client RCMF / Reg 6

W. Gamter

1200 Arrive Onsite / H-S meeting
1230 Prep to Sample Mw-08
1525 Sample Mw-08

12/16/19

WG

Location Bexar San Antonio Date 12/17/19

Project / Client RCMF / Reg 6

W. Gamter

0730 Arrive Onsite / H-S meeting
0800 Set up low flow Mw-07
845 Sample @ MW-07 + MSMSD
1055 Sample @ MW-06 + MSMSD
1337 Sample @ Mw-01

12/17/19

WG

Location San Antonio, Bexar County, TX Date 12/16/19

Project / Client RCMF / EPA 6

Tap Sampling

1200	Arrive at site Drew S., Melissa H. unload supplies for tap sampling
1235	Arrive at WW-01 wait for matthew Hernandez to open the gate of entry
1320	Start taking feild parameters for WW-01
1340	begin tap sample for WW01/WW01D
1405	leave WW-01
1408	arrive at WW-02 Start taking feild parameters for WW-02
1430	begin tap sample for WW02/WW02D
1450	Arrive back at command site
1500	help with low flow sampling
1700	offsite

MD 12/17/19

Location San Antonio, Bexar County, TX Date 12/17/19

Project / Client RCMF / EPA 6

Tap sampling

0700	leave hotel
0720	Arrive at command site load trucks w/ supplies for tap sampling
0730	leave command site for WW-04 Drew S, Melissa H.
0740	Start taking feild parameters for WW-04
0800	begin tap sample for WW-04
0810	leave WW-04
0820	Arrive at WW-07
0827	~~begin~~ MD start taking feild parameters for WW-07
0845	begin tap sample for WW-07
0855	leave WW-07
0902	arrive at WW-16
0907	start taking feild parameters for WW-16
0925	begin tap sample for WW-16
0935	leave WW-16
0945	arrive at WW-17
0950	start taking feild parameters for WW-17
1010	begin tap sample for WW-17

Rate MDK 12/17/19

Location San Antonio, Bexar County, TX Date 12/17/19

Project / Client RCMF/EPA 6

Tap sampling

1022	arive at commond site
1030	help w/ low flow samp'in (b) (6) contact little lions and (b) (6) for access to wells
1200	lunch
1230	arrive back at command site load truck w/ supplies for more tap sampling
1305	arrive at little lions learning academy (WW-09)
1315	start taking feild parameters for WW-09
1340	begin tap samole for WW09/WW09D
1410	Arrive at (b) (6) property
1415	start taking feild parameters for WW-10
1440	begin tap sample for WW-10
1505	Arrive at WW-23
1508	start taking feild parameters for WW-23
1530	begin tap sample for WW-23
1540	arrive at command site
1600	wait for property owner of WW-20 to sample well?

MA 12/17/19

Location San Antonio, Bexar County, TX Date 12/17/19

Project / Client RCMF/EPA 6

Tap sampling

1645	property owner for WW-20 never showed; didnt sample well
1700	back at command site pack of command site and load trucks
1745	leave command site

MA 12/17/19

Rite in the Rain

River City Metal Finishing
Bexar County, San Antonio TX

Page: ____ of ____
Date: 8-17-19
MM 12

Ground Water Collection Field Form

Well ID: MW-01 **Sample ID:** _____ **Sample Time:** 1337

Casing diameter/type: 2"
Well location:
Weather: Sunny, Windy, 45°F
Screened interval(s):
Sampling personnel: WG, MM
Total depth: 25 below ground, 28 from casing
Sampling method: low flow
Initial depth to water (w/o pump): 21.75
Water level indicator: Heron
Final depth to water (w/o pump): / Pumped Dry
Water quality meter: YSI
Measuring point: **North side of casing**
Pump depth setting: 27 ft
Pump type/model: Grundfos

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1315	17.49	1762	54.2	5.12	7.27	155.8	21.96	80	23.8		
1320	18.21	1777	52.9	4.98	7.02	147.0	22.11	100	14.0		
1325	18.85	1760	56.8	5.28	7.00	142.5	22.41	100	8.57		
1330	18.64	1738	56.3	5.32	7.03	140.9	22.61	100	7.93		
1335	18.40	1705	54.3	5.10	7.03	141.9	22.78	100	6.31		

Note:
Parameter Stabilization Limits:
(3 consecutive readings) for percent difference type parameters
Percent difference formula =
ABS[((first reading - second reading)/first reading) x 100]
Ex: Readings 12, 16, 15, 13
((12-16)/12)*100 = 33% ((16-15)/16)*100 = 6%
((15-13)/15)*100 = 13% In example, stabilization has not occurred.

Analyses: (circle those collected and indicate the number of containers)		
VOCs	Metals	Pesticides
SVOCS	Hexavalent Chromium	Aroclors

Recorded By: MM

River City Metal Finishing
Bexar County, San Antonio TX

Page: _____ of _____
Date: 12/17/19

Ground Water Collection Field Form

Well ID: MW-06 Sample ID: MW-06 Sample Time: 1055

Casing diameter/type: 8" Well location: Weather: Sunny, windy, 45°F
Screened interval(s): Open H Sampling personnel: WC MM
Total depth: 174.70 Sampling method: Pump
Initial depth to water (w/o pump): 160.49 Water level indicator: Heron
Final depth to water (w/o pump): 163.45 Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 170 Pump type/model: Grundfos

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1022	21.35	1166	82.9	5.84	6.7	145.2	159.82	600	50.5		
1027	21.51	1166	42.2	4.21	6.9	143.4	161.26	600	47.0		
1032	21.40	1167	41.5	3.66	6.85	151.1	161.50	600	47.4		
1037	21.61	1166	41.3	3.63	6.84	153.5	161.81	500	22.0		
1042	21.32	1166	40.6	3.58	6.81	155.0	162.13	400	48.5		
1047	21.40	1166	40.1	3.55	6.78	156.2	162.35	400	52.1		
1052	21.16	1165	39.8	3.54	6.77	156.1	162.60	400	26.0		

Note:
Parameter Stabilization Limits:
(3 consecutive readings) for percent difference type parameters
Percent difference formula =
ABS[((first reading - second reading)/first reading) x 100]
Ex: Readings 12, 16, 15, 13
((12-16)/12)*100 = 33% ((16-15)/16)*100 = 6%
((15-13)/15)*100 = 13% In example, stabilization has not occurred.

Analyses: (circle those collected and indicate the number of containers)		
VOCs	Metals	Pesticides
SVOCS	Hexavalent Chromium	Aroclors

Recorded By: WC

River City Metal Finishing
Bexar County, San Antonio TX

Page: _____ of _____
Date: 12/17/19

Ground Water Collection Field Form

Well ID: MW-07 **Sample ID:** MW-07 **Sample Time:** 845

Casing diameter/type: 8"
Well location:
Weather: Clear 40°
Screened interval(s): OPen H
Sampling personnel: WG MM
Total depth: 227.0
Sampling method: Pump
Initial depth to water (w/o pump): 159.67
Water level indicator: Heron
Final depth to water (w/o pump): 159.78
Water quality meter: YSI
Measuring point: **North side of casing**
Pump depth setting: 193
Pump type/model: Grundfos

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
0805	21.06	989	8.6	0.72	6.55	177.4	160.08	800	132		
810	21.77	988	7.4	0.65	6.94	156.2	160.72	800	65		
815	21.73	987	6.8	0.60	6.90	156.7	160.92	800	54.3		
820	21.60	987	6.2	0.54	6.55	157.8	160.66	900	47.7		
825	21.59	986	6.1	0.53	6.82	158.2	160.76	600	47.0		
830	21.16	985	6.1	0.54	6.79	158.7	160.77	500	44.2		
835	21.48	985	6.2	0.55	6.78	158.1	160.82	500	54.6		

Note:
Parameter Stabilization Limits:
(3 consecutive readings) for percent difference type parameters
Percent difference formula =
ABS[((first reading - second reading)/first reading) x 100]
Ex: Readings 12, 16, 15, 13
((12-16)/12)*100 = 33% ((16-15)/16)*100 = 6%
((15-13)/15)*100 = 13% In example, stabilization has not occurred.

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides
SVOCS	Hexavalent Chromium	Aroclors

Recorded By: WG

River City Metal Finishing
Bexar County, San Antonio TX

Page: _____ of _____
Date: 12/16/19

Ground Water Collection Field Form

Well ID: Mw-08 **Sample ID:** Mw-08 **Sample Time:** 1525

Casing diameter/type: 8" Well location: Onsite Weather: Clear 60°
Screened interval(s): Open Hole Sampling personnel: WG MM
Total depth: 229.0 Sampling method: Pump
Initial depth to water (w/o pump): 159.00' Water level indicator: Heron
Final depth to water (w/o pump): ~~224~~ 159.80' Water quality meter: YSI
Measuring point: **North side of casing** Pump depth setting: 194' Pump type/model: Grundfos

	Δ < 1° C	Δ < 3%	Δ <10%	Δ <10%	Δ < 0.1 pH	Δ < 10 mV	Δ < 0.3 ft	< 1L/min	Δ < 10 NTU		Parameter Stabilization Limits (3 consecutive readings)
Time	**Temp (°C)**	**Conductivity (mS/cm) or (µS/cm)**	**DO (%)**	**DO (mg/L)**	**pH**	**ORP (mV)**	**Water Level (feet btoc)**	**Flow Rate (L/min) or (mL/min)**	**Turbidity (NTU)**	**Purge Volume (L) or (mL)**	**Additional Comments**
1445	23.80	0.935	5.4	0.29	6.92	212.7	160.10	800	81.9		
1450	23.29	0.933	4.7	0.41	6.93	191.6	160.10	600	79.3		
1455	23.02	0.934	4.8	0.41	6.92	185.1	160.15	600	84.2		
1500	23.04	0.932	4.9	0.42	6.89	177.9	160.20	600	83.6		
1505	23.11	0.931	5.1	0.43	6.88	174.4	160.23	600	79.4		
1510	23.14	0.932	5.2	0.44	6.86	170.4	160.25	600	80.5		
1515	23.09	0.930	5.4	0.47	6.84	166.8	~~166.6~~	600	87.8		
							160.25				
1520	23.20	0.930	5.7	0.48	6.83	164.0	160.30	600	88.1		

Note:
Parameter Stabilization Limits:
(3 consecutive readings) for percent difference type parameters
Percent difference formula =
ABS[((first reading - second reading)/first reading) x 100]
Ex: Readings 12, 16, 15, 13
((12-16)/12)*100 = 33% ((16-15)/16)*100 = 6%
((15-13)/15)*100 = 13% In example, stabilization has not occurred.

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides
SVOCS	Hexavalent Chromium	Aroclors

Recorded By: WG

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/16/19

Tap Water Collection Field Form

Well ID: WW-01 **Sample ID:** WW-01 **Sample Time:** 1340

Well owner/location/residence: Coolcrest well 60150046B

Street address: 12304 Poinciana

Filtration system? (circle one) Y (N) Sampling personnel: Melissa H., Drew S.

Start purge time: Weather: Sunny, 64°

End purge time: Purge Rate (gal/min):

Sample collected at (circle as appropriate): (Wellhead tap) In-line House tap

Field Parameters:

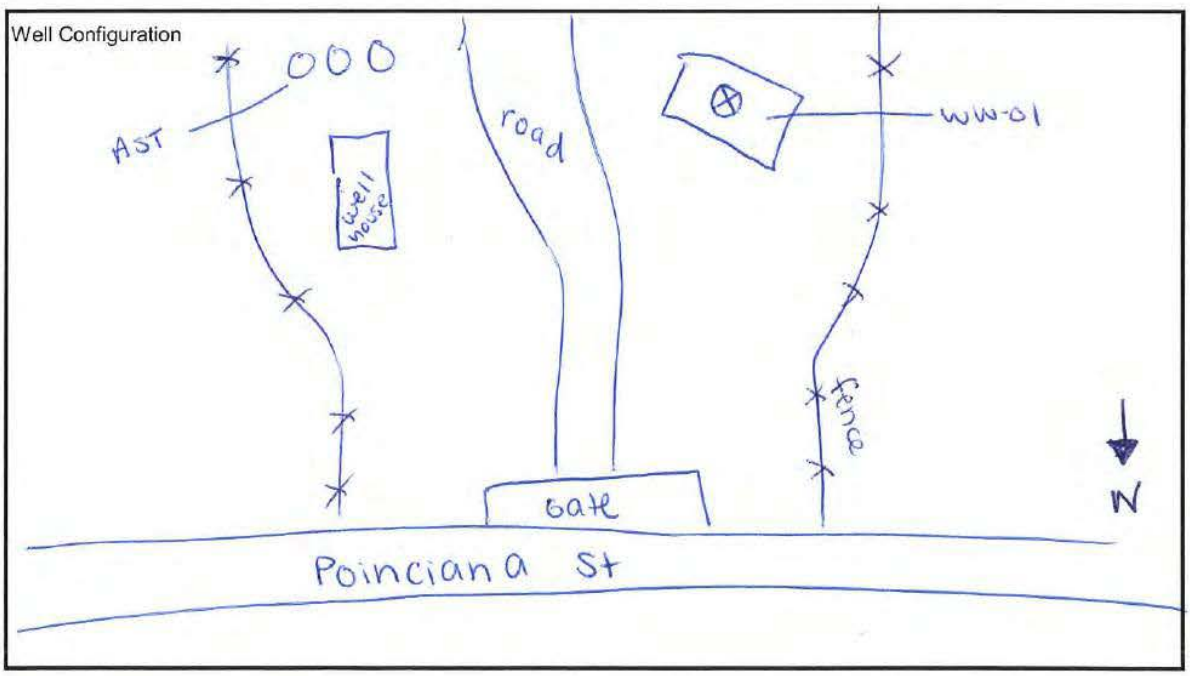
					Within	Circle One:	
Time:	1323	1328	1333	1338			
Specific Conductance:	537.0	526.6	534.8	531.7	10%	(us/cm)	ms/cm
pH:	6.19	6.69	7.07	7.30	+/- 0.5		
Temperature:	21.7°C	22°C	21.7°C	21.9°C	+/- 1 C	F°	(C°)
ORP:	166	139	130	140		mV	

Notes/Comments: GPM 127.5

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals, cyanide, hex chrom
SVOCS	Hexavalent Chromium	Aroclors	

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/16/19

Tap Water Collection Field Form

Well ID: WW-01D **Sample ID:** WW-01D **Sample Time:** 1340

Well owner/location/residence: Coolcrest Well 60156046B

Street address: 12304 Poinciana

Filtration system? (circle one) Y (N)	Sampling personnel: Melissa H., Drew S.
Start purge time:	Weather: Sunny, 64°
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	(Wellhead tap) In-line House tap

Field Parameters:

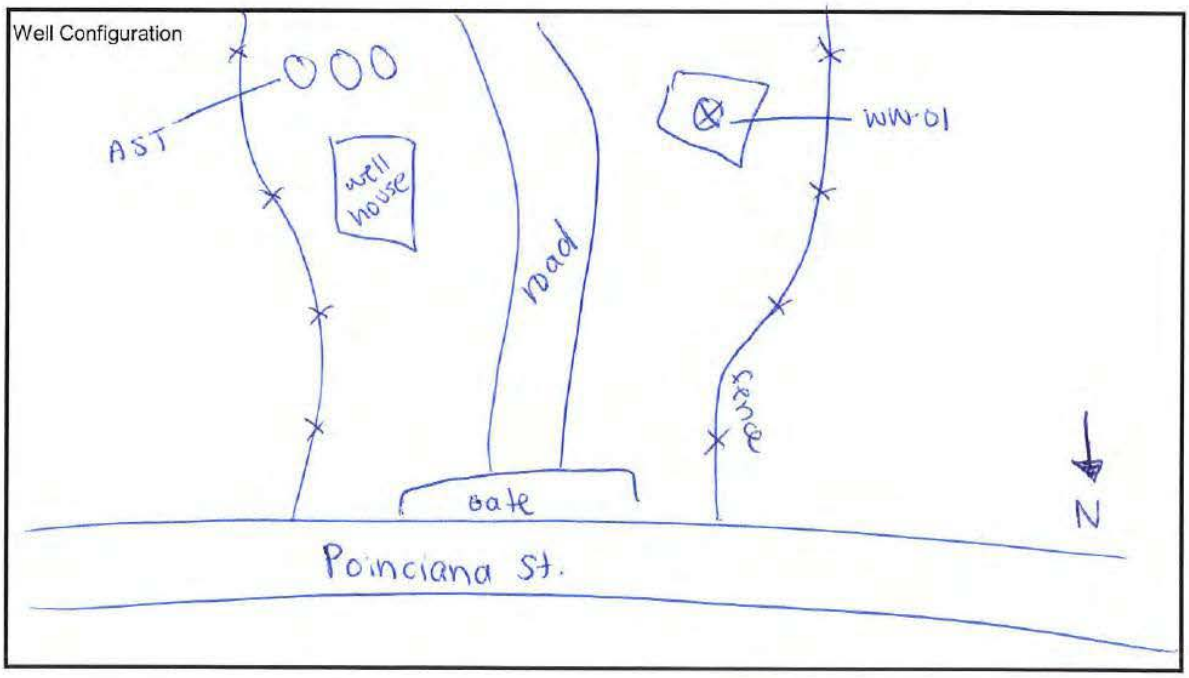
					Within	Circle One:	
Time:	1323	1328	1333	1338			
Specific Conductance:	537.0	526.6	534.8	531.7	10%	(us/cm)	ms/cm
pH:	6.19	6.69	7.07	7.30	+/- 0.5		
Temperature:	21.7°C	22°C	21.7°C	21.9°C	+/- 1 C	F°	(C°)
ORP:	166	139	130	140		mV	

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	cyanide, hex chrom

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/10/19

Tap Water Collection Field Form

Well ID: WW-02 **Sample ID:** WW-02 **Sample Time:** 1430

Well owner/location/residence: coolcrest well 60150046A

Street address: 11926 Madrona

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Sunny, 63°F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	(Wellhead tap) In-line House tap

Field Parameters:

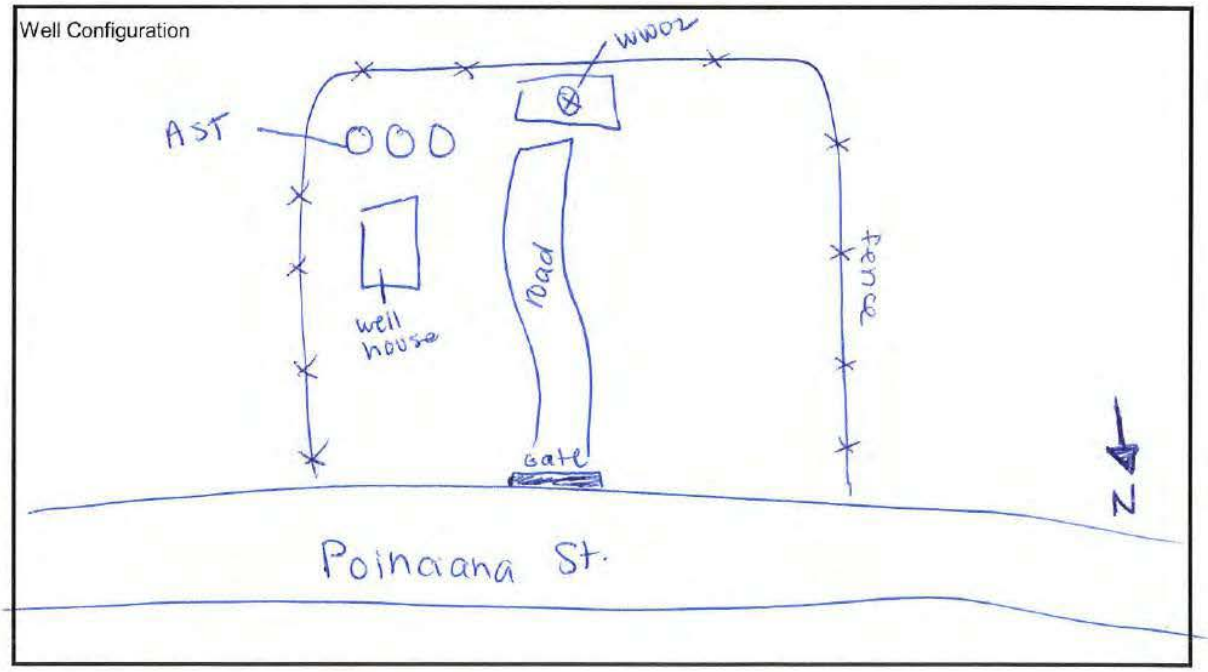
					Within	Circle One:	
Time:	1413	1418	1423	1428			
Specific Conductance:	499.6	500.3	500.2	500.6	10%	(us/cm)	ms/cm
pH:	7.32	7.39	7.40	7.42	+/- 0.5		
Temperature:	22.7°C	22.5°C	22.4°C	22.3°C	+/- 1 C	F°	(C°)
ORP:	139	154	160	153		mV	

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals, cyanide, hex chrom
SVOCS	Hexavalent Chromium	Aroclors	

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/10/19

Tap Water Collection Field Form

Well ID: WW-02 D **Sample ID:** WW-02 D **Sample Time:** 1430

Well owner/location/residence: Coolcrest Well 60150046A
Street address: 11926 Madrona

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Sunny, 63°F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	(Wellhead tap) In-line House tap

Field Parameters:

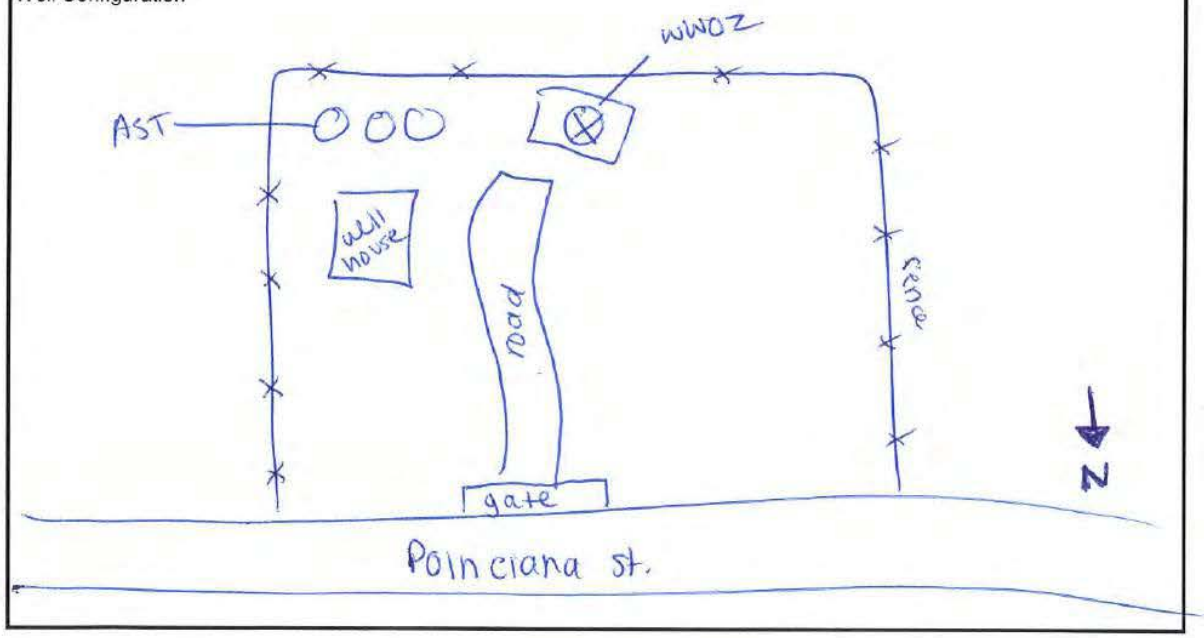
					Within	Circle One:	
Time:	1413	1418	1423	1428			
Specific Conductance:	499.6	500.3	500.2	500.6	10%	(us/cm)	ms/cm
pH:	7.32	7.39	7.40	7.42	+/- 0.5		
Temperature:	22.7°C	22.5°C	22.4°C	22.3°C	+/- 1 C	F°	(C°)
ORP:	139	154	160	153		mV	

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	cyanide, hex chrom

Well Configuration



Recorded By:

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/17/19

Tap Water Collection Field Form

Well ID: WW-04 **Sample ID:** WW-04 **Sample Time:** 0300

Well owner/location/residence: SAWS Mountain Laurel Ranch #1

Street address: 2406 Reyes Ln

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Partly cloudy, 37° F
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): (Wellhead tap) In-line House tap

Field Parameters:

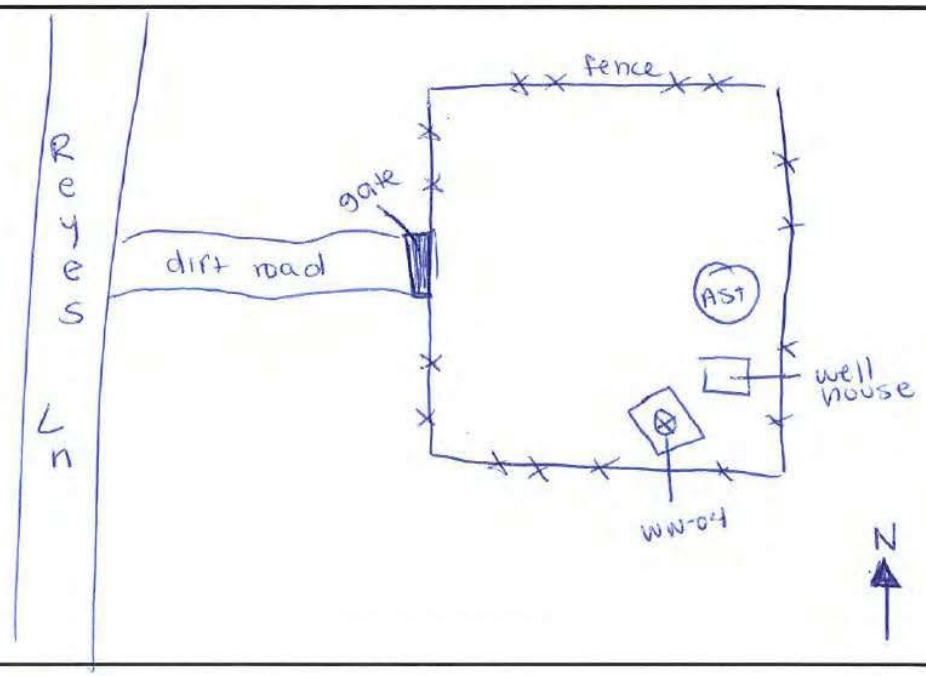
					Within		Circle One:
Time:	0743	0748	0753	0758			
Specific Conductance:	485.3	484.6	484.8	473.5	10%	us/cm	ms/cm
pH:	7.28	7.31	7.35	7.36	+/- 0.5		
Temperature:	19.4°C	21.2°C	20.6°C	21.0°C	+/- 1 C	F°	(C°)
ORP:	152	175	190	192		mV	

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals, cyanide, hex chrom
SVOCS	Hexavalent Chromium	Aroclors	

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/17/17

Tap Water Collection Field Form

Well ID: WW-07 **Sample ID:** WW-07 **Sample Time:** 0845

Well owner/location/residence: SAWS Texas Research Park #1

Street address: Talley Rd and Potranco

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Mostly cloudy, 38° F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	(Wellhead tap) In-line House tap

Field Parameters:

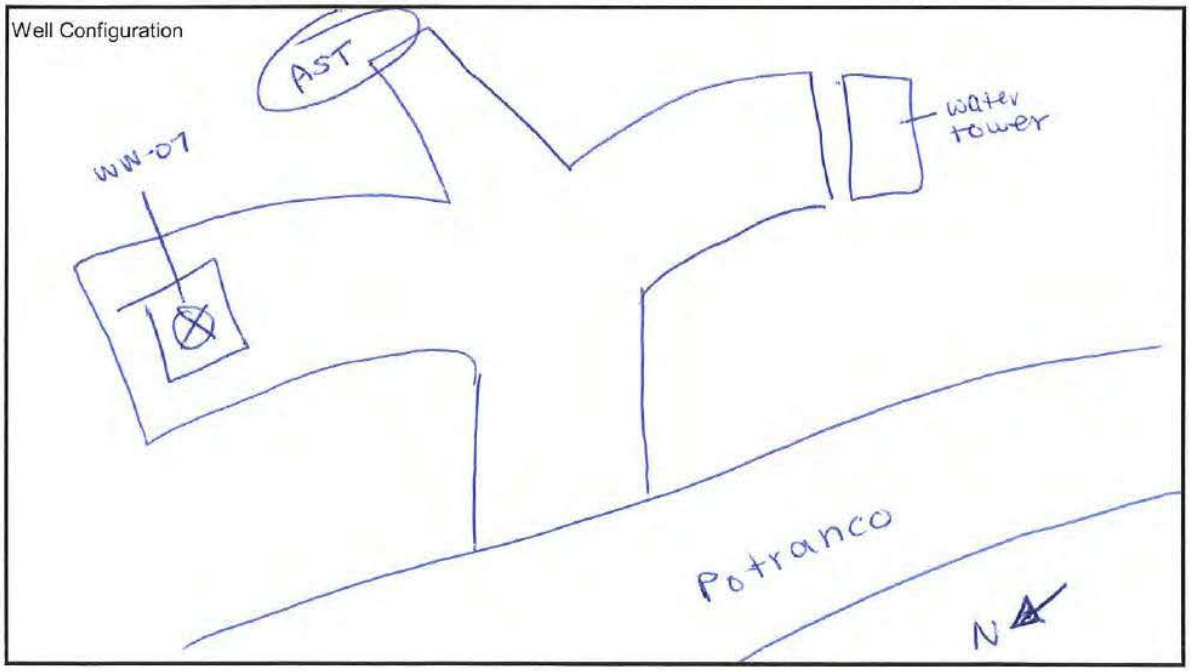
					Within	Circle One:	
Time:	0827	0832	0837	0842			
Specific Conductance:	502.6	502.3	509	506.4	10%	us/cm	ms/cm
pH:	7.29	7.41	7.49	7.26	+/- 0.5		
Temperature:	19.0°C	21.0°C	20.2°C	20.6°C	+/- 1 C	F°	(C°)
ORP:	276	311	283	293		mV	

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals, hex chrom, cyanide
SVOCS	Hexavalent Chromium	Aroclors	

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/12/19

Tap Water Collection Field Form

Well ID: WW-09 **Sample ID:** WW-09 **Sample Time:** 1340

Well owner/location/residence: Little Lions Learning Academy
Street address: 1127 Mindie Ln

Filtration system? (circle one) (Y) N	Sampling personnel: Drew S, Melissa H.
Start purge time:	Weather: Fair, 54°F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	(Wellhead tap) In-line House tap

Field Parameters:

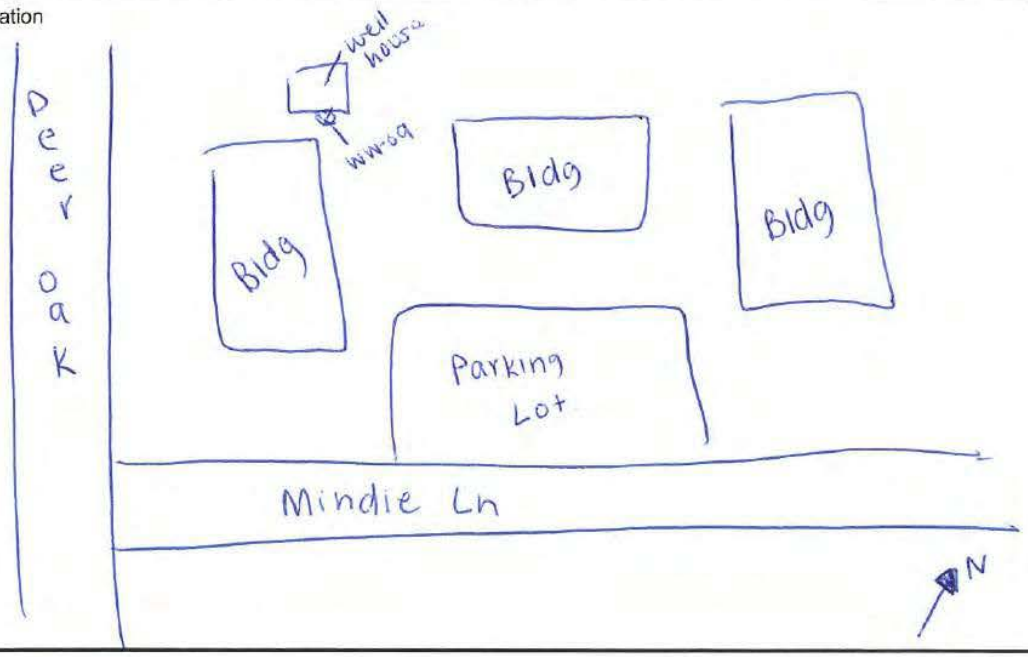
Time:	1315	1320	1325	1330	Within		Circle One:	1335
Specific Conductance:	529.2	528.1	527	529.9	10%	us/cm	ms/cm	530.2
pH:	7.43	7.39	7.43	7.45	+/- 0.5			7.45
Temperature:	19.3°C	19.4 °C	20.4°C	19.8°C	+/- 1 C	F°	(C°)	20.3
ORP:	411	429	335	518		mV		401

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	hexchrom, cyanide

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/17/19

Tap Water Collection Field Form

Well ID: WW-09D **Sample ID:** WW-09D **Sample Time:** 1340

Well owner/location/residence: Little Lions Learning Academy
Street address: 1127 Mindie Ln

Filtration system? (circle one) Y N	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Fair, 54°F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	Wellhead tap In-line House tap

Field Parameters:

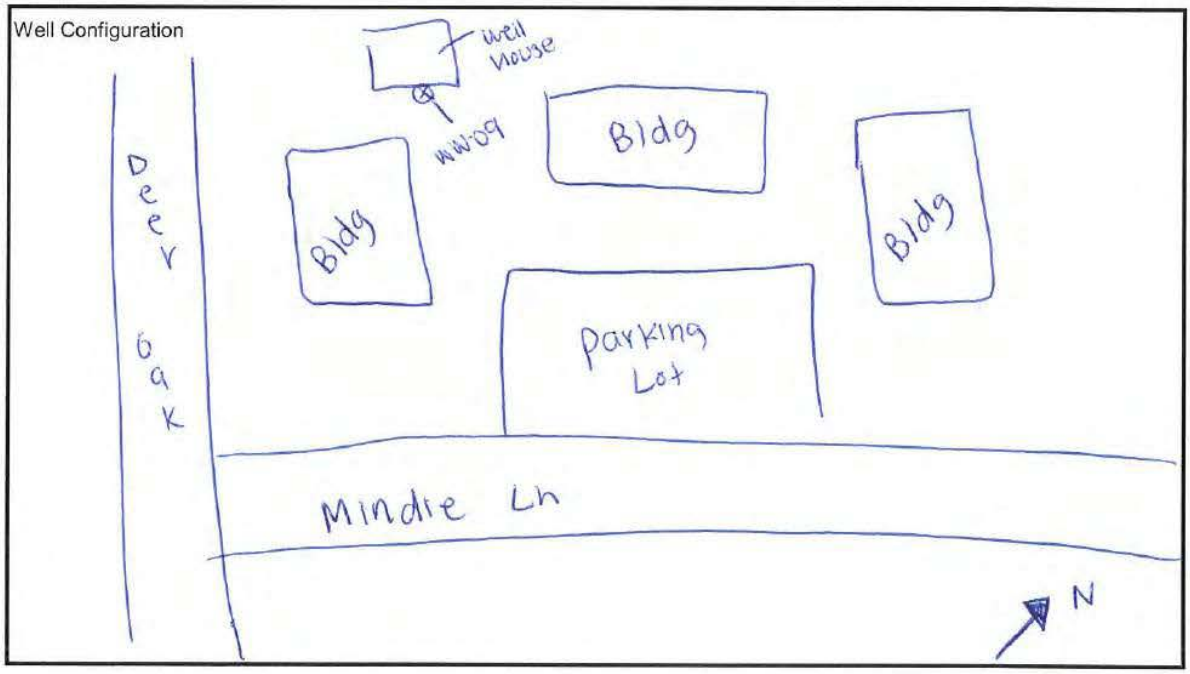
					Within		Circle One:	
Time:	1315	1320	1325	1330				1335
Specific Conductance:	529.2	528.1	527	529.9	10%	us/cm	ms/cm	530.2
pH:	7.43	7.39	7.43	7.45	+/- 0.5			7.45
Temperature:	19.3°C	19.4°C	20.4°C	19.8°C	+/- 1 C	F°	C°	20.3°C
ORP:	411	429	335	518		mV		401

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	hex chrom, cyanide

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/17/19

Tap Water Collection Field Form

Well ID: WW-10 **Sample ID:** WW-10 **Sample Time:** 1440

Well owner/location/residence:
Street address: (b) (6) [redacted]

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Fair 55°F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	(Wellhead tap) In-line House tap

Field Parameters:

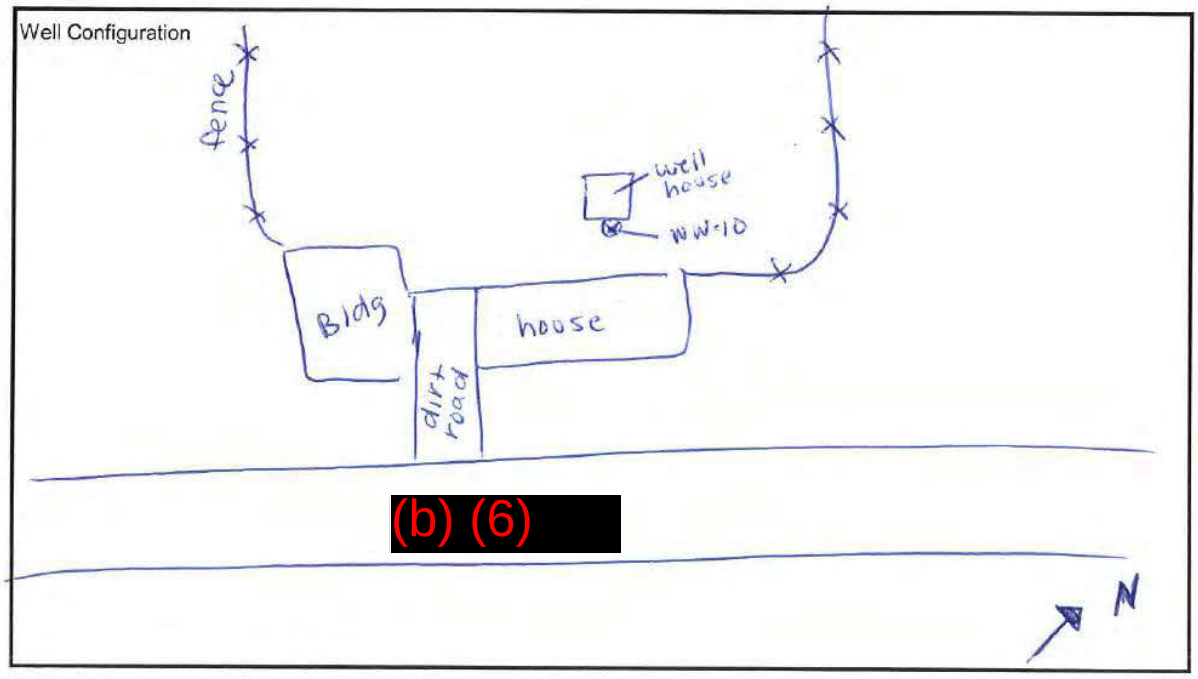
					Within	Circle One:	
Time:	1415	1420	1425	1430			
Specific Conductance:	528	531.8	533.7	528.6	10%	us/cm	ms/cm
pH:	7.52	7.61	7.61	7.53	+/- 0.5		
Temperature:	19.5°C	20.3°C	20.1°C	20.6°C	+/- 1 C	F°	(C°)
ORP:	275	262	243	249		mV	

Notes/Comments:

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	hexchrom, cyanide

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of ____
Date: 12/17/19

Tap Water Collection Field Form

Well ID: WW-16 **Sample ID:** WW-16 **Sample Time:** 0925

Well owner/location/residence: ~~Northeas~~ northwest well #16 - SAWS

Street address: 10371 tippecanoe

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Mostly cloudy, 38° F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate):	Wellhead tap In-line House tap

Field Parameters:

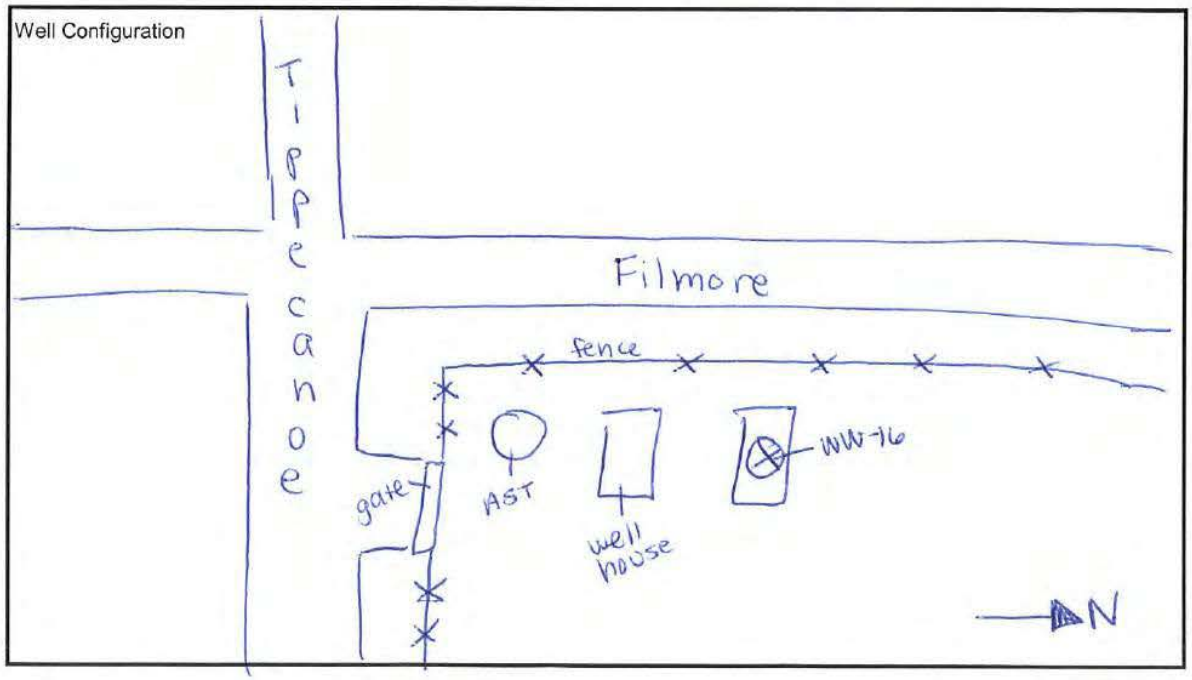
					Within		Circle One:
Time:	0907	0912	0917	0922			
Specific Conductance:	517	515.9	513	519.8	10%	us/cm	ms/cm
pH:	7.29	7.40	7.48	7.47	+/- 0.5		
Temperature:	20.8°C	21.2°C	20.7°C	20.1°C	+/- 1 C	F°	C°
ORP:	246	251	252	259		mV	

Notes/Comments: GPM: ~~2,5~~ ~2,080 gallons per minute

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	cyanide, hex chrom

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/17/19

Tap Water Collection Field Form

Well ID: WW-17 **Sample ID:** WW-17 **Sample Time:** 1010

Well owner/location/residence: SAWS northwest well #17a

Street address:

Filtration system? (circle one) Y (N)	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Cloudy, 43°F
End purge time:	Purge Rate (gal/min):
Sample collected at (circle as appropriate): (Wellhead tap)	In-line House tap

Field Parameters:

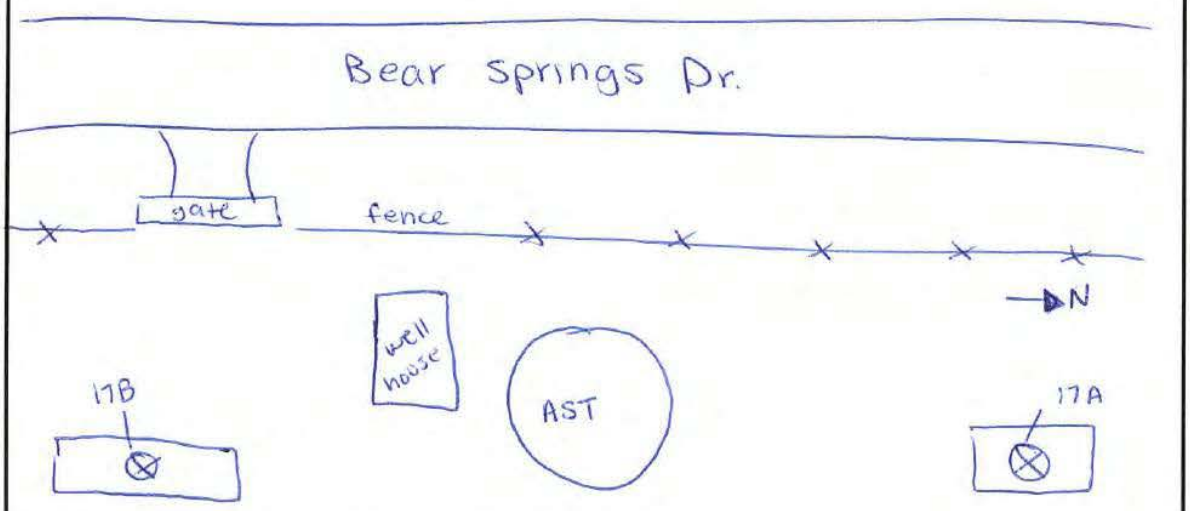
					Within		Circle One:
Time:	0950	0955	1000	1005			
Specific Conductance:	502.6	498.3	496.2	499.6	10%	us/cm	ms/cm
pH:	7.50	7.31	7.43	7.41	+/- 0.5		
Temperature:	19.3°C	20.3°C	20.8°C	21.2°C	+/- 1 C	F°	(C°)
ORP:	223	223	236	246		mV	

Notes/Comments: collecting from 17A only; not 17B

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	Total metals, dissoved metals,
SVOCS	Hexavalent Chromium	Aroclors	hex chrom, cyanide

Well Configuration



Recorded By: Melissa H.

River City Metal Finishing
Bexar County, San Antonio TX

Page: 1 of 1
Date: 12/17/19

Tap Water Collection Field Form

Well ID: WW-23 **Sample ID:** WW-23 **Sample Time:** 1530

Well owner/location/residence:

Street address:

Filtration system? (circle one) Y N	Sampling personnel: Drew S., Melissa H.
Start purge time:	Weather: Sunny, 54°F
End purge time:	Purge Rate (gal/min):

Sample collected at (circle as appropriate): Wellhead tap In-line House tap

Field Parameters:

					Within	Circle One:	
Time:	1508	1513	1518	1523			
Specific Conductance:	503.8	505.1	504.6	505.8	10%	us/cm	ms/cm
pH:	7.54	7.72	7.74	7.77	+/- 0.5		
Temperature:	13.7°C	13.1°C	13.0°C	12.6°C	+/- 1 C	F°	C°
ORP:	231	240	246	255		mV	

Notes/Comments: After the AST (2500 gallon tank) owner said well is used for house and yard

Analyses: (circle those collected and indicate the number of containers)

VOCs	Metals	Pesticides	total metals, dissolved metals,
SVOCS	Hexavalent Chromium	Aroclors	hexchrom, cyanide

Well Configuration

Recorded By: Melissa H.

Phase 2 RI Field Activities

Field Event 5 (April 2020)

Waste Pickup (DD, MM)

0845 Head to site
0900 Meet with TerraBella Environmental @ site
0905 H+S Meeting 10 soil 3 water
13 waste drums were picked up (vegetation on site is overgrown)
0945 Terrabella Environmental leaves the site; Manifest is collected from them
1000 Taking transducer readings
1100 Prepare sampling materials for dual membranes
1300 Check transducers for proper readings after downloading data
1435 Return to hotel, upload transducer data

Mia Mogavero
4-29-20

Dual Membrane Sampling (DD, MM)

0815 Head to site
0830 Arrive on site, H+S meeting
0845 Begin dual membrane sampling on MW-06, 07, + 08 {see ALS COC for sample times}
1245 Finalize sampling
1300 MW-01 water level @ 26.86'
1345 return to hotel to pack cooler
1830 Drop cooler off @ FedEx + return to hotel

~~MW-01 water level 26.86'~~ MM

Mia Mogavero
4-29-20

Phase 2 RI Field Activities

Field Event 6 (July 2020)

APPENDIX C

SOIL BORING AND MONITORING WELL LOGS

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-02**

TOTAL DEPTH: **30 ft**

PROJECT INFORMATION

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **4-03-2019**

DRILLING INFORMATION

DRILLING CO.: **Vortex Drilling**
DRILLER: **Robert Joiner**
RIG TYPE: **Mobile Drill B-61**
DRILLING METHOD: **CFA / HSA w/ plug**
SAMPLING METHOD: **split spoon 0-2' / grab 2'-TD**
BOREHOLE SIZE: **8.25 inch**

Water level during drilling ▽ Water level in completed well Casing Elevation **851.084 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES
-5			After installation, well dry. Add 19 gallons DI water during development; pump out. Depth to water: 30.17' toc / 26.67' bgs (4-15-2019)	
0		CL	Topsoil/Silty Clay. Loose, dry, some white calcareous nodules.	MW-02 (0-0.5)
		CH	Clay. 2.5Y 8/2 pale brown. Medium stiff, plastic, moist, trace Silt.	MW-02 (0.5-2)
5		CL	Silty Clay. 2.5Y 8/4-8/6 pale brown-yellow. Cuttings; loose, soft-medium stiff, plastic, dry, silty. *Hard drilling ~7.5'.*	
10		CH/ CL	Clay/Silty Clay. 2.5Y 8/3 pale brown. Cuttings; medium stiff, plastic, dry-slightly moist, silty.	
15		CH/ CL	Clay/Silty Clay. 2.5Y 8/3-7/3 pale brown. Cuttings; medium stiff, plastic, dry-slightly moist, silty.	
20		CH/ CL	Clay/Silty Clay. 2.5Y 7/3-7/4 pale brown. Cuttings; medium stiff, plastic, dry-moist, silty.	
25 ▽		CH/ CL	Clay/Silty Clay. 2.5Y 7/3-7/4 pale brown. Cuttings medium stiff, plastic, dry-moist.	MW-02 (28-30)
30				

BORING COMPLETION

WELL DETAILS

- Steel Cover
- PVC Stickup ~3.5' above surface
- Concrete Pad
- Concrete Seal
- Bentonite 3' to 8'
- centralizer
- 4" Sch.40 PVC Riser 3.5' stickup to 10'
- centralizer
- 4" Sch.40 PVC Screen 0.010" slots 10' to 25'
- Sand Pack 20/40 Silica 8' to 28'
- centralizer
- 4" Sch 40 PVC Sump 25' to 28'
- sluff/cavings
- TD 30'

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-03**

TOTAL DEPTH: **30 ft**

PROJECT INFORMATION

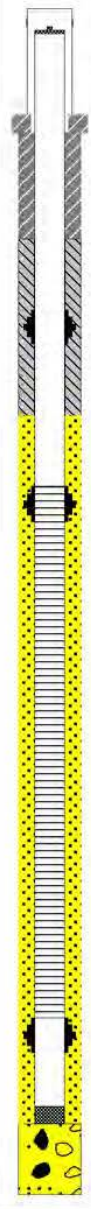
PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **3 April 2019**

DRILLING INFORMATION

DRILLING CO.: **Vortex Drilling**
DRILLER: **Robert Joiner**
RIG TYPE: **Mobile Drill B-61**
DRILLING METHOD: **CFA / HSA w/ plug**
SAMPLING METHOD: **split spoon 0-2' / grab 2'-TD**
BOREHOLE SIZE: **8.25 inch**

Water level during drilling ▽ Water level in completed well Casing Elevation **853.836 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES
-5			After installation, well dry. Add 19 gallons DI water during development; pump out. depth to water: 29.52' toc / 25.92' bgs (4-15-2019)	
0		CL	Topsoil/Silty Clay. 10YR 6/2-6/3 light brownish gray-pale brown. Loose, medium plasticity, dry, trace calcareous nodules.	MW-03 (0-0.5)
		CH	Clay. 10YR 8/2 very pale brown. Cuttings; soft-medium stiff, plastic, moist, silty-very silty.	MW-03 (0.5-2)
5		CL	Clay/ Silty Clay. 2.5Y 8/3-8/4 pale brown. Cuttings; medium stiff, plastic, dry.	
10		CH/ CL	Clay, silty. 2.5Y 8/3 pale brown. Cuttings stiff, plastic, dry-slightly moist, silty. Very hard @~12'.	
15		CH/ CL	Clay, silty. 2.5Y 8/3 pale brown. Cuttings stiff, plastic, dry-slightly moist, silty. Hard drilling.	
20		CH/ CL	Clay, silty. 2.5Y 8/2-8/3 pale brown. Cuttings; stiff, plastic, dry. Hard drilling.	
25 ▽		CH/ CL	Clay, silty. 2.5Y 8/2-8/3 pale brown. Cuttings; stiff, plastic, dry. Hard drilling.	MW-03 (28-30)
30				



BORING COMPLETION	WELL DETAILS
	Steel Cover
	PVC Stickup ~3.6' above surface
	Concrete Pad
	Concrete Seal
	Bentonite 3' to 8'
	centralizer
	4" Sch.40 PVC Riser 3.6' stickup to 10'
	centralizer
	4" Sch.40 PVC Screen 0.010" slots 10' to 25'
	Sand Pack 20/40 Silica 8' to 28'
	centralizer
	4" Sch 40 PVC Sump 25' to 28'
	sluff/cavings TD 30'

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-04**

TOTAL DEPTH: **30 ft**

PROJECT INFORMATION

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **4 April 2019**

DRILLING INFORMATION

DRILLING CO.: **Vortex Drilling**
DRILLER: **Robert Joiner**
RIG TYPE: **Mobile Drill B-61**
DRILLING METHOD: **CFA / HSA w/ plug**
SAMPLING METHOD: **split spoon 0-2' / grab 2'-TD**
BOREHOLE SIZE: **8.25 inch**

Water level during drilling ▽ Water level in completed well Casing Elevation **853.747 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES	BORING COMPLETION	WELL DETAILS
-5			After installation, well dry. Add 19 gallons DI water during development; pump out. depth to water = 29.29' toc / 25.99' bgs (4-15-2019)			Steel Cover PVC Stickup ~3.3' above surface
0		CL	Topsoil/Silty Clay with somw rounded Gravel. 7.5YR 5/2 brown, 10YR 8/2 very pale brown. Loose/soft-medium stiff, plastic, dry, abundant white calcareous nodules / rounded Limestone.	MW-04 (0-0.5) MW-04 (0.5-2)		Concrete Pad Concrete Seal Bentonite 3' to 8'
5		CH/ CL	Clay/ Silty Clay. 2.5Y 8/3-8/4 pale brown. Cuttings; medium stiff, plastic, moist, silty-very silty.			centralizer 4" Sch.40 PVC Riser 3.3' stickup to 10'
10		CH	Clay. 10YR 8/4 very pale brown. Cuttings; medium stiff, plastic, moist, slightly silty.			centralizer 4" Sch.40 PVC Screen 0.010" slots 10' to 25'
15		CH	Clay. 10YR 8/4 very pale brown. Cuttings; medium stiff, plastic, moist, slightly silty.			Sand Pack 20/40 Silica 8' to 28'
20		CH/ CL	Clay/Silty Clay. 10YR 8/4-7/3 very pale brown. Cuttings; stiff, plastic, moist, silty-some very silty. @22' Hard drilling.			
25 ▽		CH/ CL	Clay/Silty Clay. 10YR 7/4 very pale brown. Cuttings; stiff, plastic, moist-dry, silty.	MW-04 (28-30)		centralizer 4" Sch 40 PVC Sump 25' to 28' sluff/cavings TD 30'
30						

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-05**

TOTAL DEPTH: **30 ft**

PROJECT INFORMATION

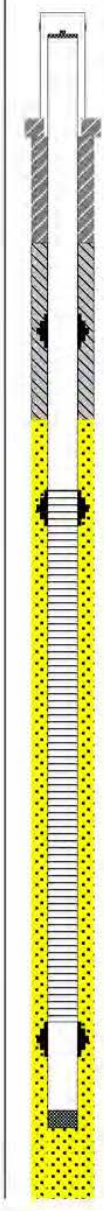
PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **3 April 2019**

DRILLING INFORMATION

DRILLING CO.: **Vortex Drilling**
DRILLER: **Robert Joiner**
RIG TYPE: **Mobile Drill B-61**
DRILLING METHOD: **CFA / HSA w/ plug**
SAMPLING METHOD: **split spoon 0-2' / grab 2'-TD**
BOREHOLE SIZE: **8.25 inch**

Water level during drilling ▽ Water level in completed well Casing Elevation **851.150 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES
-5			After installation, well dry. Add 18 gallons DI water during development; pump out. depth to water = 30.48' toc / 26.78' bgs (4-15-2019)	
0		CL	Topsoil/Silty Clay with some rounded Gravel. 10YR 6/3 pale brown. Loose, medium stiff, plastic, moist, some white calcareous nodules.	MW-05 (0-0.5)
		CL/ CH	Silty Clay/Clay. 10YR 6/3 pale brown. Loose, medium stiff, plastic, moist, some white calcareous nodules.	MW-05 (0.5-2)
5		CL	Silty Clay/Clay. 10YR 8/4 very pale brown. Cuttings; Loose grains, stiff, plastic, moist-dry.	
10		CH/ CL	Clay/Silty Clay. 10YR 8/3-8/4 very pale brown. Cuttings; Loose grains, stiff, plastic, dry.	
15		CH	Clay, some silty. 10YR 7/3-7/4 very pale brown. Cuttings; Soft-medium stiff, plastic, moist, slightly silty. (Cuttings balling-up from moisture.)	
20		CH	Clay, silty. 10YR 7/4-6/4 very pale brown-light yellowish brown. Cuttings; Medium stiff, plastic, moist, silty. (Cuttings balling-up from moisture.)	
25 ▽		CH/ CL	Clay/Silty Clay. 10YR 8/4-7/4 very pale brown. Cuttings; Medium stiff-stiff, plastic, dry-slightly moist.	MW-05 (28-30)
30				



BORING COMPLETION	WELL DETAILS
	Steel Cover
	PVC Stickup ~3.7' above surface
	Concrete Pad Concrete Seal
	Bentonite 3' to 8'
	centralizer
	4" Sch.40 PVC Riser 3.7' stickup to 10'
	centralizer
	4" Sch.40 PVC Screen 0.010" slots 10' to 25'
	Sand Pack 20/40 Silica 8' to 30'
	centralizer
	4" Sch 40 PVC Sump 25' to 28'
	TD 30'

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-06**

TOTAL DEPTH: **180 ft**

PROJECT INFORMATION

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **9 October 2019**

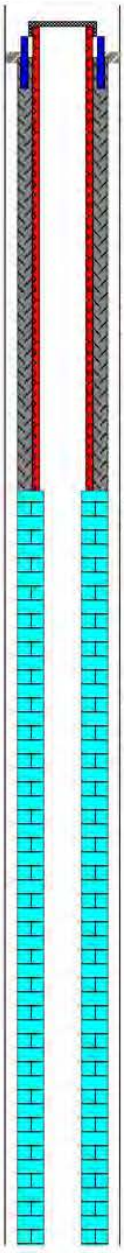
DRILLING INFORMATION

DRILLING CO.: **Harrison & Cooper, Inc.**
DRILLER: **Ken Cooper**
RIG TYPE: **TH-60**
DRILLING METHOD: **Air Rotary**
SAMPLING METHOD: **Grab**
BOREHOLE SIZE: **7-7/8 inch**

Water level during drilling Water level in completed well Casing Elevation **852.220 ft**

DEPTH	USCS	SAMPLE DESCRIPTION
0	LS	Caliche. 2.5Y 8/1 white. Cuttings; very fine powder (rock flour), dry.
5	CL	Silty Clay. 2.5Y 8/3-8/4 pale brown, trace 6/8 olive yellow. Stiff, plastic, dry-slightly moist.
10	CH	Clay. 2.5Y 7/4 pale brown. Silty/sandy, dry.
15	CH	Clay. 2.5Y 7/3 pale brown. Silty, hard, dry.
20	CH	Clay. 2.5Y 6/4 light yellowish brown. Silty/sandy, dry.
25	CH	Clay. 2.5Y 7/4 pale brown. Silty/sandy, dry.
30	CH	Clay. 2.5Y 6/3-6/4 light yellowish brown. Silty/sandy, dry.
35	LS	Limestone. 2.5Y 6/4 light yellowish brown. Very hard, silty-slightly clayey, dry.
40	LS	Limestone. 2.5Y-10YR 7/3 pale brown-very pale brown. Hard, microgranular, silty, dry.
45	LS	Limestone. 10YR 6/4 light yellowish brown. Hard, microgranular, silty, dry.
50	LS	Limestone. 10YR 7/2-7/3 light gray-very pale brown. Hard, microgranular, silty, dry.
55	LS	Limestone. 10YR 7/3-7/4 very pale brown. Hard, microgranular, silty, dry.
65	LS	Limestone. 10YR 7/6 yellow. Hard, microgranular, silty, dry.
75	LS	Limestone. 10YR 6/6 brownish yellow. Hard, microgranular, silty, moist.
80	LS	Limestone. 10YR 7/4 very pale brown. Hard, microgranular, silty, dry-moist.
90	LS	Limestone. 10YR 8/3 very pale brown. Hard, microgranular, silty, dry-moist.
95	LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, moist-slightly wet.
100	LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, moist-slightly wet.

SAMPLES: No samples were collected for laboratory submission.



WELL DETAILS:
- Concrete Pad
- 10" Steel Casing 2' stickup to 3'
- 12" Borehole 0 to 42'
- 8" steel surface casing 3.0' stickup to 42'
- Grout 0 to 42'
- Drill out with 7-7/8" bit to 220'
- 7-7/8" Openhole Completion 42' to 180'

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-06**

TOTAL DEPTH:

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**

DRILLING METHOD: **Air Rotary**
SAMPLING METHOD: **Grab**
DATE DRILLED: **9 October 2019**

Water level during drilling — Water level in completed well — Casing Elevation **852.220 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES	BORING COMPLETION	WELL DETAILS
120		LS	Limestone. 10YR 8/3-7/3 very pale brown. Hard, microgranular, silty, moist.			7-7/8" Openhole Completion 42' to 180'
125						
130						
135						
140		LS	Limestone. 10YR 8/3-7/3 very pale brown. Hard, microgranular, silty, moist.			
145						
150						
155						
160		LS	Limestone. 10YR 8/3-7/3 very pale brown. Hard, microgranular, silty, moist.			
165		LS	Limestone. 10YR 8/3-7/3 very pale brown. Hard, microgranular, silty, moist.			
170		LS	Limestone. N 4/_ dark gray, 10YR 8/3 very pale brown. Silty, hard, dry.			
175						
180						TD 180'
185						
190						
195						
200						
205						
210						
215						
220						
225						
230						
235						
240						
245						

NOTES: This log should not be used separately from the original report.

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405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-07**

TOTAL DEPTH: **230 ft**

PROJECT INFORMATION

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **10 October 2019**

DRILLING INFORMATION

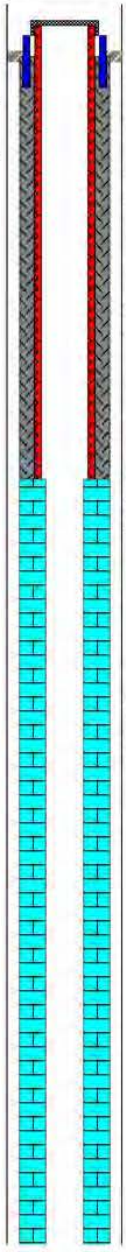
DRILLING CO.: **Harrison & Cooper, Inc.**
DRILLER: **Ken Cooper**
RIG TYPE: **TH-60**
DRILLING METHOD: **Air Rotary**
SAMPLING METHOD: **Grab**
BOREHOLE SIZE: **7-7/8 inch**

Water level during drilling Water level in completed well Casing Elevation **850.526 ft**

DEPTH	USCS	SAMPLE DESCRIPTION
-5		
0	CL	Silty Clay, some Caliche. 2.5Y 8/2 pale brown. Stiff, plastic, dry-slightly moist.
5	CL	Silty Clay, some Caliche. 2.5Y 8/2 pale brown. Stiff, plastic, dry-slightly moist.
10	CH	Clay. 2.5Y 7/4 pale brown, trace 6/8 olive yellow. Silty, dry, some very fine lithic fragments (black specks).
15	CH	Clay. 2.5Y 7/4 pale brown, trace 6/8 olive yellow. Silty, dry, some very fine lithic fragments (black specks).
20	CH	Clay. 2.5Y 7/4 pale brown. Silty, dry, trace black specks/lithic fragments.
25	CH	Clay. 2.5Y 6/3 light yellowish brown. Silty, dry, slightly plastic, trace black specks/lithic fragments.
30	CH	Clay. 2.5Y 7/4 pale brown. Silty, dry, trace black specks/lithic fragments.
35	LS	Limestone. 2.5Y 7/4-7/6 pale brown-yellow. Hard, silty-slightly clayey, dry.
40		
45	LS	Limestone. 10YR 7/3 very pale brown. Hard, microgranular, silty, dry.
50	LS	Limestone. 10YR 7/2-7/3 light gray-very pale brown. Hard, microgranular, silty, dry.
55	LS	Limestone. 10YR 8/3 very pale brown. Hard, microgranular, silty, dry.
60	LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, dry.
65	LS	Limestone. 10YR 6/6 brownish yellow. Hard, microgranular, silty, moist.
70	LS	Limestone. 10YR 6/6 brownish yellow, 7/2 light gray. Hard, microgranular, silty, moist-dry.
75	LS	Limestone. 10YR 6/6-6/8 brownish yellow. Hard, microgranular, silty, moist.
80	LS	Limestone. 2.5Y 6/3-6/4 light yellowish brown. Hard, microgranular, silty, moist-dry.
85	LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, moist-dry.
90	LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, moist-slightly moist.
95	LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, slightly moist-dry.
100	LS	Limestone. 10YR 8/4 very pale brown. Hard, microgranular, silty, slightly moist.
105		
110	LS	Limestone. 10YR 8/4 very pale brown. Hard, microgranular, silty, moist.
115		

SAMPLES: No samples were collected for laboratory submission.

BORING COMPLETION / WELL DETAILS



Concrete Pad
10" Steel Casing 2' stickup to 3'
12" Borehole 0 to 41'
8" steel surface casing 2.20' stickup to 41'
Grout 0 to 41'
Drill out with 7-7/8" bit to 230'
7-7/8" Openhole Completion 41' to 230'

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-07**

TOTAL DEPTH:

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**

DRILLING METHOD: **Air Rotary**
SAMPLING METHOD: **Grab**
DATE DRILLED: **10 October 2019**

Water level during drilling Water level in completed well Casing Elevation **850.526 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES	BORING COMPLETION	WELL DETAILS
120		LS	Limestone. 10YR 7/4 very pale brown. Hard, microgranular, silty, slightly moist-dry.			
125		LS	Limestone. 2.5Y 8/3 pale brown. Hard, microgranular, silty, slightly moist-dry.			7-7/8" Openhole Completion 41' to 230'
130		LS	Limestone. 10YR 7/4-7/6 very pale brown-yellow. Hard, microgranular, silty, slightly moist-dry.			
135		LS	Limestone. 10YR 8/3 very pale brown. Hard, microgranular, silty, slightly moist-dry.			
140		LS	Limestone. 10YR 8/3-8/4 very pale brown. Hard, microgranular, silty, slightly moist-dry.			
145						
150						
155						
160						
165						
170						
175						
180		LS	Limestone. 10YR 7/1-7/2 light gray. Hard, microgranular, silty, slightly moist-dry.			
185						
190						
195						
200						
205						
210						
215						
220		SH	Shale. 10YR 7/1-7/2 light gray. Hard, silty, very fine laminations, blow up water.			
225						
230						TD 230'
235						
240						
245						

NOTES: This log should not be used separately from the original report.

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405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-08**

TOTAL DEPTH: **220 ft**

PROJECT INFORMATION

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**
LOGGED BY: **Mark Kelly**
PROJECT MANAGER: **Robert Owens**
DATE DRILLED: **10 October 2019**

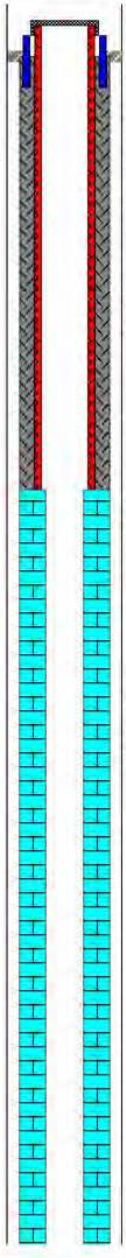
DRILLING INFORMATION

DRILLING CO.: **Harrison & Cooper, Inc.**
DRILLER: **Ken Cooper**
RIG TYPE: **TH-60**
DRILLING METHOD: **Air Rotary**
SAMPLING METHOD: **Grab**
BOREHOLE SIZE: **7-7/8 inch**

Water level during drilling Water level in completed well Casing Elevation **850.088 ft**

DEPTH	USCS	SAMPLE DESCRIPTION
-5		
0	CH/CL	Clay/Silty Clay, Caliche. 10YR 8/2, 7/2 pale brown, light gray. Stiff, plastic, dry-slightly moist.
5	CL	Silty Clay. 2.5Y 8/3-7/3 pale brown. Stiff, plastic, dry-slightly moist.
10		
15	CH	Clay. 2.5Y 7/3 pale brown. Silty, dry.
	CH	Clay. 10YR 6/4 light yellowish brown. Hard, silty, dry.
20	CH	Clay. 2.5Y 7/3 pale brown. Silty, dry, very fine black specks.
25	CH	Clay. 2.5Y 7/3-7/4 pale brown. Silty, dry, slightly plastic, trace orange specks/stains.
30	CH	Clay. 2.5Y 6/4 light yellowish brown. Silty, dry, trace black specks/lithic fragments. Hard drilling at 35'.
35	LS	Limestone. 2.5Y 7/3 pale brown. Hard, silty, microgranular, dry.
40	LS	Limestone. 2.5Y 8/3-7/3 pale brown. Hard, silty, microgranular, dry.
45	LS	Limestone. 2.5Y-10YR 7/3 pale brown-very pale brown. Hard, microgranular, silty, dry.
50	LS	Limestone. 2.5Y-10YR 7/3 pale brown-very pale brown. Hard, microgranular, silty, dry.
55	LS	Limestone. 10YR 6/4 light yellowish brown. Hard, microgranular, silty, dry.
60	LS	Limestone. 10YR 6/4-6/3 light yellowish brown-pale brown. Hard, microgranular, silty, dry.
65	LS	Limestone. 2.5Y 8/3 pale brown. Hard, microgranular, silty, dry.
70	LS	Limestone. 2.5Y 8/2-8/1 pale brown-white. Hard, microgranular, silty, dry.
75	LS	Limestone. 2.5Y 7/4 pale brown. Hard, microgranular, silty, dry.
80	LS	Limestone. 2.5Y 8/4 pale brown. Hard, microgranular, silty, slightly moist.
85	LS	Limestone. 10YR 8/3 very pale brown. Hard, microgranular, silty, moist-slightly moist.
90	LS	Limestone. 2.5Y 8/3-8/4 pale brown. Hard, microgranular, silty, moist-slightly moist.
95	LS	Limestone. 2.5Y 8/4 pale brown. Hard, microgranular, silty, dry-slightly moist.
100	LS	Limestone. 2.5Y 8/3 pale brown. Hard, microgranular, silty, dry-slightly moist.
105	LS	Limestone. 10YR 6/4 light yellowish brown. Hard, microgranular, silty, slightly moist-moist.
110	LS	Limestone. 2.5Y 8/1 white. Hard, microgranular, silty, moist; rock flour/very fine cuttings.
115		

SAMPLES: No samples were collected for laboratory submission.



WELL DETAILS:
- Concrete Pad
- 10" Steel Casing 2' stickup to 3'
- 12" Borehole 0 to 42'
- 8" steel surface casing 1.75' stickup to 42'
- Grout 0 to 42'
- Drill out with 7-7/8" bit to 220'
- 7-7/8" Openhole Completion 42' to 220'

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Hwy 121
Bldg. C, Ste. 100
Lewisville, TX 75067

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-08**

TOTAL DEPTH:

PROJECT: **River City Metal Finishing Superfund Site**
SITE LOCATION: **San Antonio, Bexar Co., Texas**
ADDRESS: **12040 Potranco Road**

DRILLING METHOD: **Air Rotary**
SAMPLING METHOD: **Grab**
DATE DRILLED: **10 October 2019**

Water level during drilling Water level in completed well Casing Elevation **850.088 ft**

DEPTH	SOIL/ROCK SYMBOLS	USCS	SAMPLE DESCRIPTION	SAMPLES	BORING COMPLETION	WELL DETAILS
		LS	Limestone. 10YR 7/6 yellow. Hard, microgranular, silty, slightly moist-dry; rock flour.			
120		LS	Limestone. 2.5Y 8/2-8/3 pale brown. Hard, microgranular, silty, dry-slightly moist; rock flour.			7-7/8" Openhole Completion 42' to 220'
125						
130		LS	Limestone. 2.5Y 8/3 pale brown. Hard, microgranular, silty, slightly moist-dry.			
135						
140						
145						
150		LS	Limestone. 2.5Y 7/1-6/1 light gray-gray. Hard, microgranular, silty, slightly moist-dry.			
		LS	Limestone. 2.5Y 7/4-8/2 pale brown. Hard, microgranular, silty, slightly moist-dry.			
155		LS	Limestone. 2.5Y 8/3 pale brown. Hard, microgranular, silty, slightly moist-dry.			
		LS	Limestone. 2.5Y 7/1 light gray. Hard, microgranular, silty, slightly moist-dry.			
160						
165		LS	Limestone. 5Y 6/1 gray. Hard, microgranular, silty, slightly moist-dry.			
170						
175						
180						
185		LS	Limestone. 2.5Y 7/3-7/4 pale brown. Hard, microgranular, silty, slightly moist-dry.			
190						
195						
200		LS	Limestone. 2.5Y 7/4-7/6 pale brown-yellow. Hard, microgranular, silty. Blow up water.			
205						
210		SH	Shale. 5Y 7/1-8/1 light gray-white. Hard, slightly silty, very fine laminations, flaky cuttings floating on water.			
215						
220						TD 220'
225						
230						
235						
240						
245						

NOTES: This log should not be used separately from the original report.

EA Engineering, Science, and Technology, Inc., PBC
405 State Highway 121
Building C, Suite 100
Lewisville, Texas 75067

RECORD OF SUBSURFACE EXPLORATION

Site: River City Metal Finishing Superfund Site
Location: San Antonio, Bexar Co., Texas
Project Number: 14342.165 - B - 3

Boring/Well ID: SB-01	Date: 4-1-2019	Logged By: Mikelly	Water Level
Depth of Boring: 15'	Boring Diameter: 2 1/2" (drive shoe)	Drilling Co.: Fortex	Concrete
Length of Riser:	Casing Diameter:	Driller: Robert Tojhen	Grout
Length of Screen:	Slot Size:	Rig: Geoprobe 7822DT	Bentonite
Riser/Screen Material:	Filter Pack:	Bit: Drive Shoe	Filter Pack
Sampling Method: Plastic Liners (1.75')		Drilling Method: DPT	Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
0		Dry vegetation / topsoil						
		0-1.75': Topsoil / SILTY CLAY. 10YR 5/2, stiff, med plastic, dry, sm wht CaCO3 (grayish brown).		ND				
		1.75-5: CLAY. 2.5Y 8/2, sm 6/8 streaks, Med. stiff, plast, dry & sl moist, silty. ~~(very~~ pale brown, ~~brownish~~ olive yellow). MK						
5		5-10' (SAA) CLAY. 2.5Y 8/2, sm 7/8 strks. (pale brown, yellow) Stiff-hard, plastic, dry, sl silty, Calcareous.						
10		10-15 (SAA) Very hard, plastic, dry						
15		@ ~14.75 Ding to Gray 2.5Y 7/1 & 7/6 strks. (abdt) (light gray + yellow)						
		TD @ 15'						
		Backfill w/ Bent. chips.						

EA Engineering, Science, and Technology, Inc., PBC
405 State Highway 121
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Lewisville, Texas 75067

RECORD OF SUBSURFACE EXPLORATION

Site: River City Metal Finishing Superfund Site
Location: San Antonio, Bexar Co., Texas
Project Number: 14342.165 - B - 3

Boring/Well ID: SR-02	Date: 4-1-2019	Logged By: MKelly	Water Level
Depth of Boring:	Boring Diameter: 2 1/4"	Drilling Co.: Vortex	Concrete
Length of Riser:	Casing Diameter:	Driller: Robert Joiner	Grout
Length of Screen:	Slot Size:	Rig: Geoprobe 7822DT	Bentonite
Riser/Screen Material:	Filter Pack:	Bit: Drive Shoe	Filter Pack
Sampling Method: Plastic Liner (1-75')		Drilling Method: Direct Push	Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
0		topsoil/vegetation						
		0-1 Topsoil: Dark brown 10YR 3/3	0-0.5	ND				
			0.5-2.0					
		1-5: CLAY ~~[illegible]~~ NK, sm sl moist, silty, med stiff, dry. 10YR 9/2 pale orange yellow	2-5					
5		5-10: CLAY. 10YR 8/2-8/3, trace 7/8 strks. (very pale brown, yellow) Stiff-hard, plastic, dry. (mostly 'orange' 5.7-5.8), silty.	~~[illegible]~~ NK					
10		10-15: (SAA) CLAY Stiff (sl fissile (~~brittle~~ crumbly), plastic, dry, silty.						
15		@15' Δ to gray 10YR 7/2-7/3 sm 6/8; sl. brittle/shly (light gray - very pale brown, brownish yellow).	13-15					
		TD @ 15'						

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RECORD OF SUBSURFACE EXPLORATION

Site: River City Metal Finishing Superfund Site
Location: San Antonio, Bexar Co., Texas
Project Number: 14342.165 - B - 3

Boring/Well ID: SB-03	Date: 4-1-2019	Logged By: M. Kelly	Water Level
Depth of Boring: 8 ft	Boring Diameter: 2.25 (Shoe)	Drilling Co.: Vonkeck	Concrete
Length of Riser:	Casing Diameter:	Driller: Robert Tanner	Grout
Length of Screen:	Slot Size:	Rig: Geoprobe 7822 DT	Bentonite
Riser/Screen Material:	Filter Pack:	Bit: Drive Shoe	Filter Pack
Sampling Method: Plastic Liners (1.75")		Drilling Method: HPT	Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
		Veg/Topsoil						
0		0-1.25 Topsoil/Dark Brown/Gray silty CLAY, 10YR 4/2 dark grayish brown	0-0.5	ND				
		1.25-5' CLAY. 10YR 9/2 ~~wh/yellow~~ MK	0.5-2.0					
		Med stiff, plastic, dry, silty (pale orange yellow)	2-5					
5		5-10' CLAY. 10YR 8/3-8/4, trace 7/8. (very pale brown, yellow)						
		Med. stiff-stiff, plastic, dry, silty	6-8					
8								
		Refusal @ 8 ft (Rock: 10YR 9/2-8/2, Chalk, vhnl, Fn xlln, sl silty/sandy (pale orange yellow - very pale brown)						

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Lewisville, Texas 75067

RECORD OF SUBSURFACE EXPLORATION

Site: River City Metal Finishing Superfund Site
Location: San Antonio, Bexar Co., Texas
Project Number: 14342.165 - B - 3

Boring/Well ID: SB-04	Date: 4-2-2019	Logged By: MIelly	Water Level
Depth of Boring: 7 Ft	Boring Diameter: 2.25" (shoe)	Drilling Co.: Vortex/Drlg	Concrete
Length of Riser:	Casing Diameter:	Driller: Robert Joiner	Grout
Length of Screen:	Slot Size:	Rig: Geoprobe 7822DT	Bentonite
Riser/Screen Material:	Filter Pack:	Bit: Drive Shoe	Filter Pack
Sampling Method: Plastic Liner (1.75")		Drilling Method: Direct Push Tech (DPT)	Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
0		vegetation. (very pale brown - pale orange yellow) 0-5: CLAY 10YR 8/3-9/2 (No topsoil Recovered) (Rec 5') Medium stiff - stiff, plastic, sl. mst-dry, silty, some v silty (Silty Clay). Calcareous,		ND				
5		5-7 SAA 2.5Y 8/1. (white)						
10		Refusal @ 7'; silty Chalk/Marl						
15								
20								

SB-05 + SB-06

EA Engineering, Science, and Technology, Inc., PBC 405 State Highway 121 Building C, Suite 100 Lewisville, Texas 75067		RECORD OF SUBSURFACE EXPLORATION Site: River City Metal Finishing Superfund Site Location: San Antonio, Bexar Co., Texas Project Number: 14342.165 - B - 3	
Boring/Well ID: SB-06	Date: 4-2-2019	Logged By: Mikelly	Water Level
Depth of Boring: 5'	Boring Diameter: 2.25"	Drilling Co.: Vortex	Concrete
Length of Riser:	Casing Diameter:	Driller: Robert Jamer	Grout
Length of Screen:	Slot Size:	Rig: Geoprobe 7522DT	Bentonite
Riser/Screen Material:	Filter Pack:	Bit: Drive Shoe	Filter Pack
Sampling Method: Plastic Liners		Drilling Method: DPT	Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
0		0-0.75: Topsoil/Silty Clay. 10YR 5/2. (grayish brown) soft-med stiff, lo-med plast., vslmst-dry, sm wht $CaCO_3$.		✓				
5		0.75-5.0: Silty Clay/Clay, 10YR 7/3-8/3, Med. stiff, med-hi plast, vslmst-dry, sm v silty, Calcareous. (pale brown) TD = 5'						
0		SB-05 (dark grayish brown) 0-1.5 Topsoil/Silty Clay. 10YR 4/2. Stiff, plast., slmst-dry, sm wht fn $CaCO_3$ nodules.		✓				
5		1.5-5: CLAY. 10YR 8/3-8/4. Med stiff, plast., slmst-dry, silty. sm sl sft/slmost (silty). Calcareous (marly). TD = 5' (pale brown)						

SB-07 + SB-08

EA Engineering, Science, and Technology, Inc., PBC 405 State Highway 121 Building C, Suite 100 Lewisville, Texas 75067		RECORD OF SUBSURFACE EXPLORATION Site: River City Metal Finishing Superfund Site Location: San Antonio, Bexar Co., Texas Project Number: 14342.165 - B - 3	
Boring/Well ID: SB07	Date: 9-2-2019	Logged By: Mark Kelly	Water Level
Depth of Boring: 5'	Boring Diameter:	Drilling Co.:	Concrete
Length of Riser:	Casing Diameter:	Driller:	Grout
Length of Screen:	Slot Size:	Rig:	Bentonite
Riser/Screen Material:	Filter Pack:	Bit:	Filter Pack
Sampling Method: Plastic Liners		Drilling Method:	Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
0		Vegetation / topsoil (grayish brown) 0-1.5 Topsoil/Silty Clay 10YR 5/2, stiff, plastic, dry, sm wht $CaCO_3$ (white) (pale brown)		ND				
5		1.5-5: CLAY (silty) 10YR 8.5/1-8/1, 2.5Y 8/2. stiff, plastic, dry - vs moist, [illegible] (Marl) calcareous						
		TD @ 5'						
0		SB-08 (grayish brown) 0-1.75: Topsoil/Silty Clay 10YR 5/2. Med stiff-stiff, plast, dry sm wht $CaCO_3$.		ND				
5		1.75-5 CLAY. 10YR ~~[illegible]~~ 8/1, 2.5Y 8/2, (white, pale brown). Stiff, plastic, dry - vsl moist.						
		TD = 5'						

SB-09 + SB-10

EA Engineering, Science, and Technology, Inc., PBC
405 State Highway 121
Building C, Suite 100
Lewisville, Texas 75067

RECORD OF SUBSURFACE EXPLORATION

Site: River City Metal Finishing Superfund Site
Location: San Antonio, Bexar Co., Texas
Project Number: 14342.165 - B - 3

Boring/Well ID: SB-09	Date: 4-2-2019	Logged By: M Kelly	
Depth of Boring: 5'	Boring Diameter: 2.25"	Drilling Co.: Vortex	
Length of Riser:	Casing Diameter:	Driller: Robert Joiner	
Length of Screen:	Slot Size:	Rig: ~~Geoprobe~~ Geoprobe 7822DT	
Riser/Screen Material:	Filter Pack:	Bit: Drive Shoe	
Sampling Method: Plastic Liner		Drilling Method: DPT	

Water Level
Concrete
Grout
Bentonite
Filter Pack
Well Screen

Depth (Feet)	USCS	SOIL / ROCK DESCRIPTION (Order: soil type, color, density/consistency, plasticity, moisture, grain size, angularity/mineralogy, other)	SAMPLE ID	PID (ppm)	PID (ppb)	WELL COMPLETION annulus	casing	annulus
0		0-0.5 Topsoil / Silty Clay. 10YR 4/2 (dark grayish brown)		NO				
		0.5-5 CLAY ~~(Silty Clay)~~ 2.5Y 8/2 - 8.5/2 (very pale yellow-pale yellow) Med. stiff-stiff, plastic, dry-slmst, silty.						
5		TD @ 5'						
		SB-10						
0		0-0.5 Topsoil / Silty Clay. 10YR 5/2 (grayish brown), tr wht CaCO3 nodules Med. stiff-stiff, med plastic, dry						
		0.5-5; CLAY. 10YR 8/2 (pale orange yellow) Med. stiff-stiff (~~Few~~ slstf/moist, plastic, pred slmst-dry, silty, Calcareous						
5		TD @ 5 ft.						

STATE OF TEXAS WELL REPORT for Tracking #512466

Owner:	**EPA Region 6**	Owner Well #:	**MW-02**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**30**

Drilling Method: **Bored; Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
8	**28**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**3**	**Concrete 1.42 Bags/Sacks**
3	**8**	**Bentonite 1.86 Bags/Sacks**
28	**30**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner**

License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**0**	**Vegetation**
0	**0.5**	**Topsoil/Silty CLAY; loose, dry, small white calcareous nodules.**
0.5	**5**	**CLAY; pale brown, medium stiff, plastic, moist, trace Silt.**
5	**10**	**Silty CLAY; pale brown/yellow, loose, medium stiff, plastic, dry.**
10	**15**	**CLAY/Silty CLAY; pale brown, medium stiff, plastic, dry-slightly moist.**
15	**20**	**CLAY/Silty CLAY; pale brown, medium stiff, plastic, dry-slightly moist.**
20	**25**	**CLAY/Silty CLAY; pale brown, medium stiff, plastic, dry-moist.**
25	**30**	**CLAY/Silty CLAY; pale brown, medium stiff, plastic, dry-moist.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
4	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**10**
4	**Screen**	**New Plastic (PVC)**	**40 0.010**	**10**	**25**
4	**Sump**	**New Plastic (PVC)**	**40**	**25**	**27.5**
4	**Bottom Cap**	**New Plastic (PVC)**	**40**	**27.5**	**28**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #512468

Owner:	**EPA Region 6**	Owner Well #:	**MW-03**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**30**

Drilling Method: **Bored; Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
8	**28**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**3**	**Concrete 1.42 Bags/Sacks**
3	**8**	**Bentonite 1.86 Bags/Sacks**
28	**30**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**0**	**Vegetation**
0	**2**	**Topsoil/Silty CLAY; loose, medium plasticity, dry, light brownish gray-pale brown.**
2	**5**	**CLAY; soft to medium stiff plasticity, moist, Silty -very Silty, very pale brown.**
5	**10**	**Silty CLAY; pale brown, hard, stiff, plastic, dry.**
10	**20**	**Silty CLAY; pale brown, stiff, plastic, dry-slightly moist.**
20	**30**	**Silty CLAY; pale brown, stiff, plastic, dry.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
4	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**10**
4	**Screen**	**New Plastic (PVC)**	**40 0.010**	**10**	**25**
4	**Sump**	**New Plastic (PVC)**	**40**	**25**	**27.5**
4	**Bottom Cap**	**New Plastic (PVC)**	**40**	**27.5**	**28**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #512527

Owner:	**EPA Region 6**	Owner Well #:	**MW-04**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**30**

Drilling Method: **Bored; Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
8	**28**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**3**	**Concrete 1.42 Bags/Sacks**
3	**8**	**Bentonite 1.86 Bags/Sacks**
28	**30**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**Topsoil/Silty CLAY**
5	**10**	**CLAY/Silty CLAY; pale brown, medium stiff, plastic, moist, silty-very silty.**
10	**20**	**CLAY; pale brown, medium stiff, plastic, moist, silty-very silty.**
20	**25**	**CLAY/Silty CLAY; pale brown, stiff, plastic, moist, silty-very silty.**
25	**30**	**CLAY/Silty CLAY; pale brown, stiff, plastic, moist-dry, silty.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
4	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**10**
4	**Screen**	**New Plastic (PVC)**	**40 0.010**	**10**	**25**
4	**Sump**	**New Plastic (PVC)**	**40**	**25**	**27.5**
4	**Bottom Cap**	**New Plastic (PVC)**	**40**	**27.5**	**28**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #512530

Owner:	**EPA Region 6**	Owner Well #:	**MW-05**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**30**

Drilling Method: **Bored; Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
8	**28**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**3**	**Concrete 1.42 Bags/Sacks**
3	**8**	**Bentonite 1.86 Bags/Sacks**
28	**30**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**2**	**Topsoil/Silty CLAY, small red Gravel; pale brown, loose-medium stiff, plastic, moist.**
2	**5**	**SAA changes to tan Silty CLAY/CLAY.**
5	**10**	**Silty CLAY/CLAY; very pale brown, loose-stiff, plastic, moist, dry.**
10	**15**	**CLAY/Silty CLAY; very pale brown, SAA.**
15	**20**	**Silty CLAY; very pale brown, soft-medium stiff, plastic, moist.**
20	**25**	**Silty CLAY; very plastic, very pale brown - light yellowish brown, medium, stiff, plastic, moist.**
25	**30**	**Silty CLAY; very pale brown, medium stiff, plastic, dry, slightly moist,**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
4	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**10**
4	**Screen**	**New Plastic (PVC)**	**40 0.010**	**10**	**25**
4	**Sump**	**New Plastic (PVC)**	**40**	**25**	**27.5**
4	**Bottom Cap**	**New Plastic (PVC)**	**40**	**27.5**	**28**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #527442

Owner:	**EPA**	Owner Well #:	**MW-06**
Address:	**1201 Elm Street Dallas, TX 75270**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 41.98" N**
		Longitude:	**098° 43' 40.71" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **10/8/2019** Drilling End Date: **10/9/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
12	**0**	**42**
7.875	**40**	**180**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**42**	**Grout 15 Bags/Sacks**

Seal Method: **Poured**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Harrison & Cooper; Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **Ken Cooper** License Number: **51990**

Apprentice Name: **David Lagoski**

Comments: **No Data**

Report Amended on 11/25/2019 by Request #29342

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**Caliche**
5	**12**	**Silty Clay**
12	**35**	**Clay/Marl**
35	**80**	**Limestone**
80	**180**	**Limestone/Chalk**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
8	**Blank**	**New Steel**		**0**	**40**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #527444

Owner:	**EPA**	Owner Well #:	**MW-07**
Address:	**1201 Elm Street Dallas, TX 75270**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 41.98" N**
		Longitude:	**098° 43' 40.71" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **10/8/2019** Drilling End Date: **10/10/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
12	**0**	**41**
7.875	**40**	**230**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**41**	**Grout 15 Bags/Sacks**

Seal Method: **Poured**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Harrison & Cooper; Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **Ken Cooper** License Number: **51990**

Apprentice Name: **David Lagoski**

Comments: **No Data**

Report Amended on 11/25/2019 by Request #29343

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**12**	**Silty Clay**
12	**35**	**Clay/Marl**
35	**80**	**Limestone**
80	**218**	**Limestone/Chalk**
218	**230**	**Shale**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
8	**Blank**	**New Steel**		**0**	**40**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #527445

Owner:	**EPA**	Owner Well #:	**MW-08**
Address:	**1201 Elm Street Dallas, TX 75270**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 41.98" N**
		Longitude:	**098° 43' 40.71" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **10/8/2019** Drilling End Date: **10/10/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
12	**0**	**42**
7.875	**40**	**220**

Drilling Method: **Air Rotary**

Borehole Completion: **Open Hole**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**42**	**Grout 15 Bags/Sacks**

Seal Method: **Poured**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Harrison & Cooper; Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **Ken Cooper** License Number: **51990**

Apprentice Name: **David Lagoski**

Comments: **No Data**

Report Amended on 11/25/2019 by Request #29344

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**12**	**Silty Clay**
12	**35**	**Clay/Marl**
35	**80**	**Limestone**
80	**210**	**Limestone/Chalk**
210	**218**	**Shale**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
8	**Blank**	**New Steel**		**0**	**40**

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STATE OF TEXAS WELL REPORT for Tracking #512532

Owner:	**EPA Region 6**	Owner Well #:	**SB-01**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**3**	**0**	**15**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 0.16 Bags/Sacks**
	2	**15**	**Bentonite 0.83 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

STATE OF TEXAS WELL REPORT for Tracking #512551

Owner:	**EPA Region 6**	Owner Well #:	**SB-02**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**3**	**0**	**15**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 0.16 Bags/Sacks**
	2	**15**	**Bentonite 0.83 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Topsoil; dark brown.**
1	**5**	**CLAY; pale orange-yellow, slightly moist, silty, medium stiff, dry.**
5	**10**	**CLAY; very pale brown, yellow, stiff-hard, plastic, dry, silty.**
10	**15**	**CLAY; light gray-very pale brown, brownish yellow, stiff (slight fissile), plastic, dry, silty.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512557

Owner:	**EPA Region 6**	Owner Well #:	**SB-03**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**8**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**8**	**Bentonite 0.39 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1.25**	**Topsoil; dark brown, Silty CLAY, medium stiff, plastic, dry.**
1.25	**5**	**CLAY; pale orange-yellow, medium stiff, plastic, dry, silty.**
5	**8**	**CLAY; very pale brown, medium stiff, plastic, dry, silty.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512558

Owner:	**EPA Region 6**	Owner Well #:	**SB-04**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**7**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**7**	**Bentonite 0.32 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**CLAY; medium stiff, plastic, slightly moist-dry, silty, calcareous.**
5	**7**	**SAA; white**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512562

Owner:	**EPA Region 6**	Owner Well #:	**SB-05**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**5**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**5**	**Bentonite 0.19 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1.5**	**Topsoil/Silty CLAY; dark grayish brown, stiff, plastic, slightly moist-dry, calcareous nodules.**
1.5	**5**	**Silty CLAY; pale brown, medium stiff, plastic, dry, slightly moist-dry, calcareous.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512567

Owner:	**EPA Region 6**	Owner Well #:	**SB-06**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**5**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**5**	**Bentonite 0.19 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**0.75**	**Topsoil/Silty CLAY; grayish brown, soft-medium stiff, low-medium plasticity, slightly moist-dry.**
0.75	**5**	**Silty CLAY; pale brown, medium stiff, medium to high plasticity, slightly moist-dry, very silty & calcareous.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512569

Owner:	**EPA Region 6**	Owner Well #:	**SB-07**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**5**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**5**	**Bentonite 0.19 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1.5**	**Topsoil/Silty CLAY; grayish brown, stiff, plastic, dry, calcareous.**
1.5	**5**	**CLAY; white-pale brown, stiff, plasticity, dry, calcareous.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512571

Owner:	**EPA Region 6**	Owner Well #:	**SB-08**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**3**	**0**	**5**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 0.16 Bags/Sacks**
	2	**5**	**Bentonite 0.19 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1.75**	**Topsoil/Silty CLAY; grayish brown, medium stiff, plastic ,dry, small white calcareous.**
1.75	**5**	**CLAY; white & pale brown, stiff, plastic, dry, slightly moist.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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STATE OF TEXAS WELL REPORT for Tracking #512578

Owner:	**EPA Region 6**	Owner Well #:	**SB-09**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**5**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**5**	**Bentonite 0.19 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**0.5**	**Topsoil/Silty CLAY; dark grayish brown.**
0.5	**5**	**Silty CLAY; very pale yellow, medium stiff, plastic, dry-slightly moist.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #512579

Owner:	**EPA Region 6**	Owner Well #:	**SB-10**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Environmental Soil Boring**

Drilling Start Date: **4/1/2019** Drilling End Date: **4/5/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
3	**0**	**5**

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 0.16 Bags/Sacks**
2	**5**	**Bentonite 0.19 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**0.5**	**Topsoil/Silty CLAY; grayish brown, white calcareous nodules, medium stiff, medium plasticity, dry.**
0.5	**5**	**Silty CLAY; pale orange-yellow, medium stiff, slightly moist-dry, calcareous.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Robert Joiner** License Number: **54776**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1.75**	**Topsoil/Silty CLAY; grayish brown, stiff, medium plasticity, dry, some what calcareous.**
1.75	**5**	**CLAY; grayish brown, medium stiff, plastic, dry.**
5	**10**	**CLAY; pale brown/yellow, stiff-hard, plastic, dry, slightly silty, calcareous.**
10	**15**	**SAA; very hard, plastic, dry.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

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APPENDIX D

BOREHOLE GEOPHYSICAL SURVEY RESULTS FOR MW-06, MW-07, AND MW-08

GEO CAM

Geophysical Logging & Video Services

17118 Classen Road, San Antonio, TX 78247 Toll Free: (877) 495-9121

Field Generated Video Data Sheet **Date:** 4/7/20

Client: EA Engineering Well Name: Well 6

Location: 12040 Potranco Reason for Video: General Survey

Driller TD: 220' Video TD: 179' USB Copies: 0

Age of Well: NA Pump Depth: NA Oil: — Survey By: BC

Casing / I.D.	Type	From	To	Joints
8"	Steel	+2.0'	43'	
openhole		43'	179'	

Water Level: 160'

Ref. Point: TC

Type of Perforations: Open hole completion

N29° 25' 48.4" W98° 43' 54.3"

Depths	Description
	Light Scaling in casing
43'	End of Casing
70'	Vug
82'	Med Vug
99	Nodule Build Up
126	Vertical Fracture
160.9	Water Level - mostly Clear
170'	Fracture
179.3'	TD - Soft Bottom

Note: All measurements are taken from side-view; operator will add proper depth to objects viewed through down-hole lens. **This is a field generated data report. For a more comprehensive typed report with still photos, please request from operator at time of survey**

GEO CAM

Water Well Logging & Video Recording Services

Borehole: **MW-06**

Logs: **GAMMA, EM39 COND., TEMP., FL RES.**

Geo Cam, Inc. 17118 Classen rd. San Antonio, TX 78247 877-495-9121

Project: **RIVER CITY METAL FINISHING SUPERFUND** Date: 04/07/2020

Client: **EA ENGINEERING** County: BEXAR

Location: **N 29 25 48.4 W 98 43 54.3** State: TX

BOREHOLE DATA

Drilling Contractor: NA **Driller T.D. (ft) : NA**

Elevation: 840' GPS Logger T.D. (ft) : 179'

Depth Ref: T.C. Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			8" STEEL	+2'	43'
2						
3						

Drill Method: NA Weight: **Fluid Level (ft) :** 161'

Hole Medium: Mud Type: WATER Time Since Circ: NA

Viscosity: Rm: at: Deg C

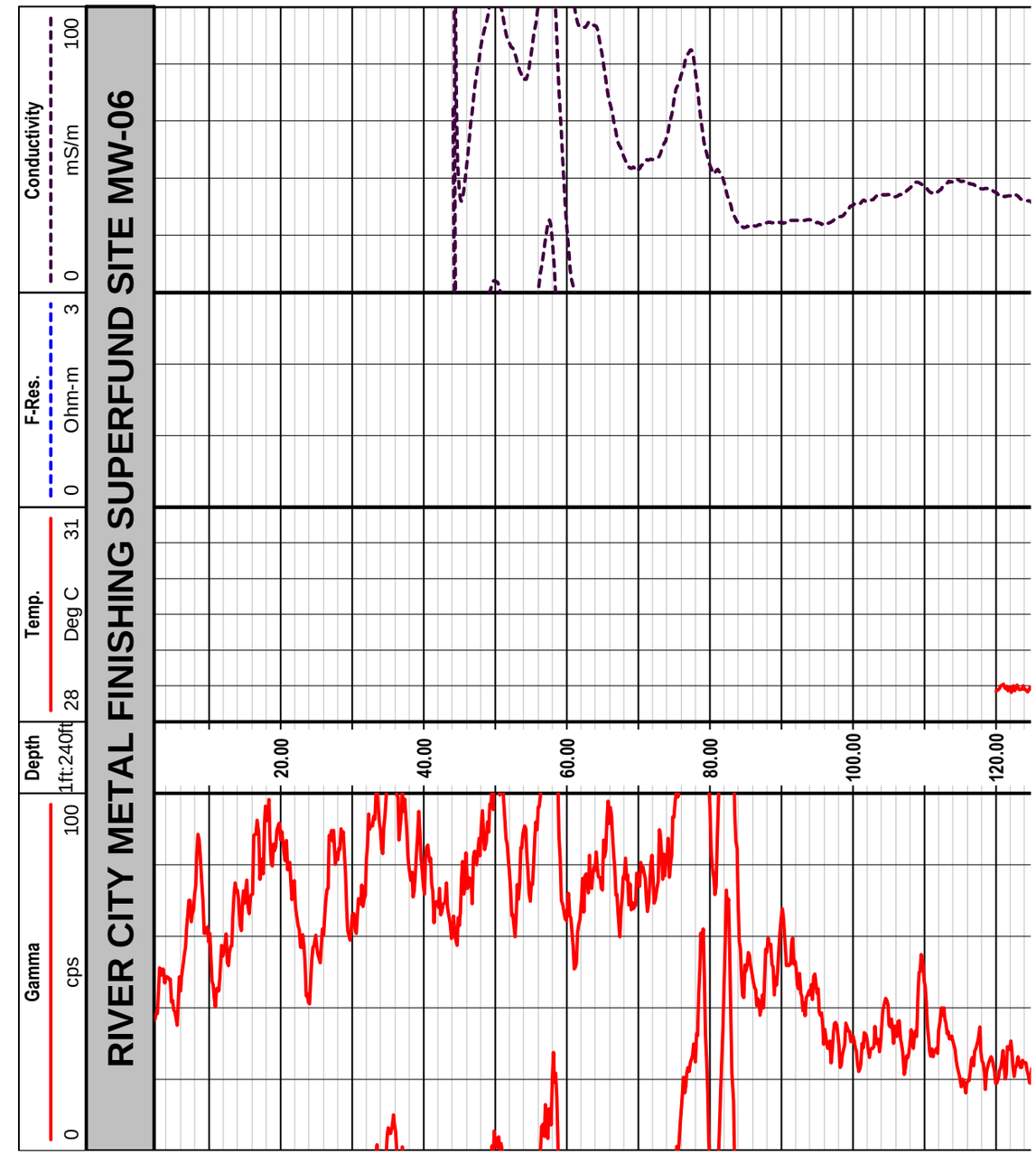
GENERAL DATA

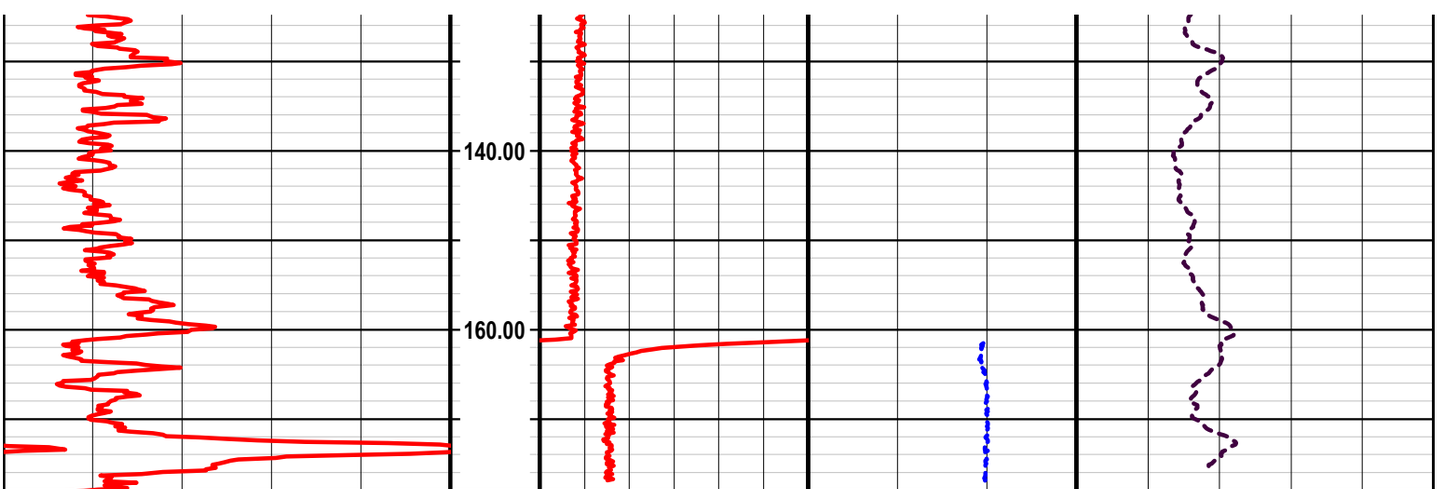
Logged by: ADAM ROBERTS Unit/Truck: 08

Witness: DAVID

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	5	30	2.3'	178.2'	20
TEMP, FLRES	4	30	120'	176.8'	20
EM39 COND.	2,3	30	44.1'	175.8'	20
Tool Serial No.					

Comments: ALL MEASUREMENTS TAKEN FROM TOP OF CASING





RIVER CITY METAL FINISHING SUPERFUND SITE MW-06

Gamma	Depth	Temp.	F-Res.	Conductivity
0 cps 100	1ft:240ft	28 Deg C 31	0 Ohm-m 3	0 mS/m 100

GEO CAM

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen rd. San Antonio, TX 78247 877-495-9121

Borehole: MW-06

Logs: OBI

Project: RIVER CITY METAL FINISHING SUPERFUND Date: 04/08/2020

Client: **EA ENGINEERING** County: BEXAR

Location: N 29 25 48.4 W 98 43 54.3 State: TX

BOREHOLE DATA

Drilling Contractor: NA **Driller T.D. (ft) : NA**

Elevation: 840' GPS Logger T.D. (ft) : 179'

Depth Ref: T.C. Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			8" STEEL	+2'	43'
2						
3						

Drill Method: NA Weight: **Fluid Level (ft) :** 161'

Hole Medium: Mud Type: WATER Time Since Circ: NA

Viscosity: Rm: at: Deg C

GENERAL DATA

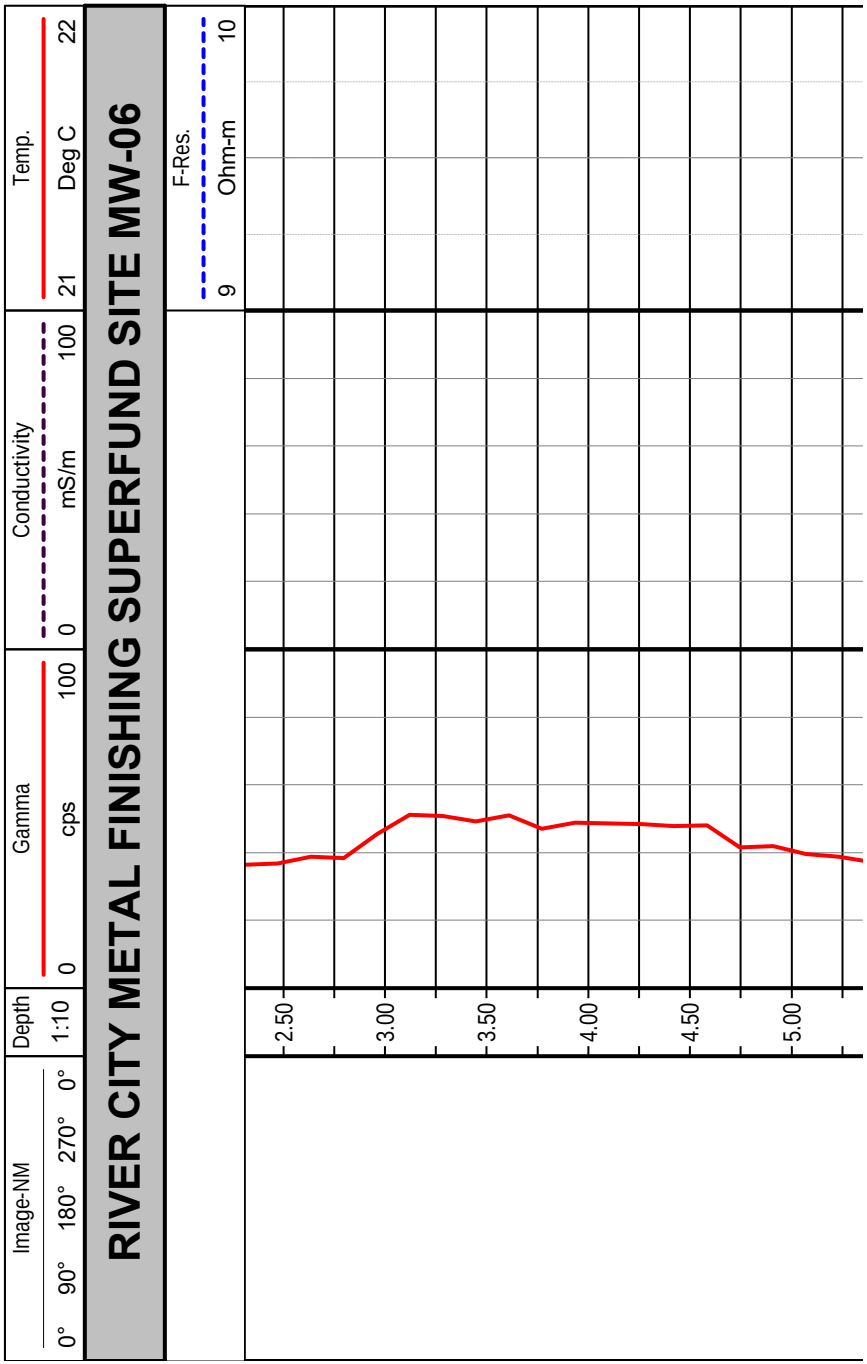
Logged by: ADAM ROBERTS Unit/Truck: 08

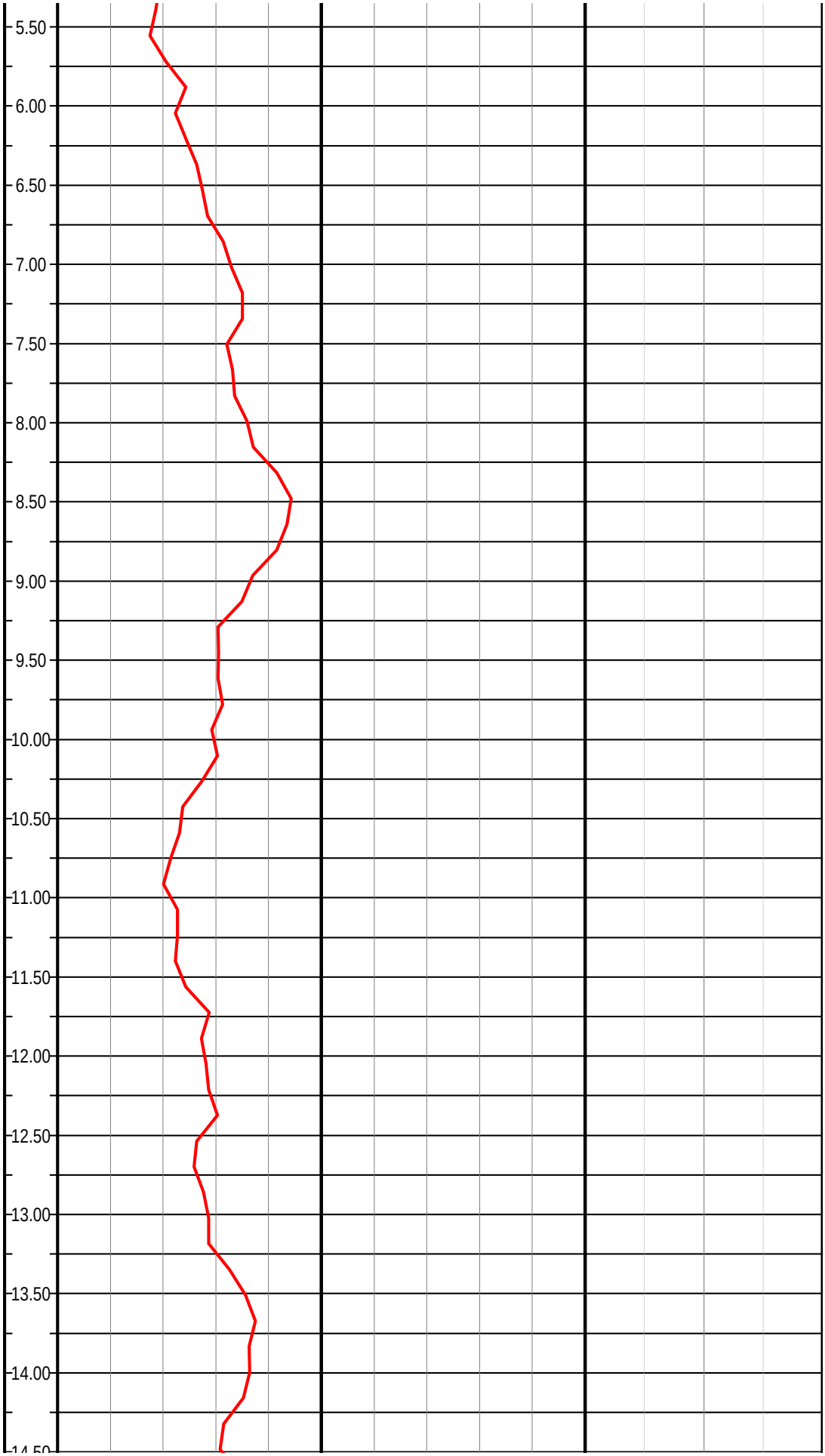
Witness: DAVID

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
OBI	1	2.5	40.1'	178'	20

Tool Serial No.

Comments: ALL MEASUREMENTS TAKEN FROM TOP OF CASING

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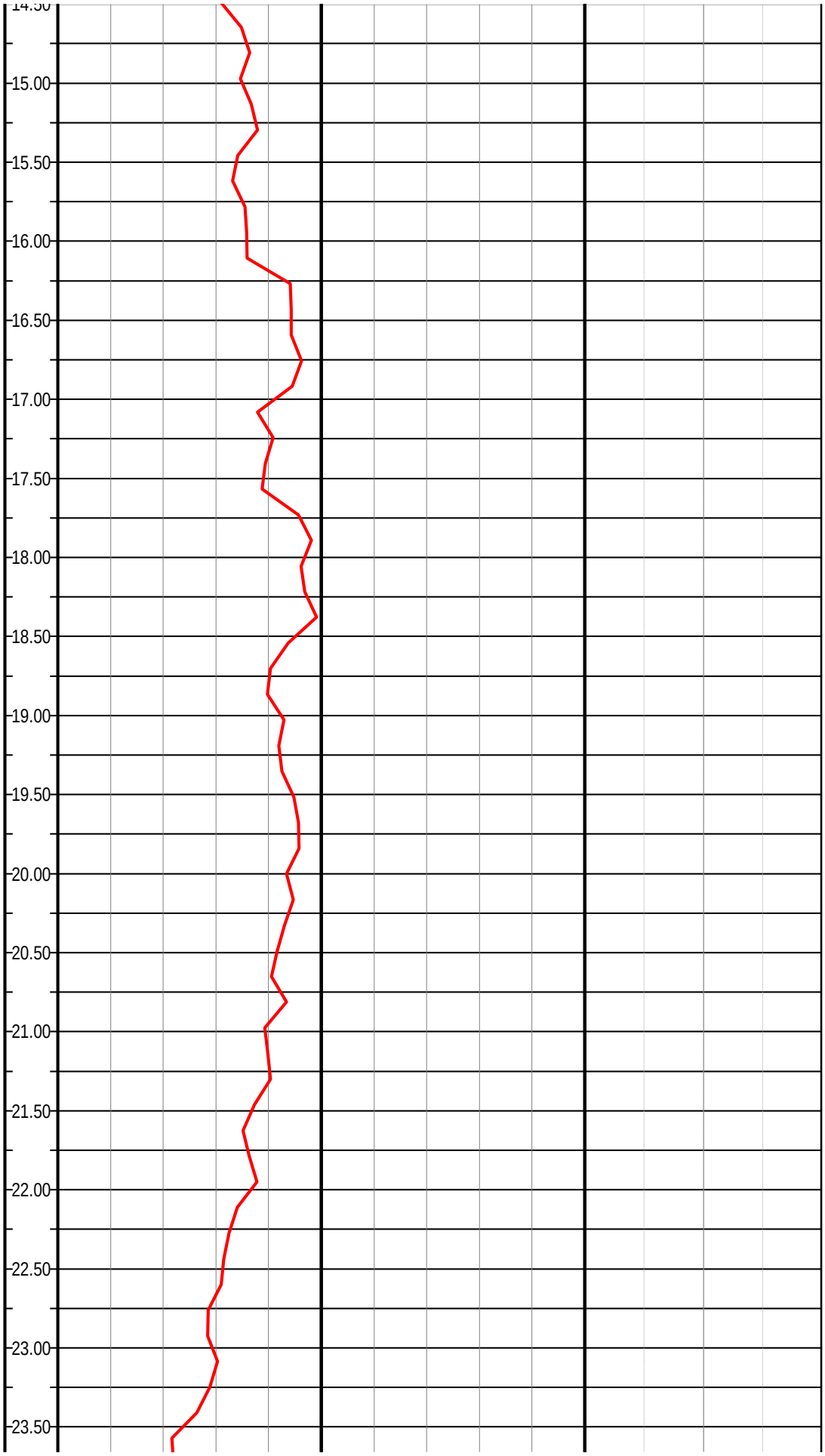
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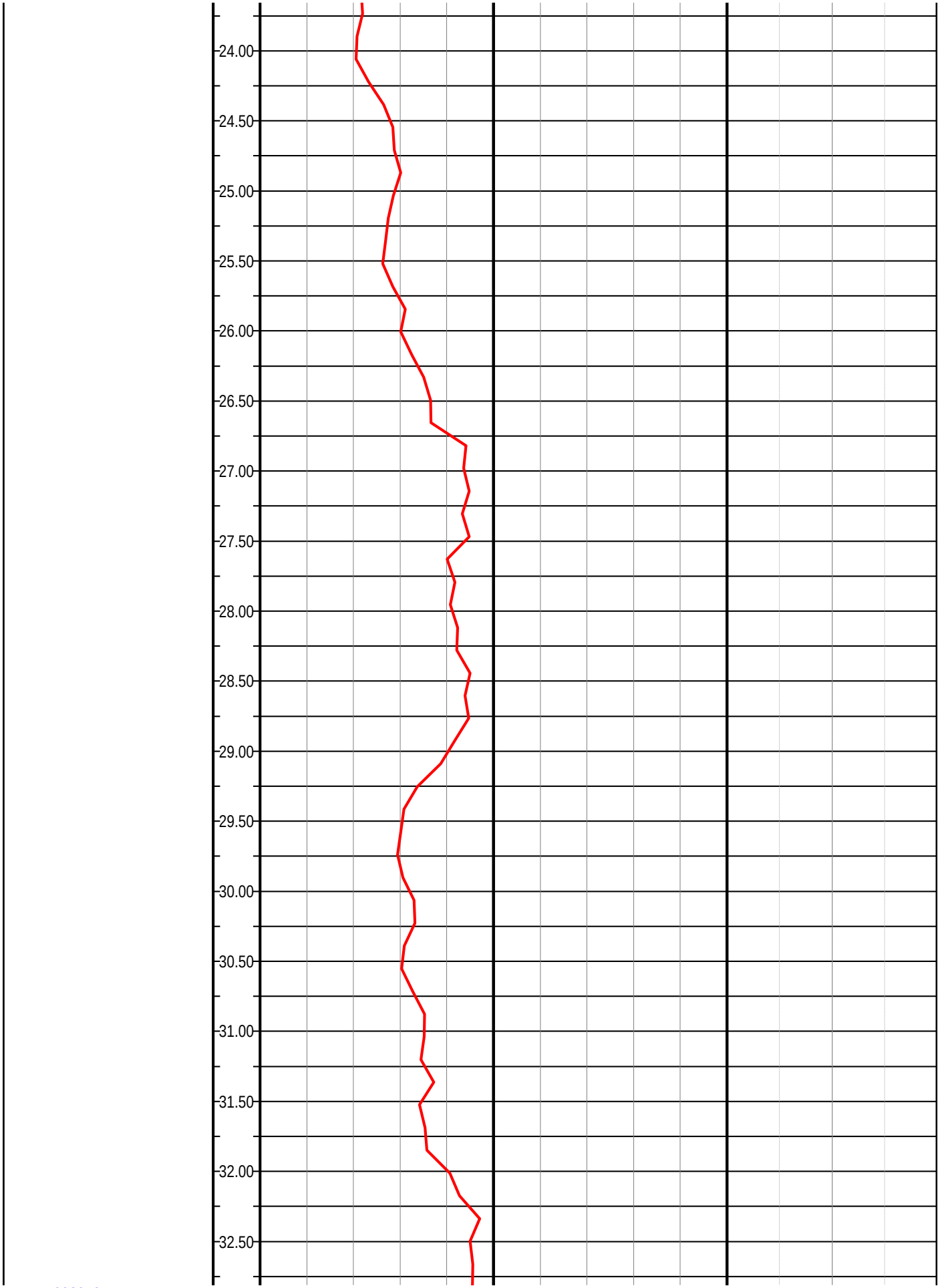
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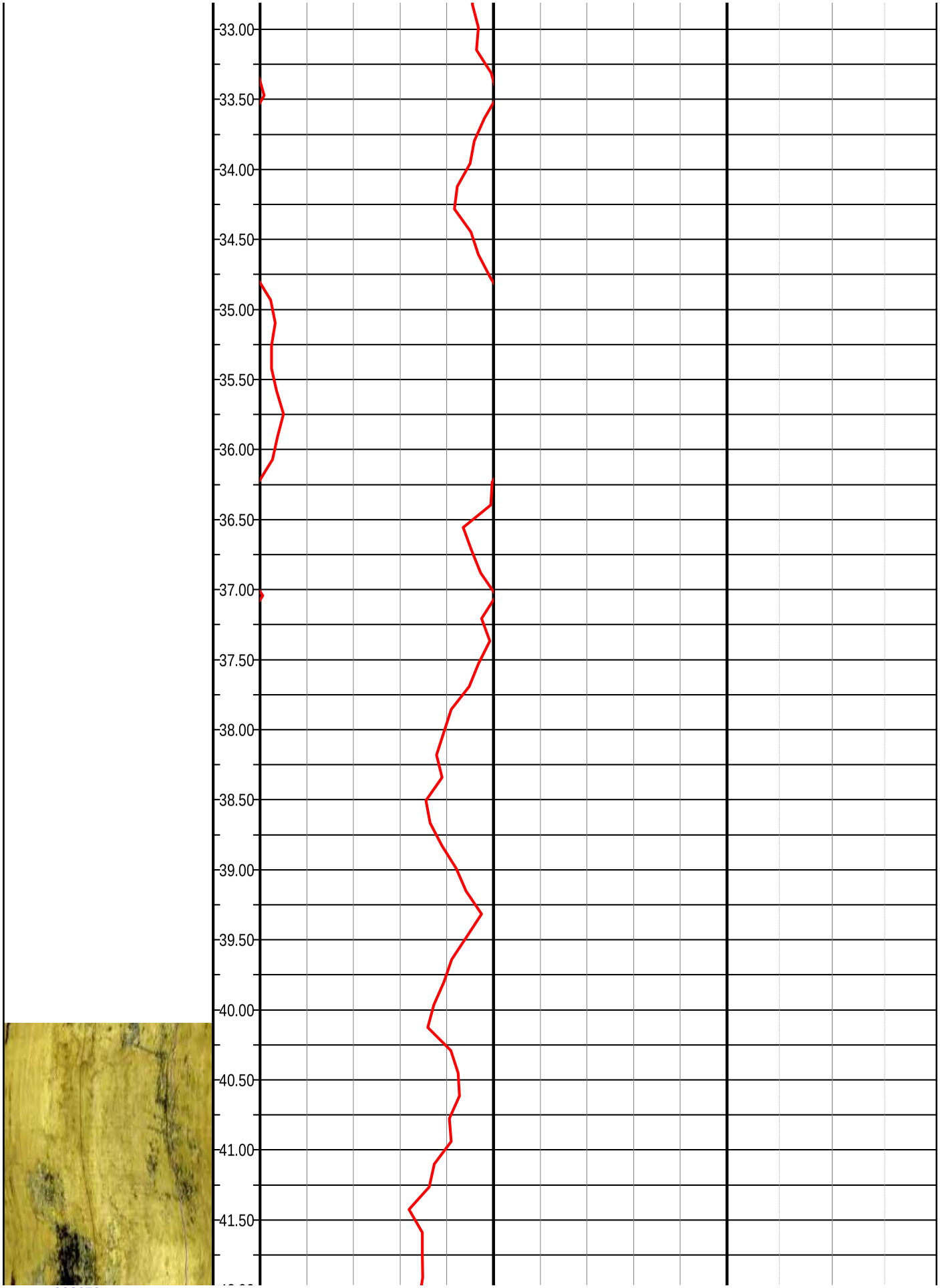
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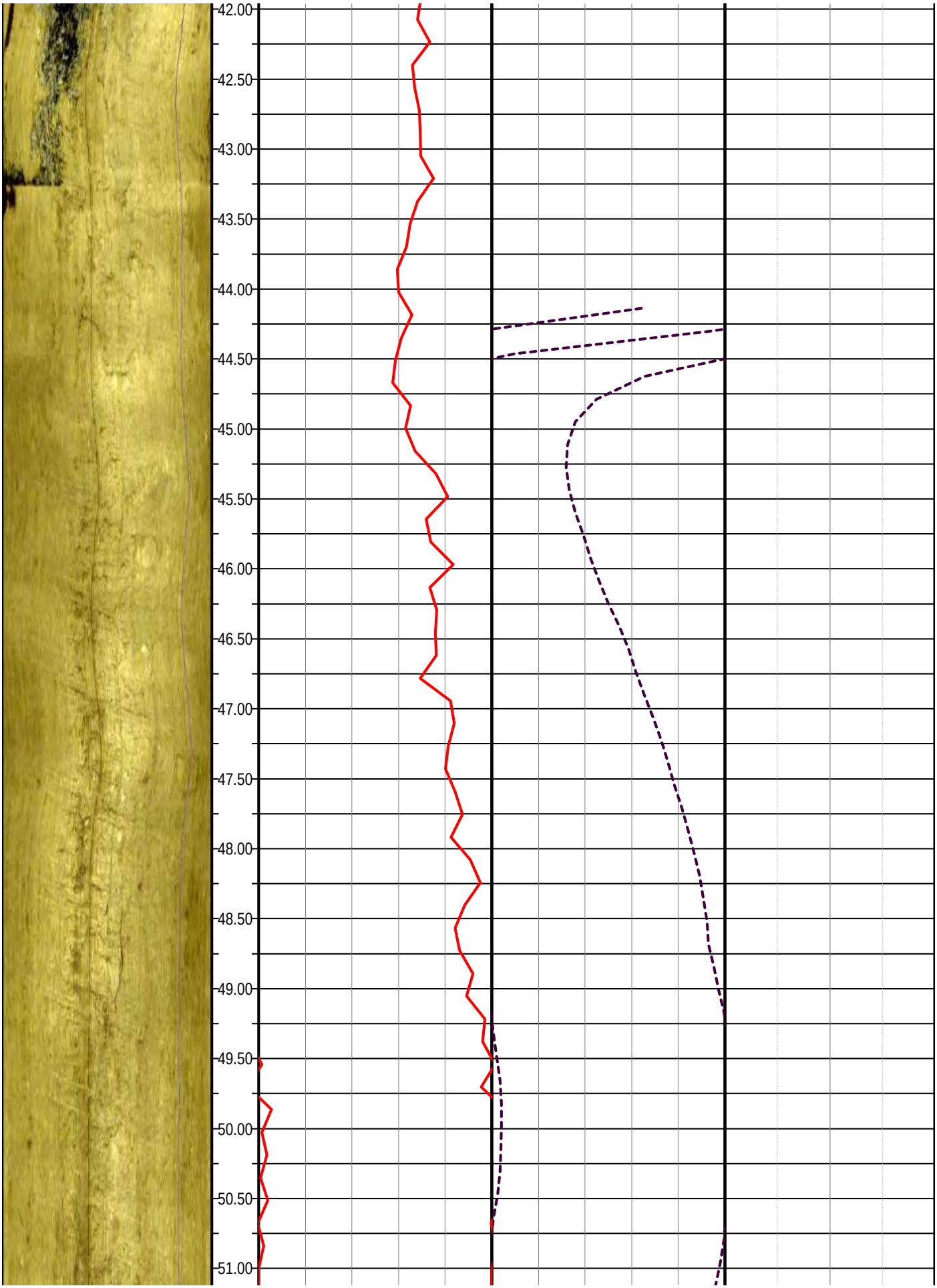
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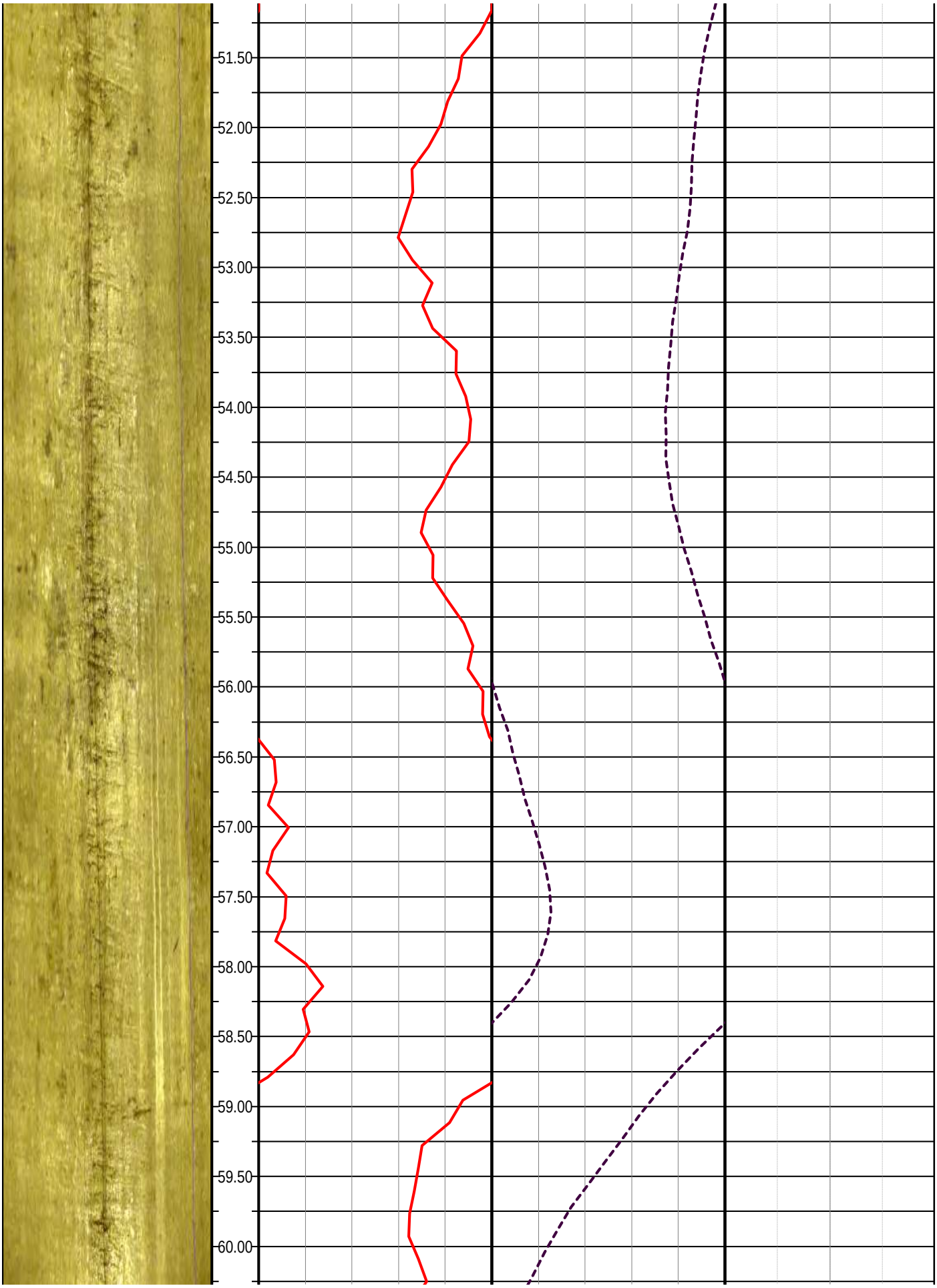
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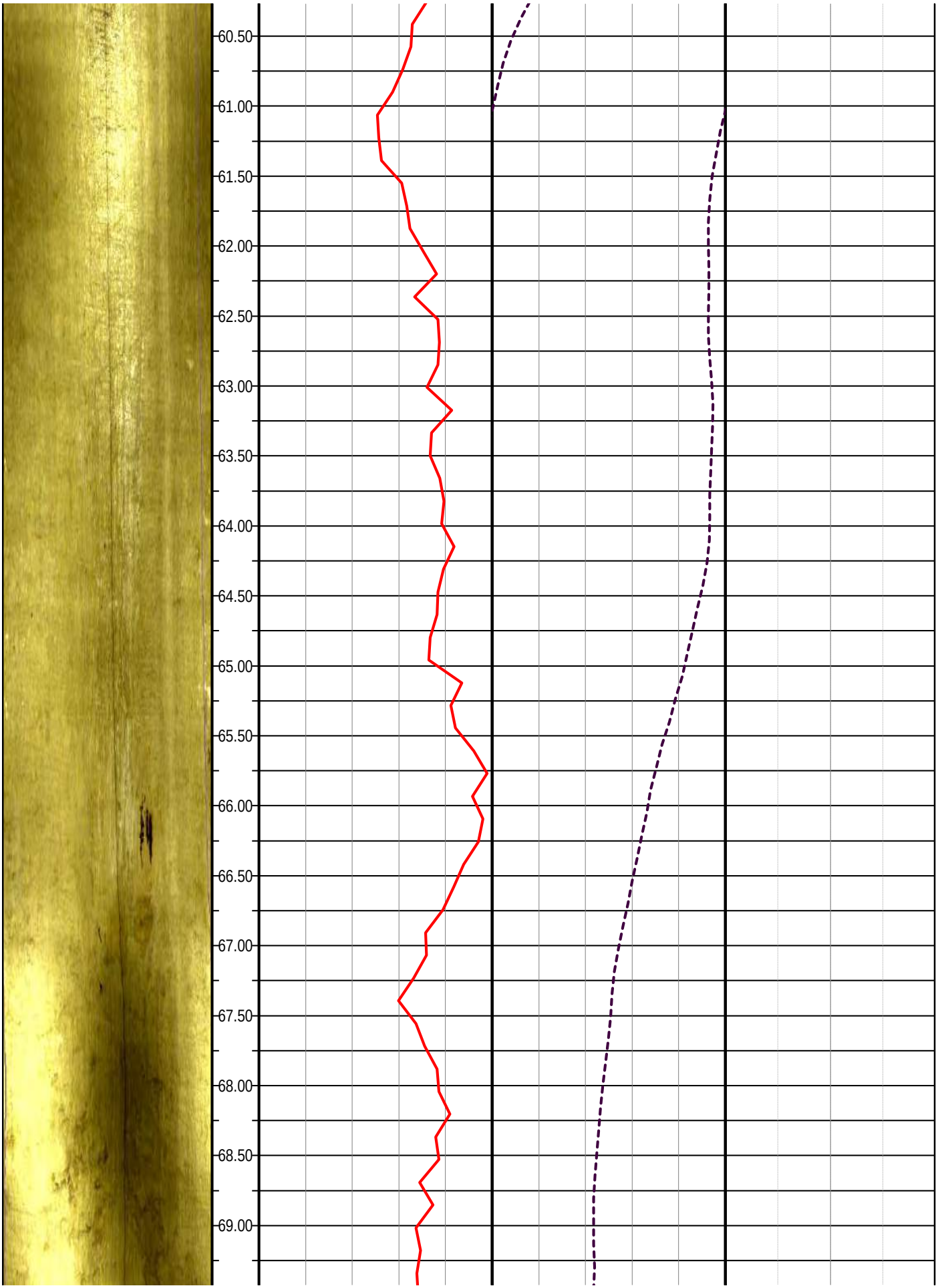
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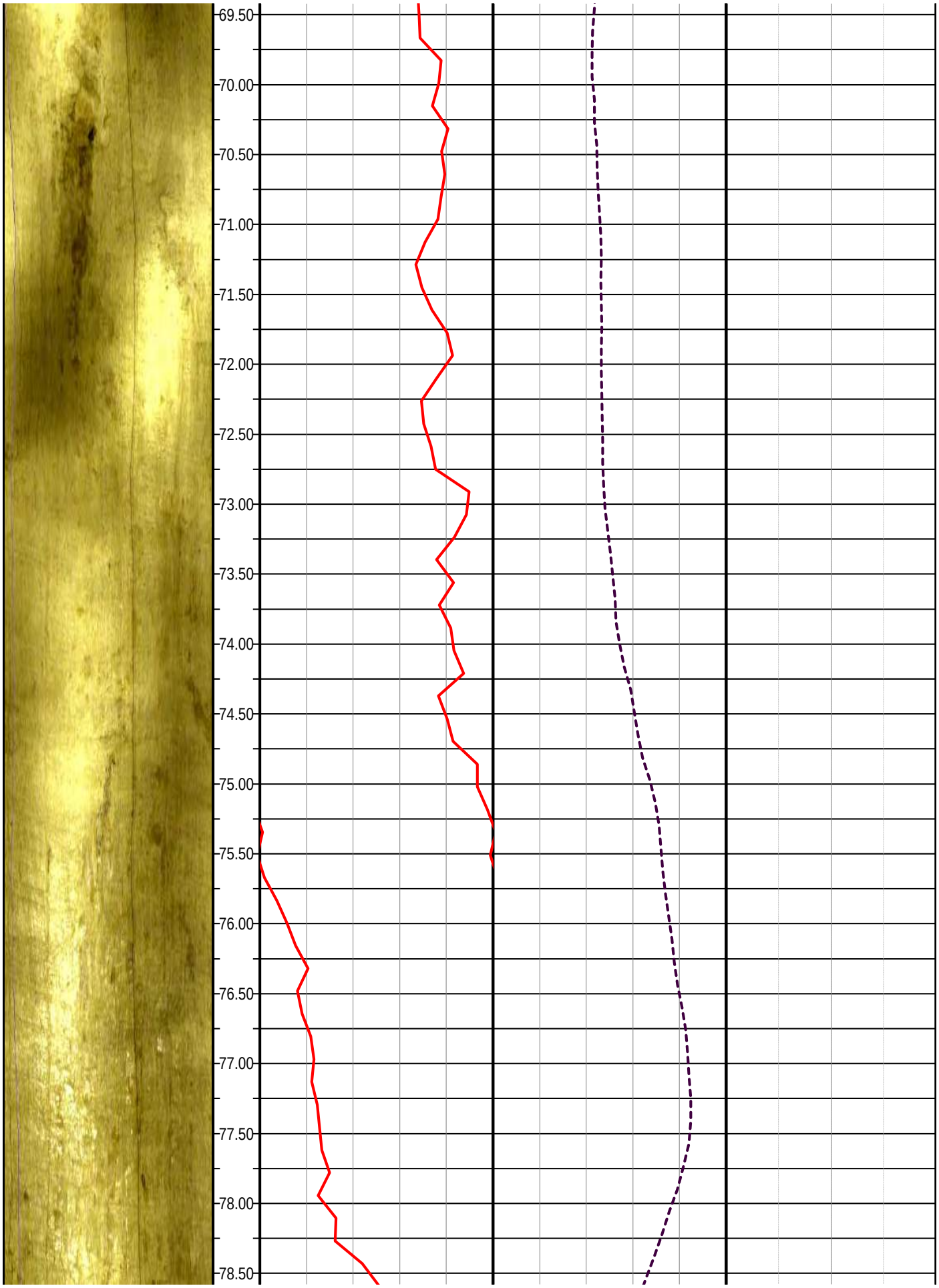
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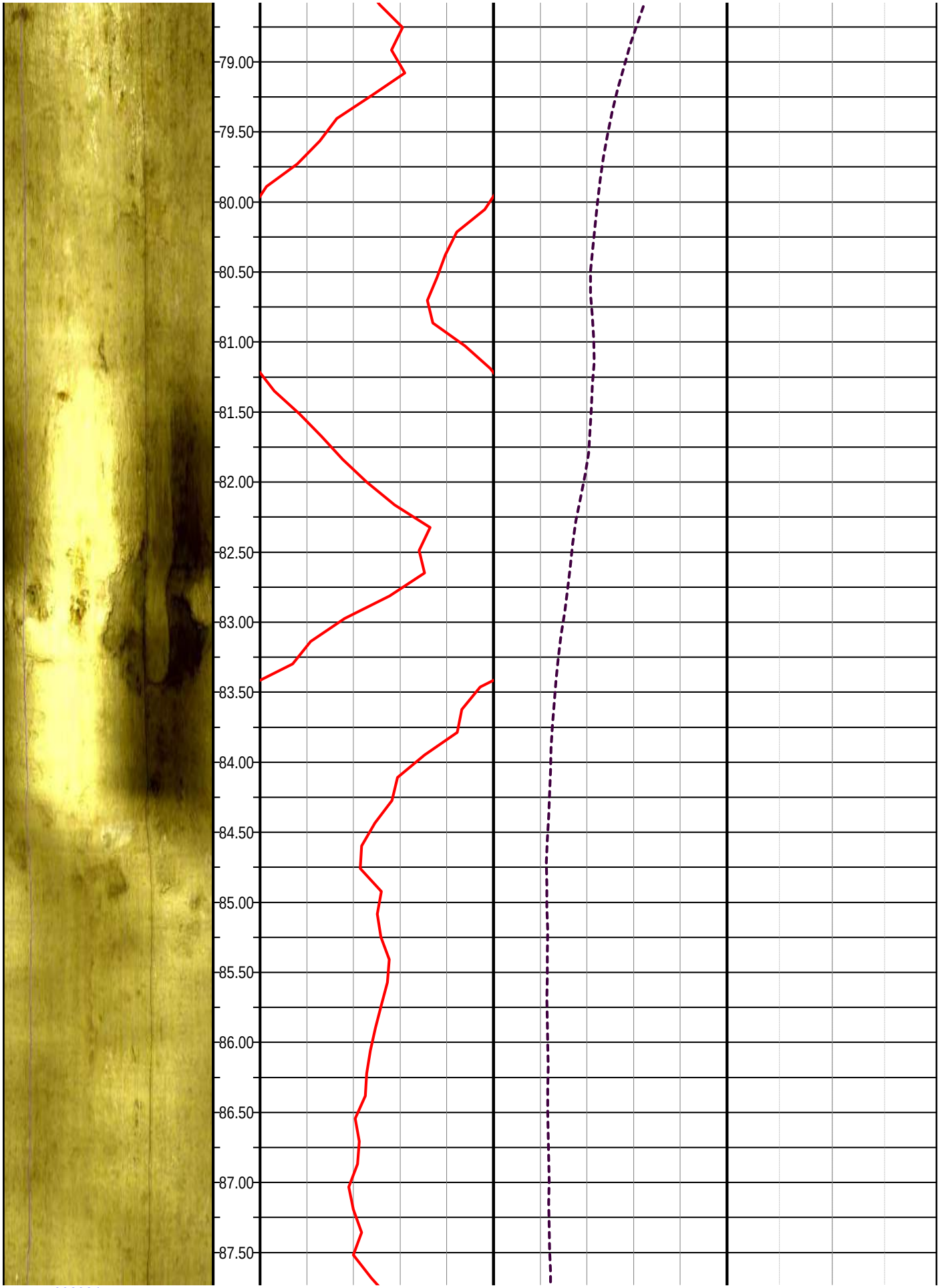
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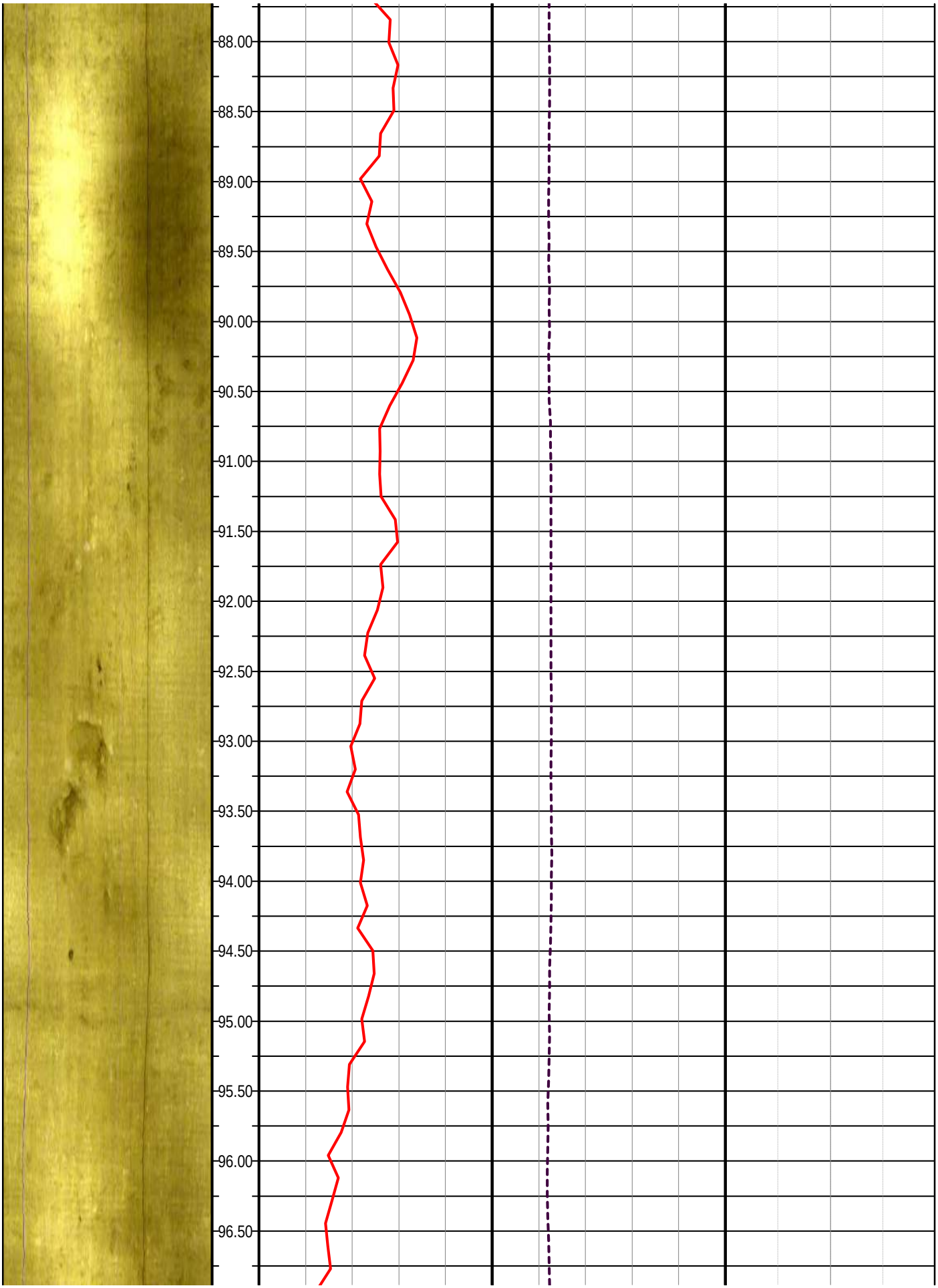
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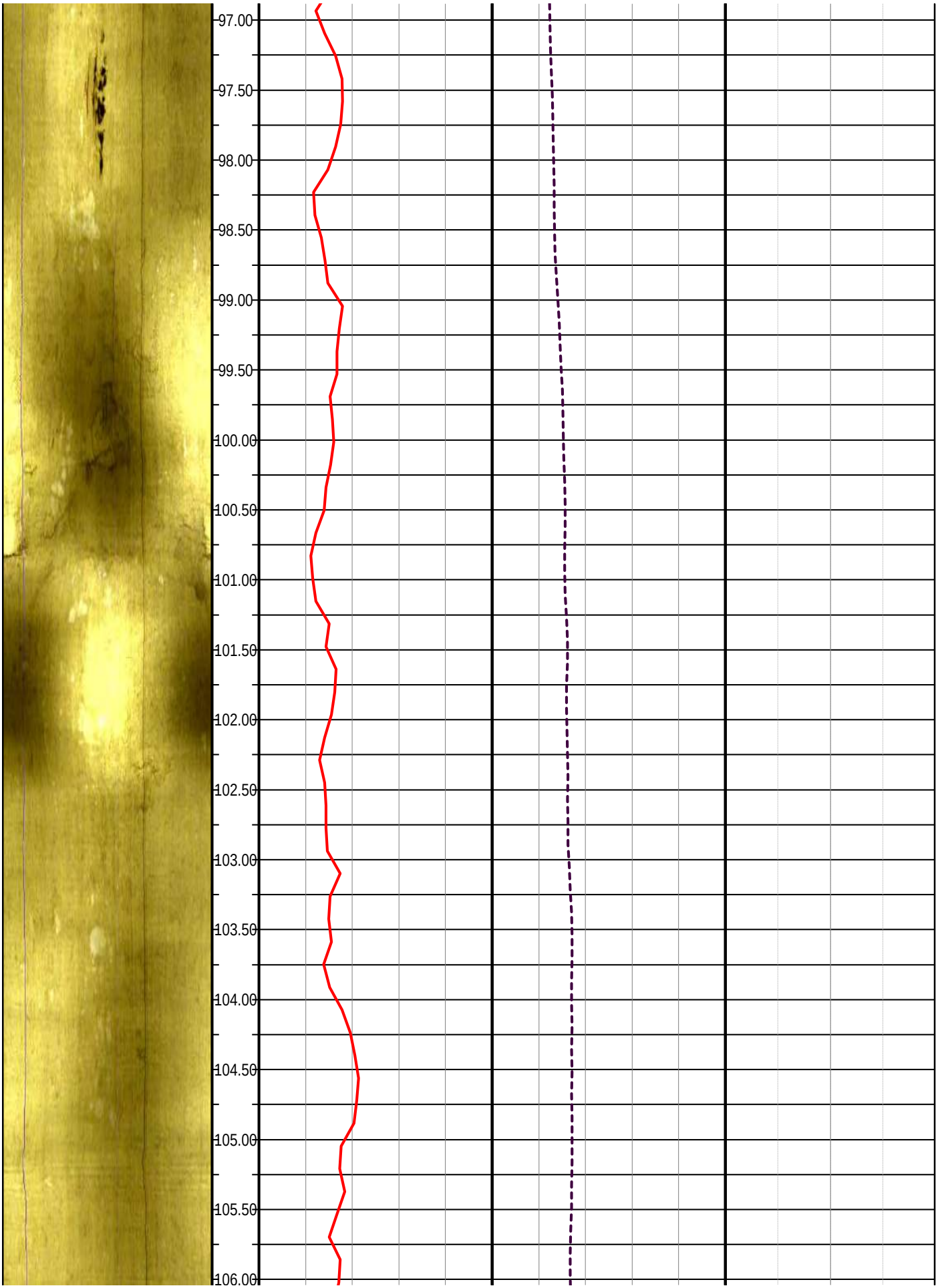
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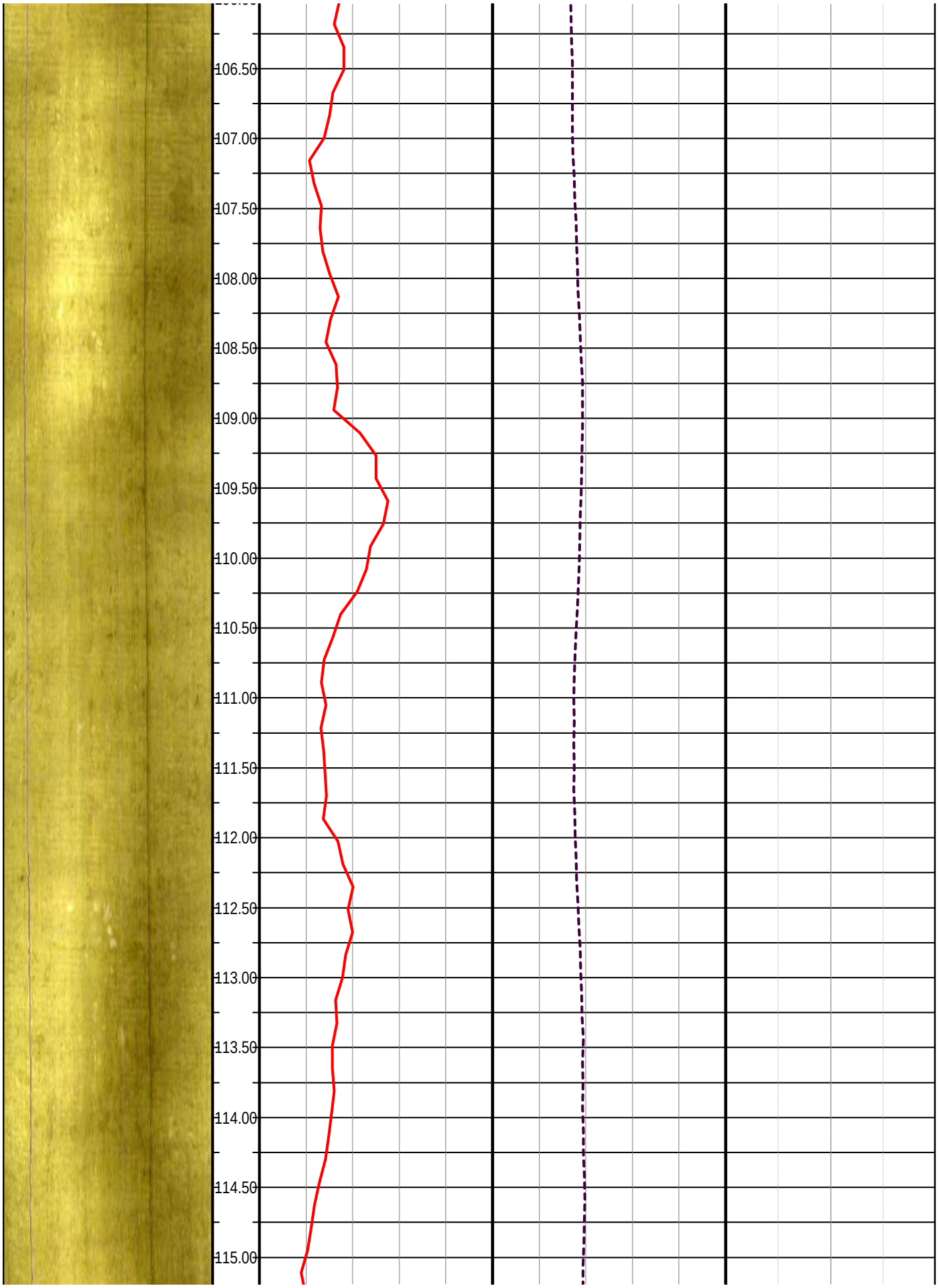
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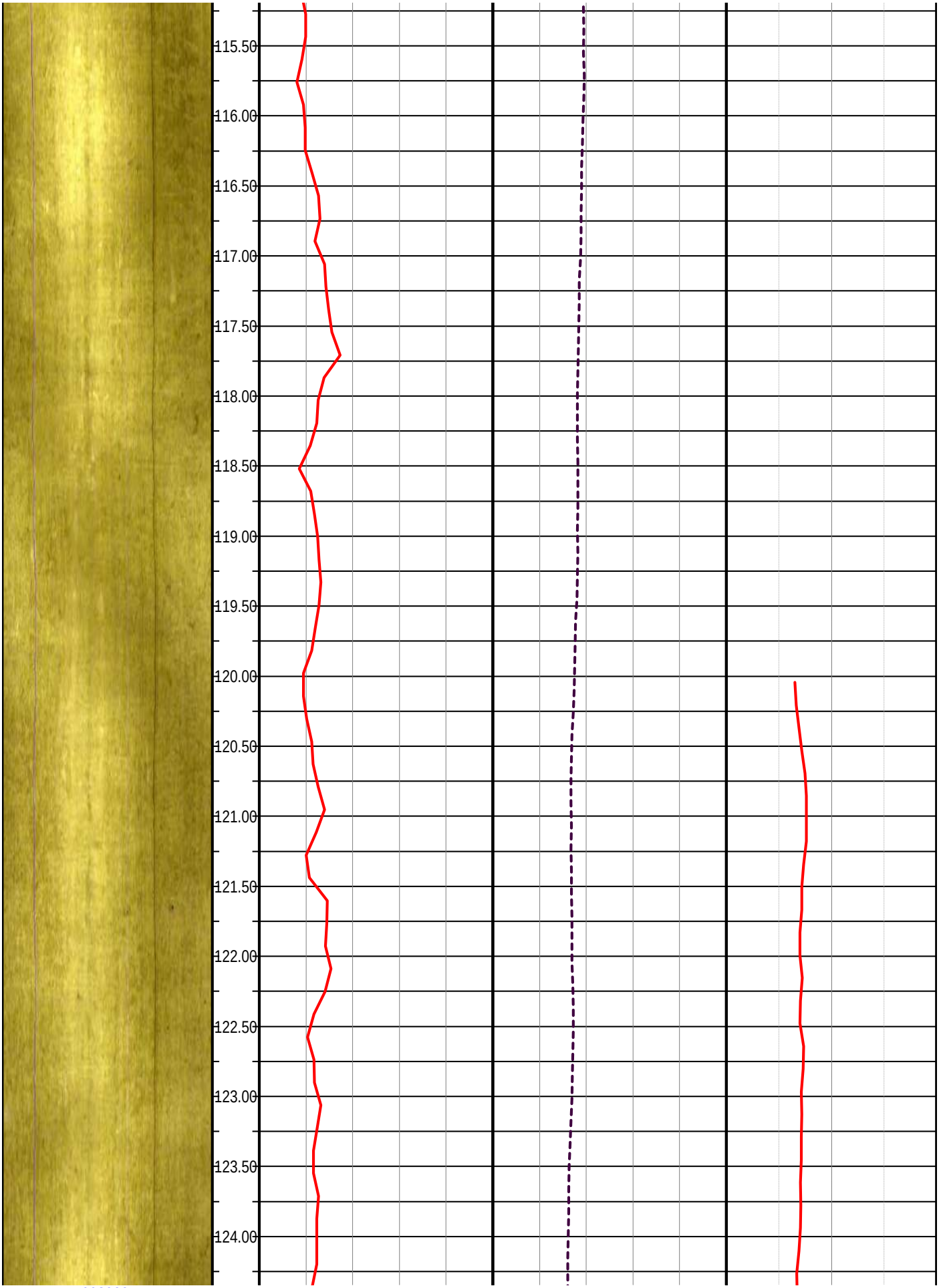
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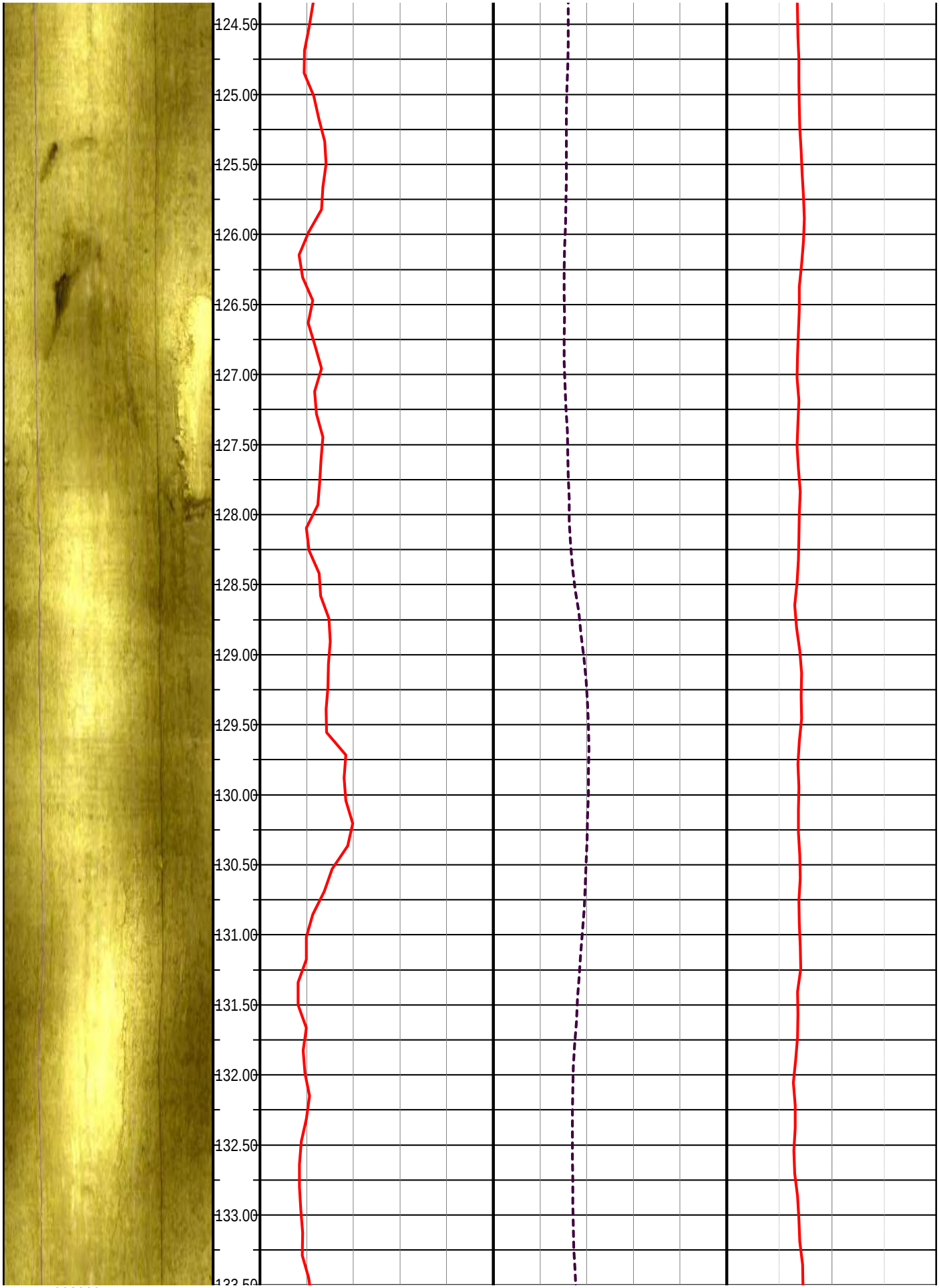
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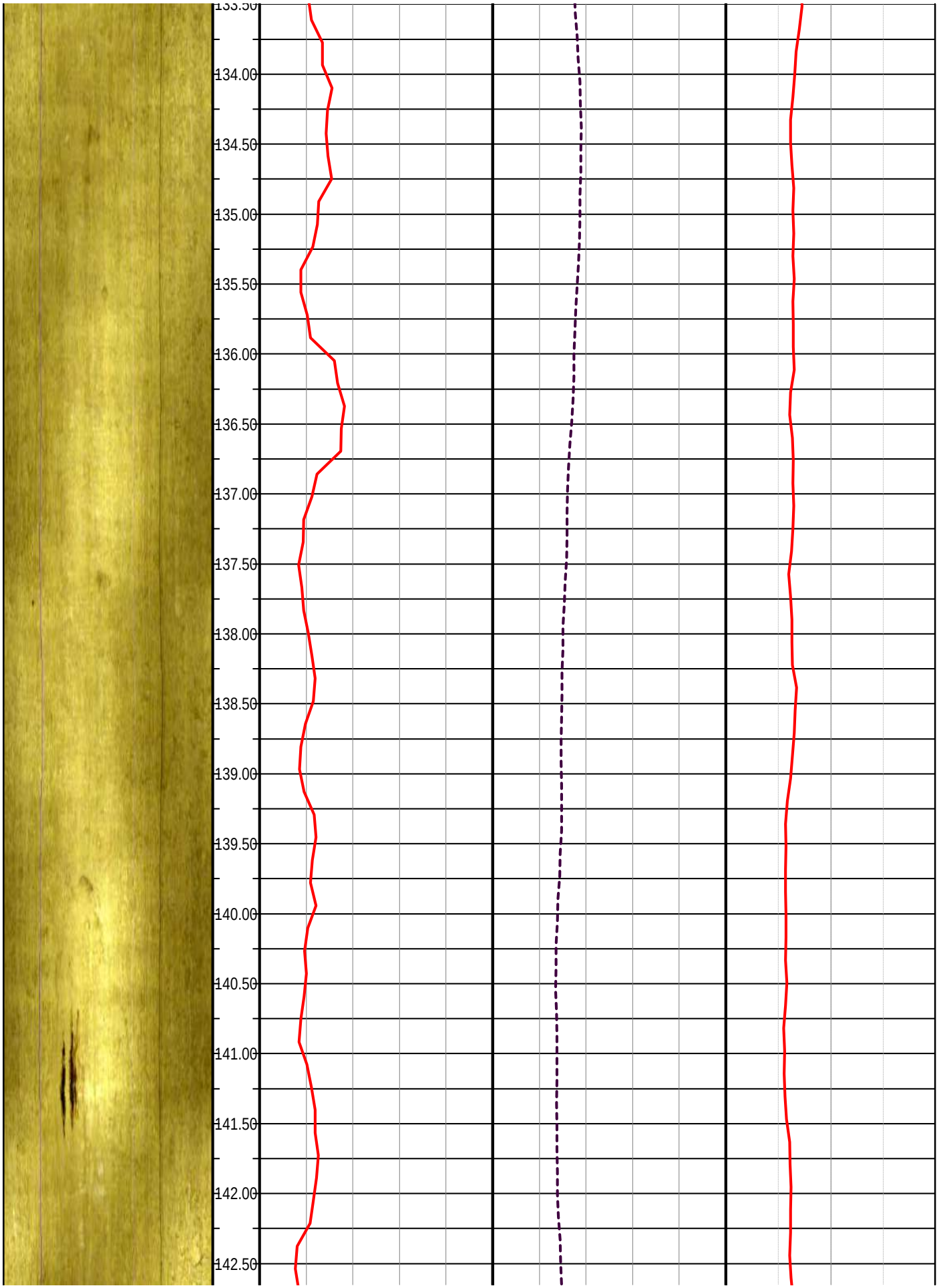
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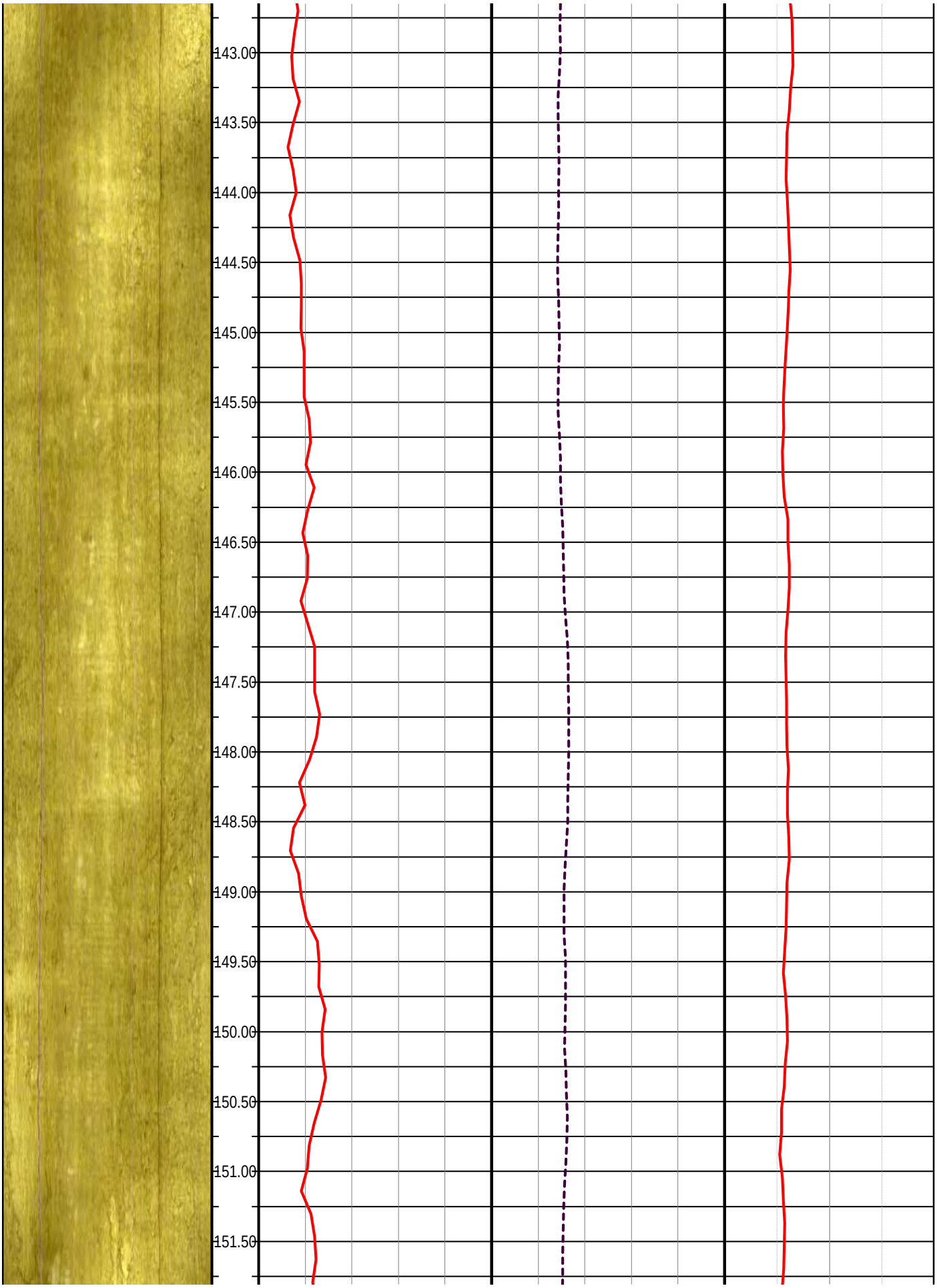
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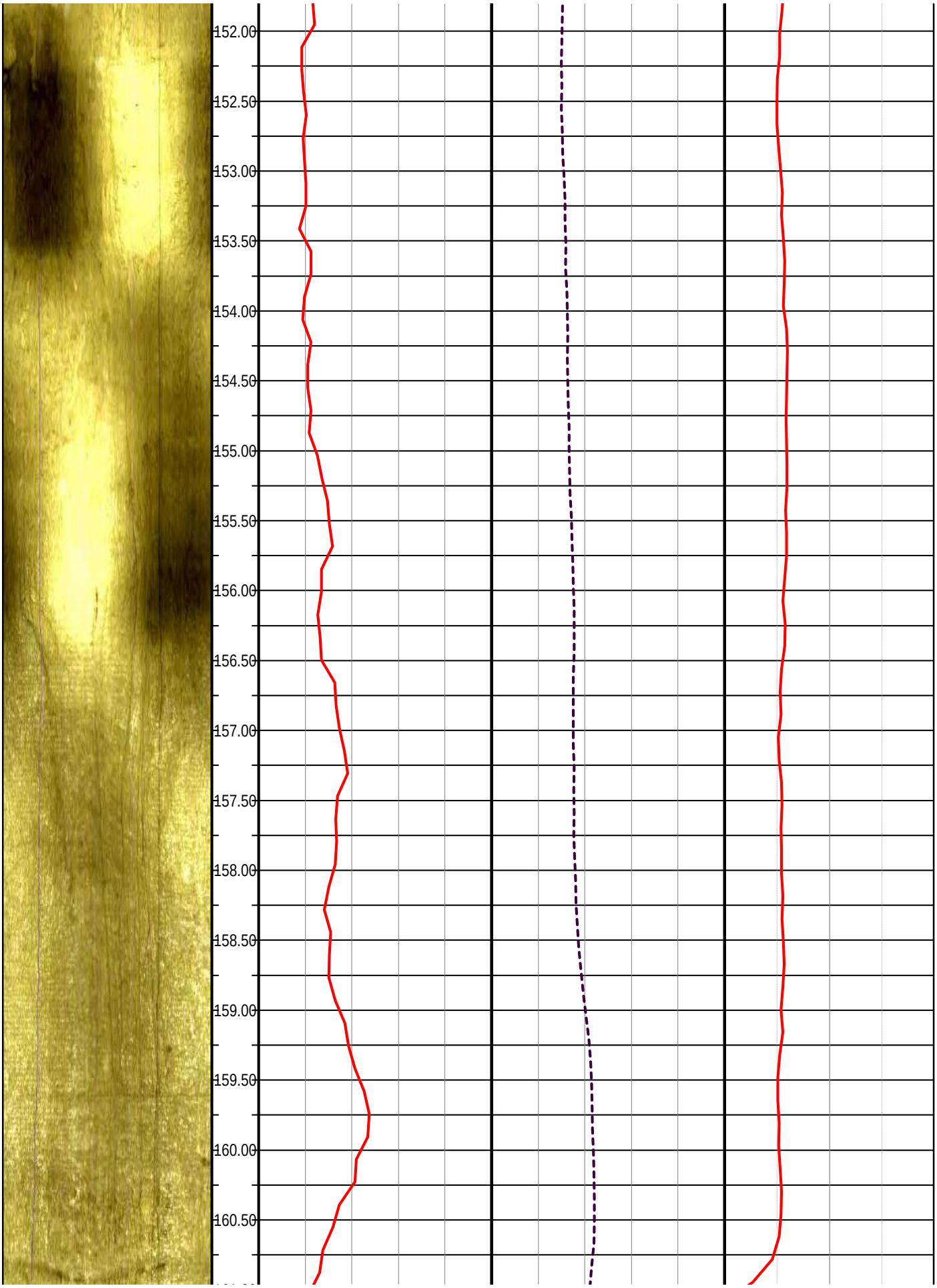
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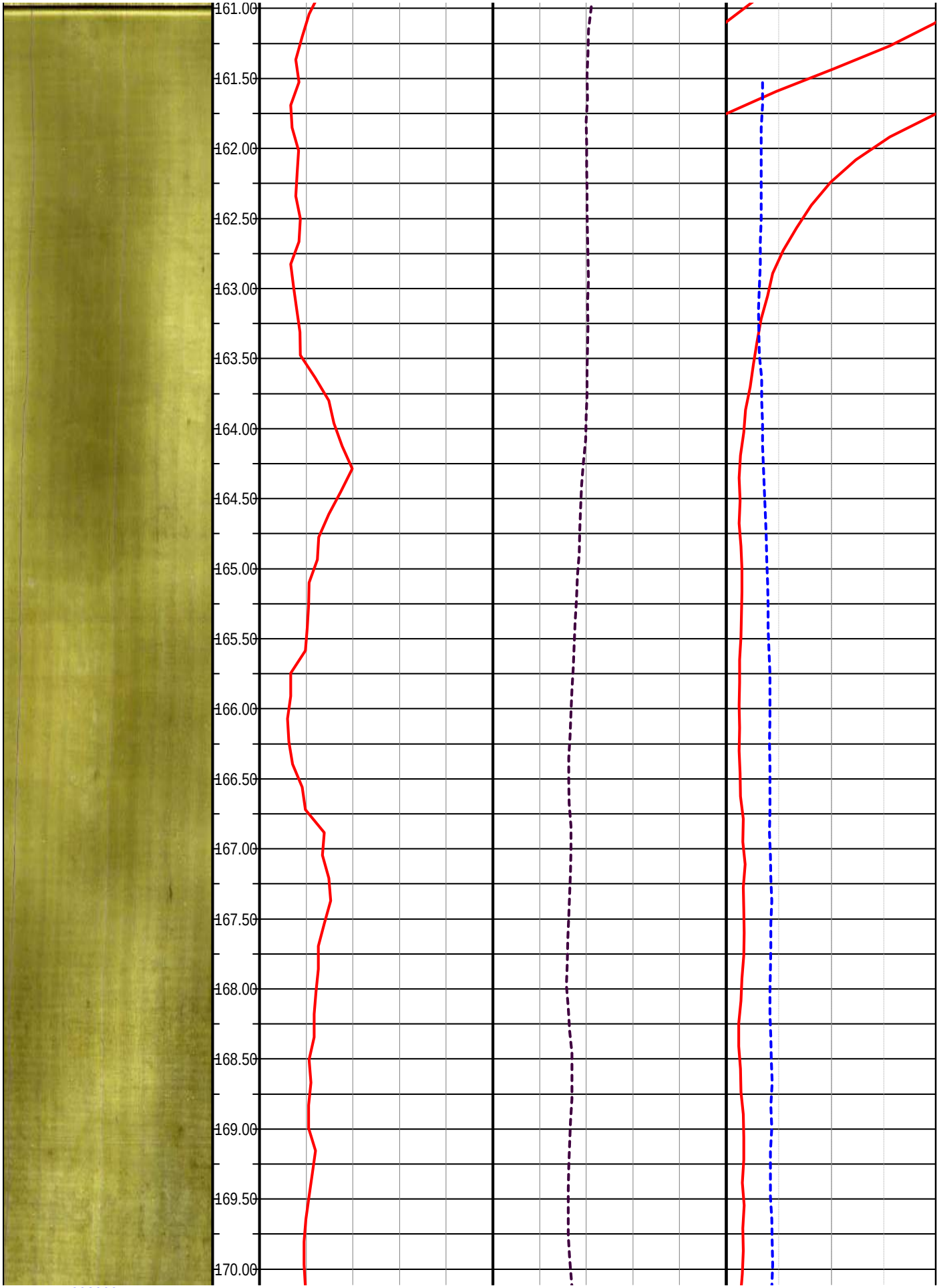
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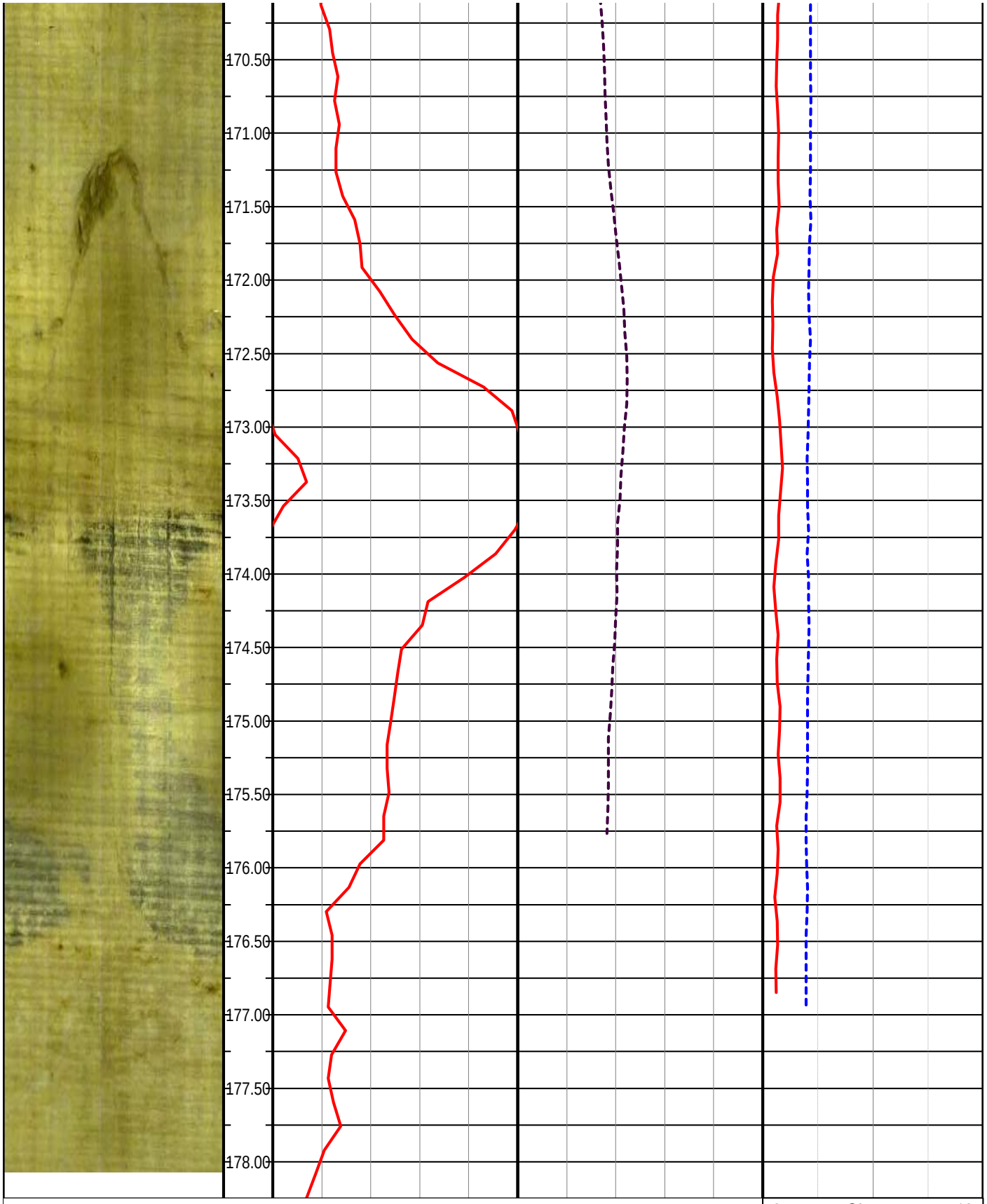


RIVER CITY METAL FINISHING SUPERFUND SITE MW-06

0° 90° 180° 270° 0° | 1:10 | 0 cps 100 | 0 mS/m 100 | 21 Deg C 22

002094

Image-NM	Depth	Gamma	Conductivity	Temp.

GEO CAM

Geophysical Logging & Video Services

17118 Classen Road, San Antonio, TX 78247 Toll Free: (877) 495-9121

Field Generated Video Data Sheet **Date:** 4/7/20

Client: EA Engineering Well Name: Well 7

Location: 12040 Potranco Rd Reason for Video: General Survey

Driller TD: 220' Video TD: 226' USB Copies: 0

Age of Well: NA Pump Depth: NA Oil: None Survey By: DS

Casing / I.D.	Type	From	To	Joints
8"	Steel	+2.2'	43.1	
openhole		43.1'	226'	

Water Level: 159'

Ref. Point: IC.

Type of Perforations: open hole completion

N 29° 25' 48.9" W 98° 43' 53.7" Elev 857'

Depths	Description
	Little to light scaling on casing
43.1'	End of Casing
73'	Large Vug
~~58~~	Nodule buildup on walls
158.9	Water Level - Slightly cloudy with suspended particles
194	Vertical Fracture - possible flow
226.3	TD - Soft Bottom

Note: All measurements are taken from side-view; operator will add proper depth to objects viewed through down-hole lens. **This is a field generated data report. For a more comprehensive typed report with still photos, please request from operator at time of survey**

GEO CAM

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen rd. San Antonio, TX 78247 877-495-9121

Borehole: MW-07

Logs: GAMMA, EM39 COND., TEMP., FL RES.

Project: RIVER CITY METAL FINISHING SUPERFUND

Date: 04/07/2020

Client: EA ENGINEERING

County: BEXAR

Location: N 29 25 48.4 W 98 43 53.7

State: TX

BOREHOLE DATA

Drilling Contractor: NA

Driller T.D. (ft) : NA

Elevation: 857' GPS

Logger T.D. (ft) : 226'

Depth Ref: T.C.

Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			8" STEEL	+2.2'	43.1'
2						
3						

Drill Method: NA

Weight:

Fluid Level (ft) : 159'

Hole Medium:

Mud Type: WATER

Time Since Circ: NA

Viscosity:

Rm: at: Deg C

GENERAL DATA

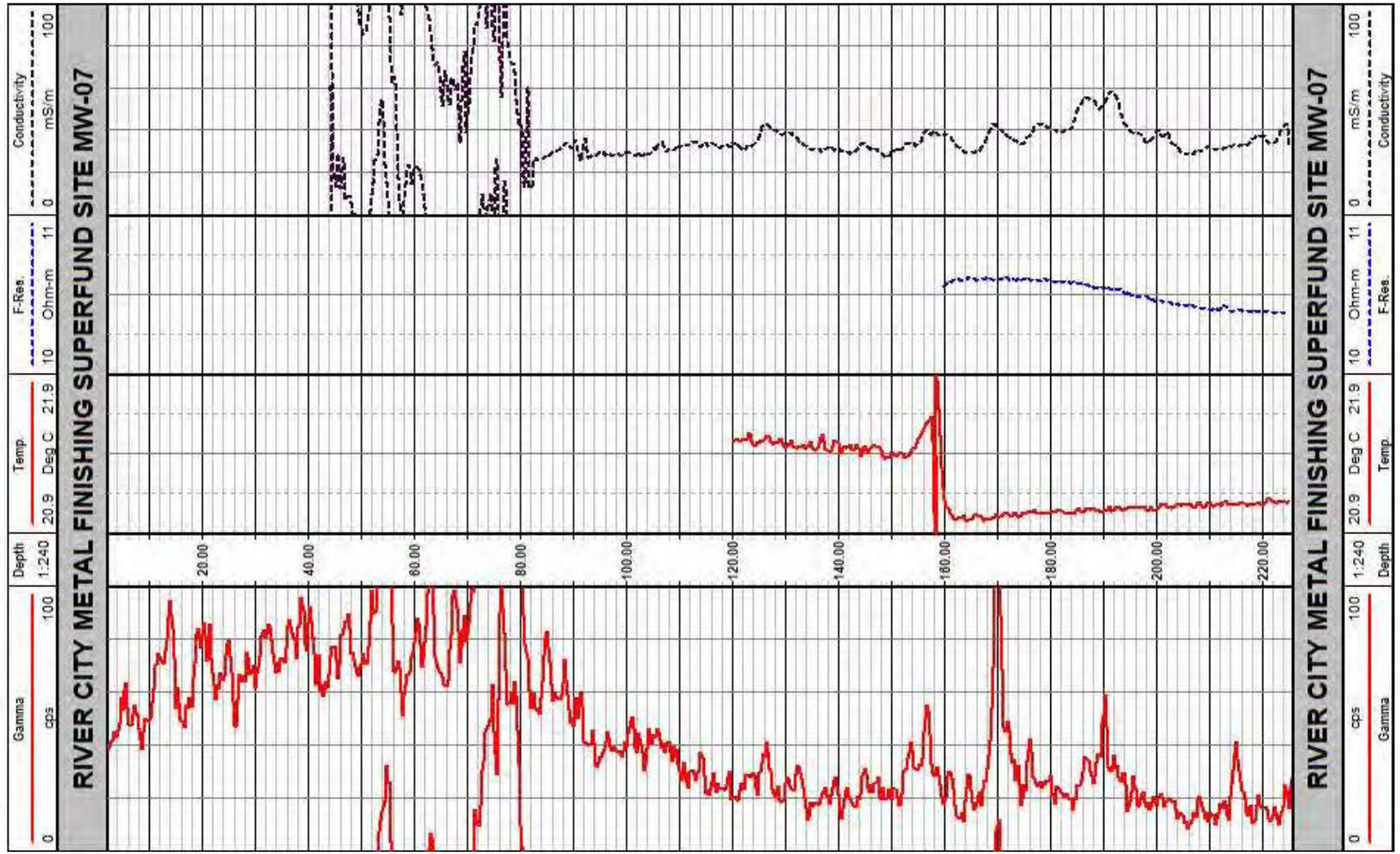
Logged by: ADAM ROBERTS

Unit/Truck: 08

Witness: DAVID

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	5	30	2.3'	225.8'	20
TEMP, FLRES	4	30	120'	225'	20
EM39 COND	2,3	30	44.1'	225'	20
Tool Serial No.					

Comments: ALL MEASUREMENTS TAKEN FROM TOP OF CASING



GEO CAM

Borehole: **MW-07**

Logs: **GAMMA, EM39 COND., TEMP., FL RES.**

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen rd. San Antonio, TX 78247 877-495-9121

Project: **RIVER CITY METAL FINISHING SUPERFUND** Date: 04/07/2020

Client: **EA ENGINEERING** County: BEXAR

Location: **N 29 25 48.4 W 98 43 53.7** State: TX

BOREHOLE DATA

Drilling Contractor: NA **Driller T.D. (ft) : NA**

Elevation: 857' GPS Logger T.D. (ft) : 226'

Depth Ref: T.C. Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			8" STEEL	+2.2'	43.1'
2						
3						

Drill Method: NA Weight: **Fluid Level (ft) :** 159'

Hole Medium: Mud Type: WATER Time Since Circ: NA

Viscosity: Rm: at: Deg C

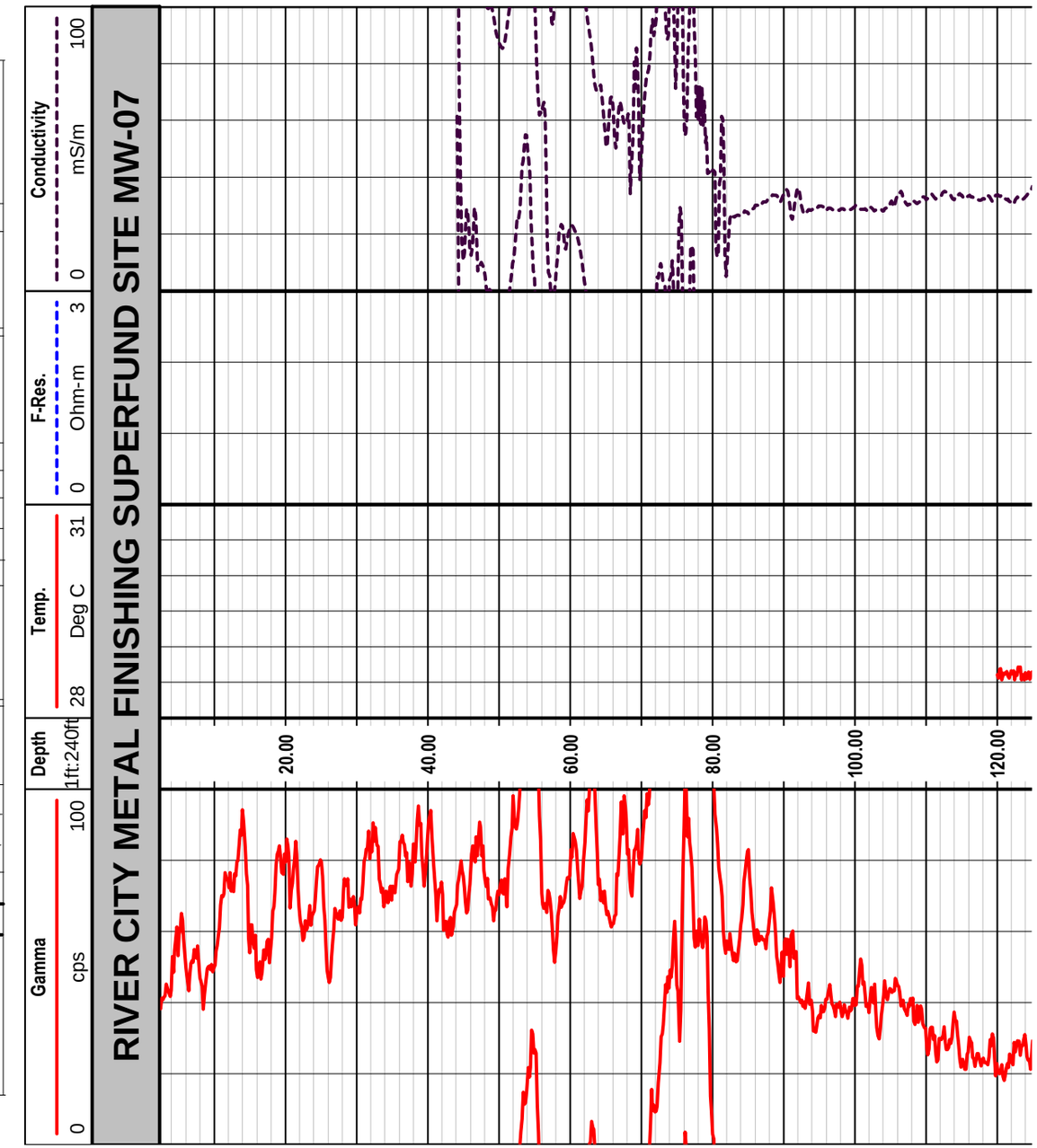
GENERAL DATA

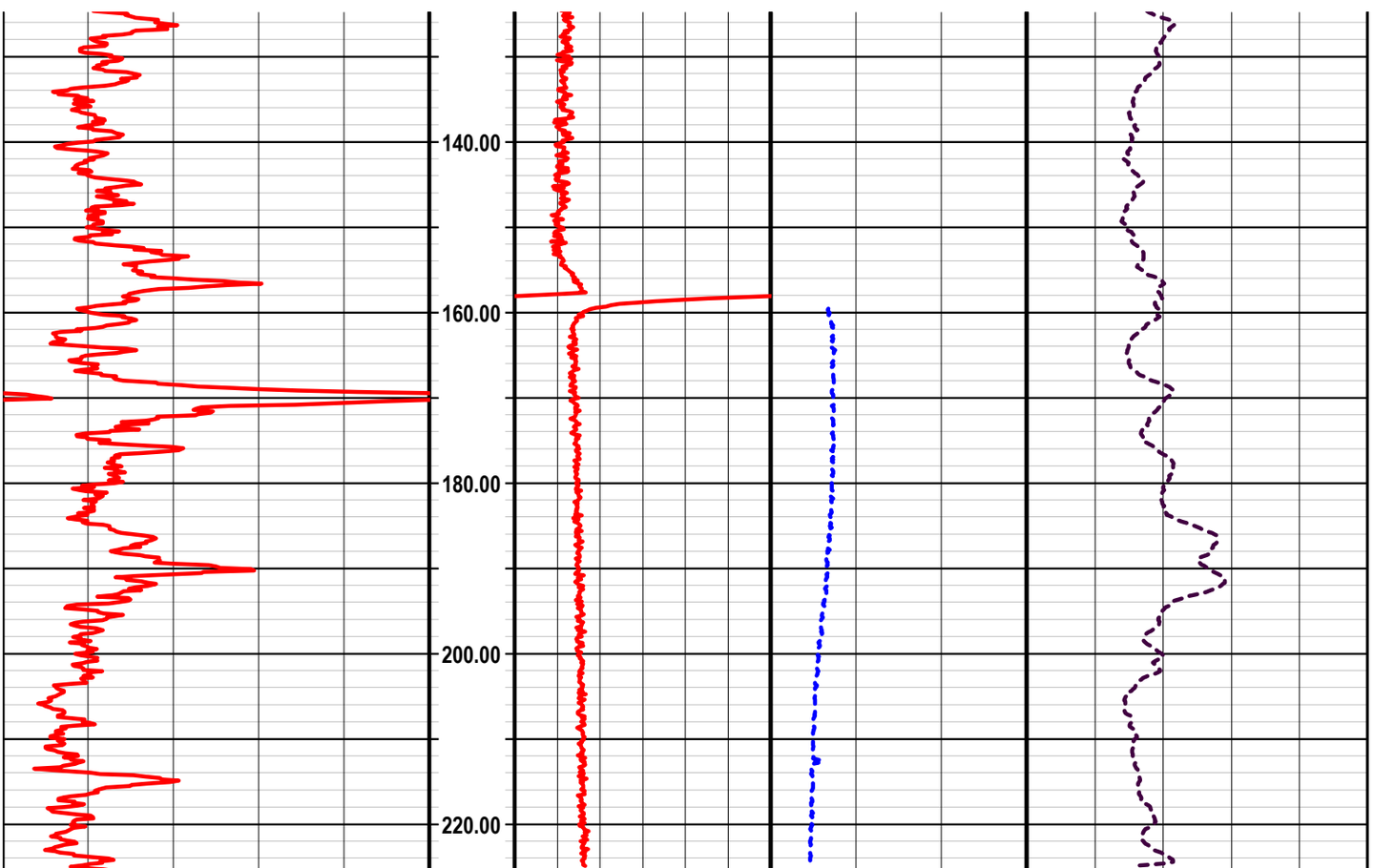
Logged by: ADAM ROBERTS Unit/Truck: 08

Witness: DAVID

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	5	30	2.3'	225.8'	20
TEMP, FLRES	4	30	120'	225'	20
EM39 COND.	2,3	30	44.1'	225'	20
Tool Serial No.					

Comments: ALL MEASUREMENTS TAKEN FROM TOP OF CASING





RIVER CITY METAL FINISHING SUPERFUND SITE MW-07

Gamma	Depth	Temp.	F-Res.	Conductivity
0 cps 100	1ft:240ft	28 Deg C 31	0 Ohm-m 3	0 mS/m 100

GEO CAM

Geophysical Logging & Video Services

17118 Classen Road, San Antonio, TX 78247 Toll Free: (877) 495-9121

Field Generated Video Data Sheet **Date:** 4/7/20

Client: EA Engineering Well Name: Well 8

Location: 12040 Potranco Rd Reason for Video: General Survey

Driller TD: 220' Video TD: 209.5' USB Copies: 2

Age of Well: N/A Pump Depth: — Oil: — Survey By: DS

Casing / I.D.	Type	From	To	Joints
8"	Steel	+1.75	42.9'	
open hole		42.9'	209.5'	

Water Level: 158'

Ref. Point: T.C.

Type of Perforations: open hole completion

N 29° 25' 48.9' W 98° 43' 53.8" Elev. 863'

Depths	Description
	Light Scaling on casing
42.9	End of casing -
	Possible Reduction
158.5'	Water level - clear with a few suspended particles
~~[illegible]~~ 190	Vug
205	Small Fracture
209.5	TD - Soft Bottom

Note: All measurements are taken from side-view; operator will add proper depth to objects viewed through down-hole lens. **This is a field generated data report. For a more comprehensive typed report with still photos, please request from operator at time of survey**

GEO CAM

Borehole: **MW-08**

Logs: **GAMMA, EM39 COND., TEMP., FL RES.**

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen rd. San Antonio, TX 78247 877-495-9121

Project: **RIVER CITY METAL FINISHING SUPERFUND** Date: 04/07/2020

Client: **EA ENGINEERING** County: BEXAR

Location: **N 29 25 48.9 W 98 43 53.8** State: TX

BOREHOLE DATA

Drilling Contractor: NA **Driller T.D. (ft) : NA**

Elevation: 863' gps Logger T.D. (ft) : 209'

Depth Ref: T.C. Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			8" STEEL	+1.75'	42.9'
2						
3						

Drill Method: NA Weight: **Fluid Level (ft) :** 158.5'

Hole Medium: Mud Type: WATER Time Since Circ:

Viscosity: Rm: at: Deg C

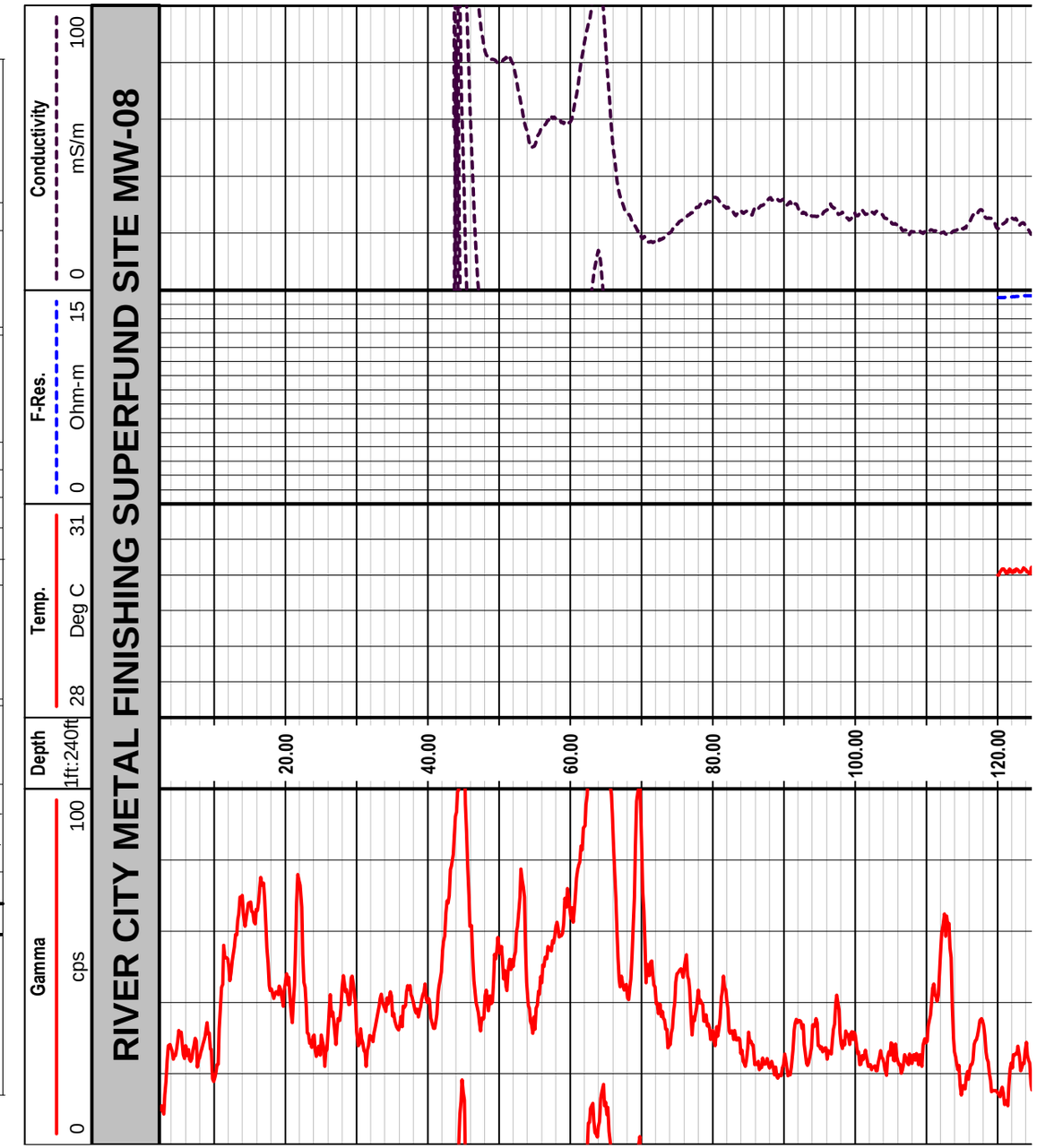
GENERAL DATA

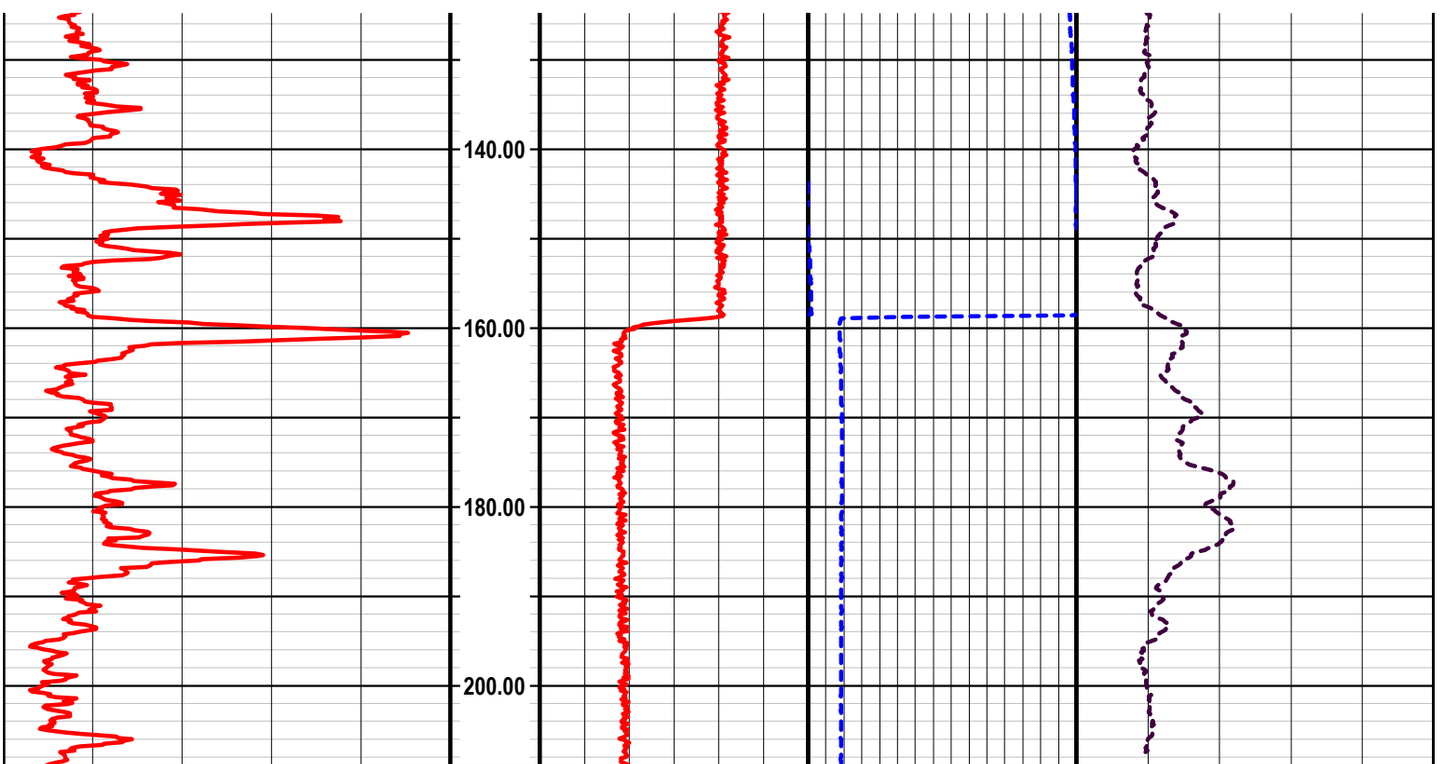
Logged by: ADAM ROBERTS Unit/Truck: 08

Witness: DAVID

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	5	30	2.3'	209'	20
TEMP, FLRES	4	30	120'	209'	20
EM39 COND.	2,3	30	43.7'	208'	20
Tool Serial No.					

Comments: ALL MEASUREMENTS TAKEN FROM TOP OF CASING





RIVER CITY METAL FINISHING SUPERFUND SITE MW-08

Gamma	Depth	Temp.	F-Res.	Conductivity
0 cps 100	1ft:240ft	28 Deg C 31	0 Ohm-m 15	0 mS/m 100

ALT

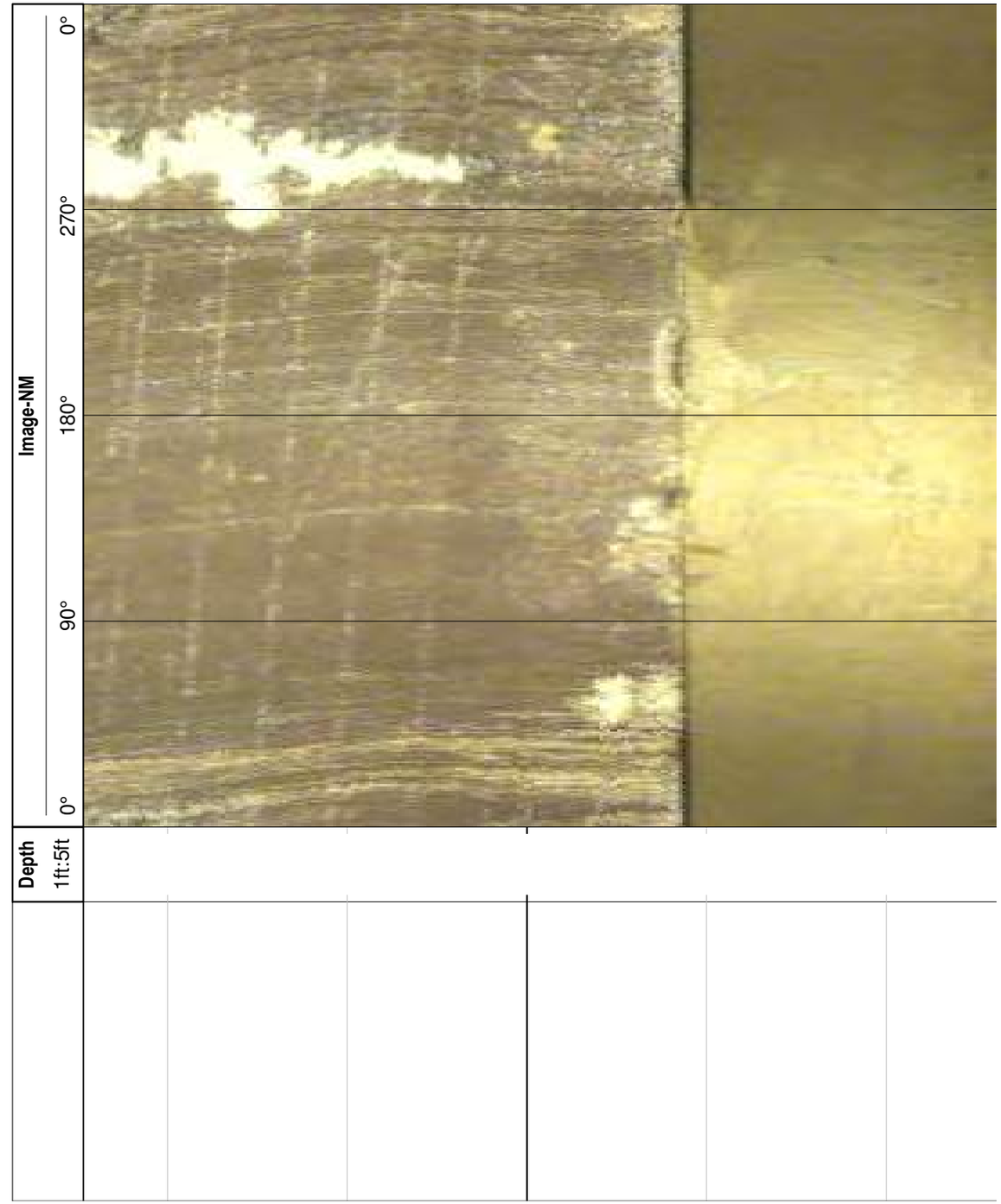
CO	COMPANY
WELL	WELL ID
FLD	FIELD
CTY	COUNTRY
STE	STATE
FILING No	

LOCATION			OTHER SERVICES
SEC	TWP	RGE	

PERMANENT DATUM	ELEVATION	K.B.
LOG MEAS. FROM	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM		G.L.

DATE		TYPE FLUID IN HOLE	
RUN No		SALINITY	
TYPE LOG		DENSITY	
DEPTH-DRILLER		LEVEL	
DEPTH-LOGGER		MAX. REC. TEMP.	
BTM LOGGED INTERVAL			
TOP LOGGED INTERVAL			
OPERATING RIG TIME			
RECORDED BY			
WITNESSED BY			

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO



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55.00

60.00

002106

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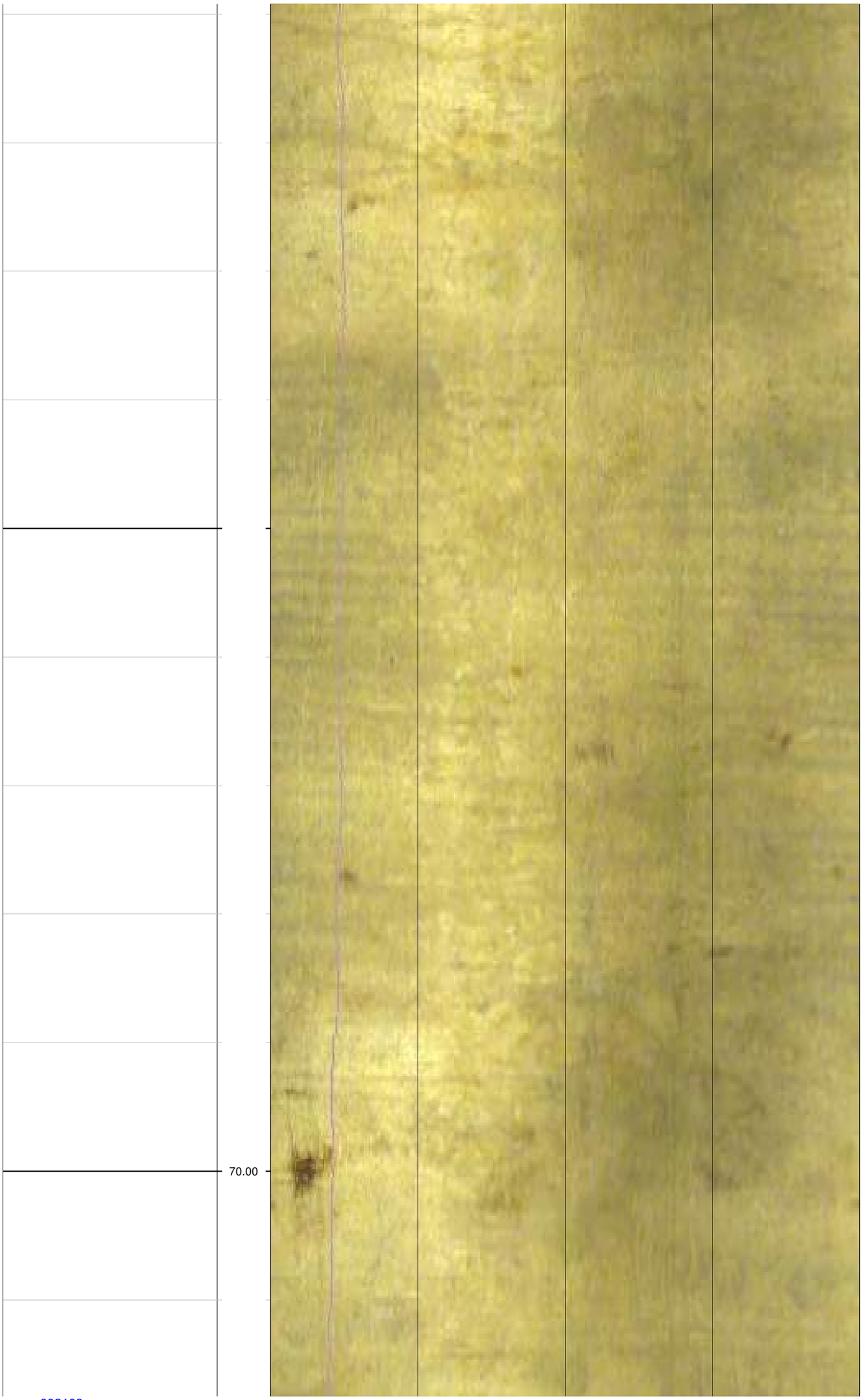
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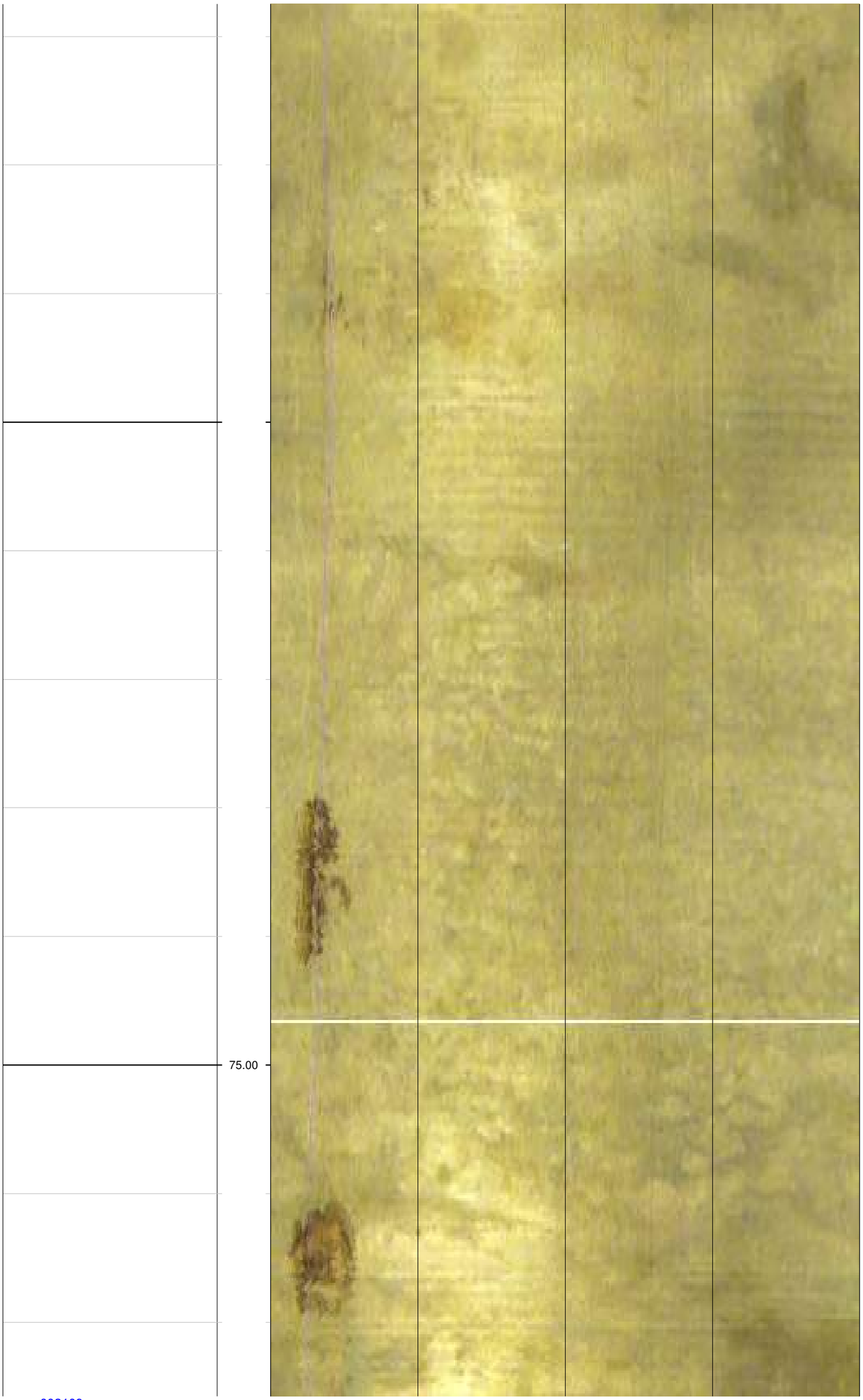
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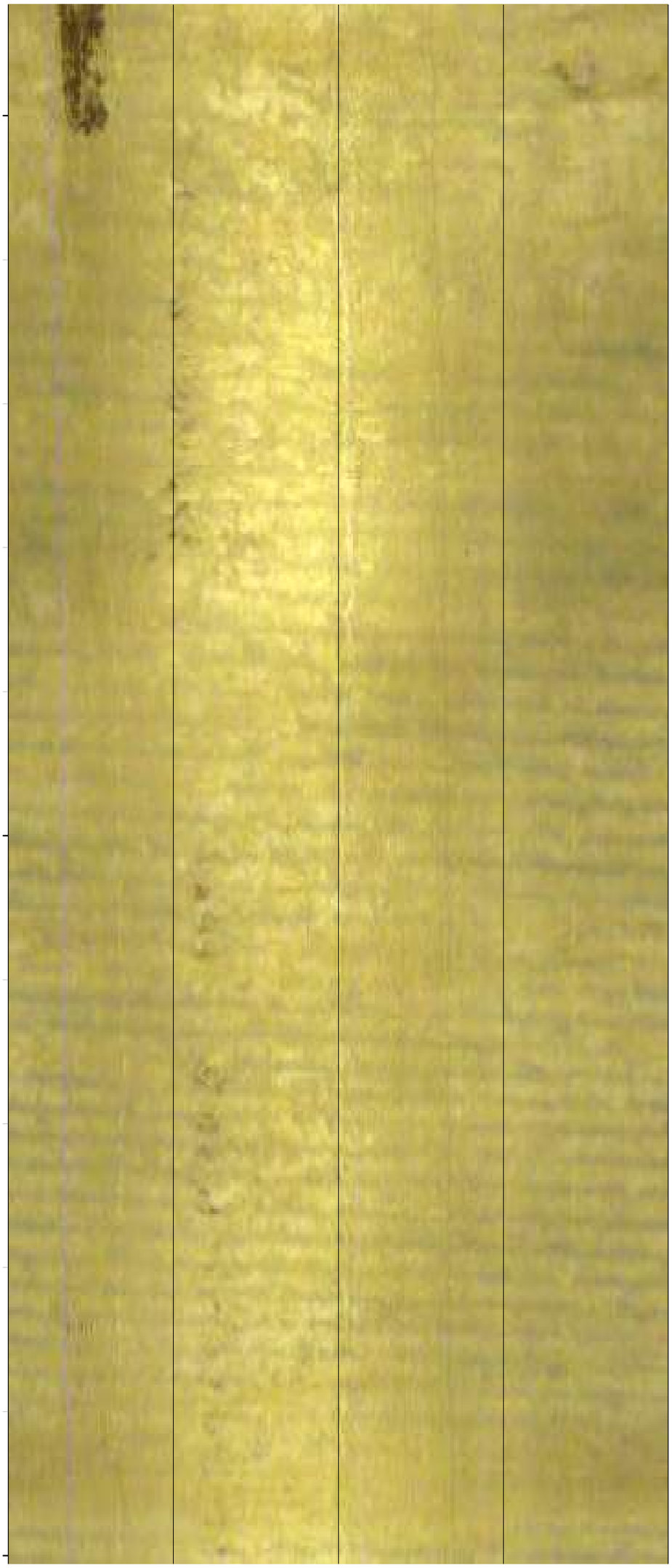

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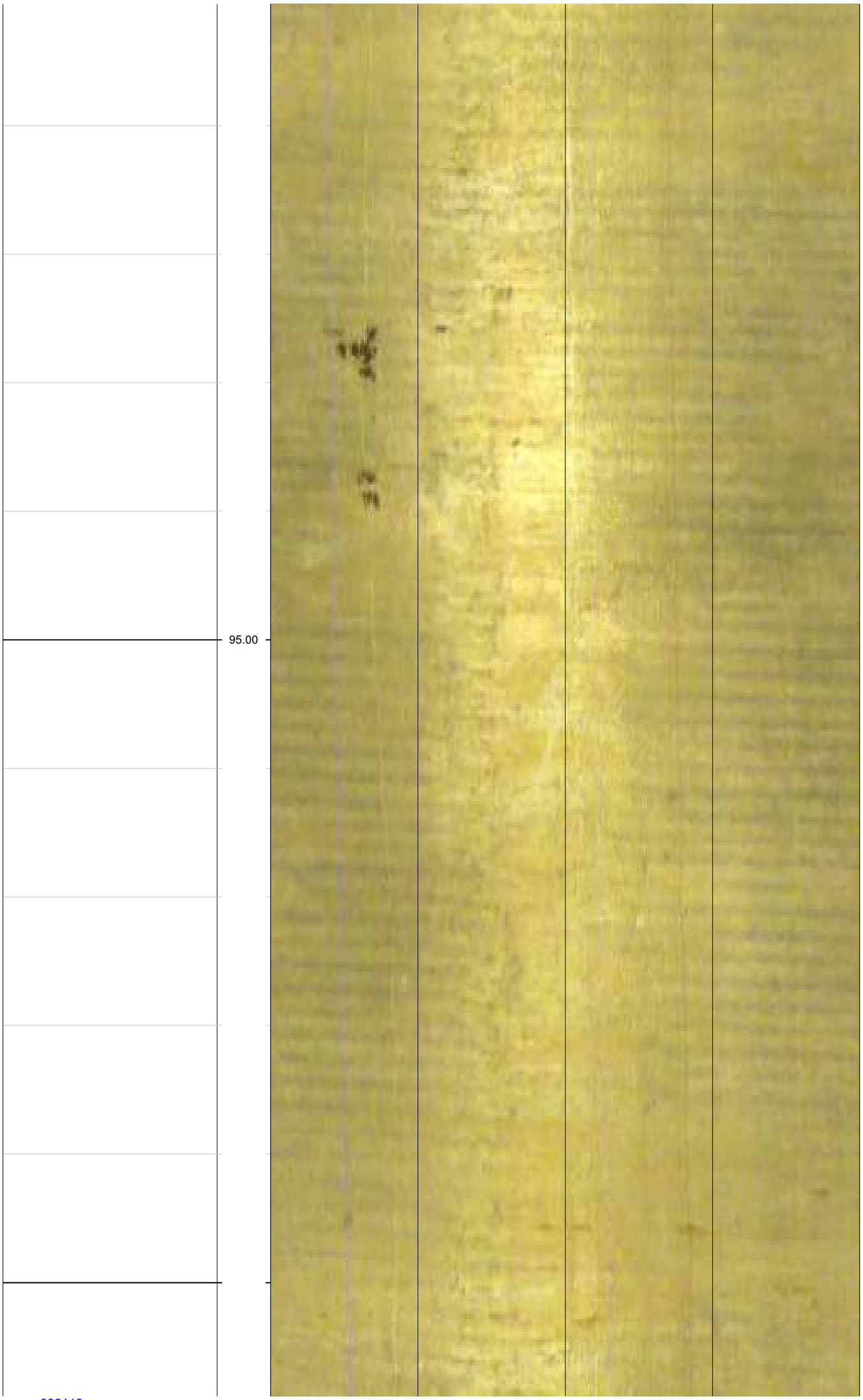
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115.00

002118

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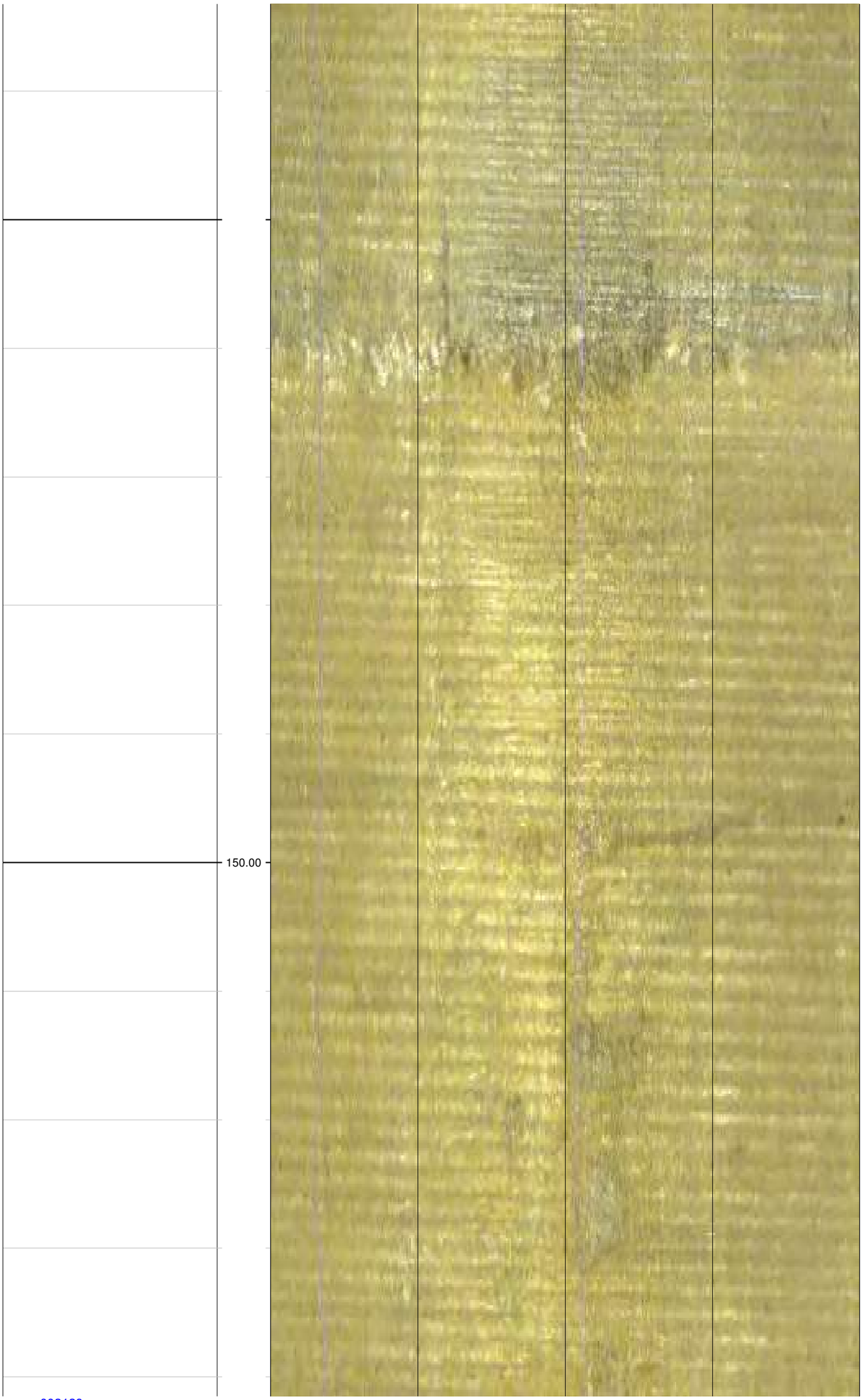
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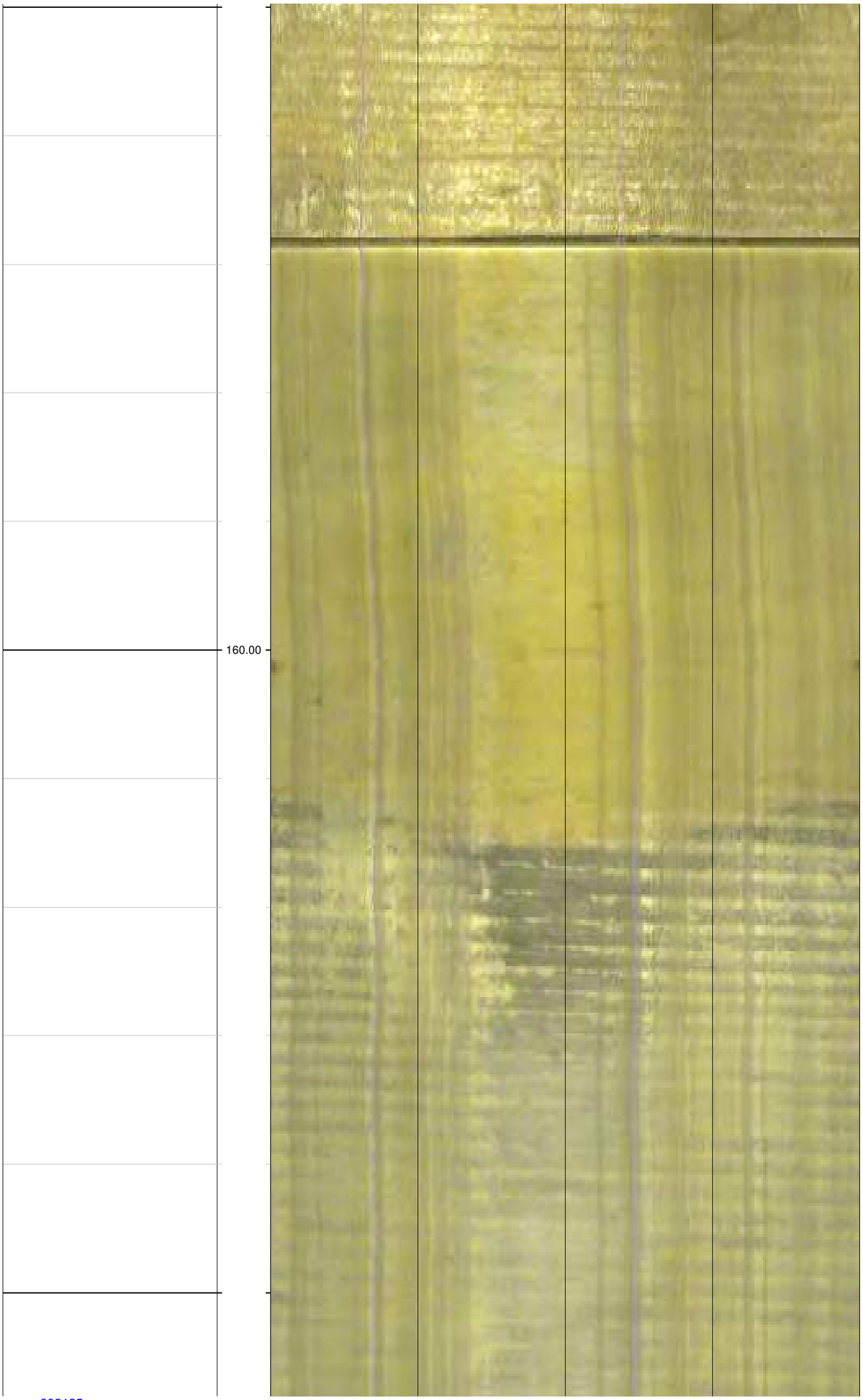
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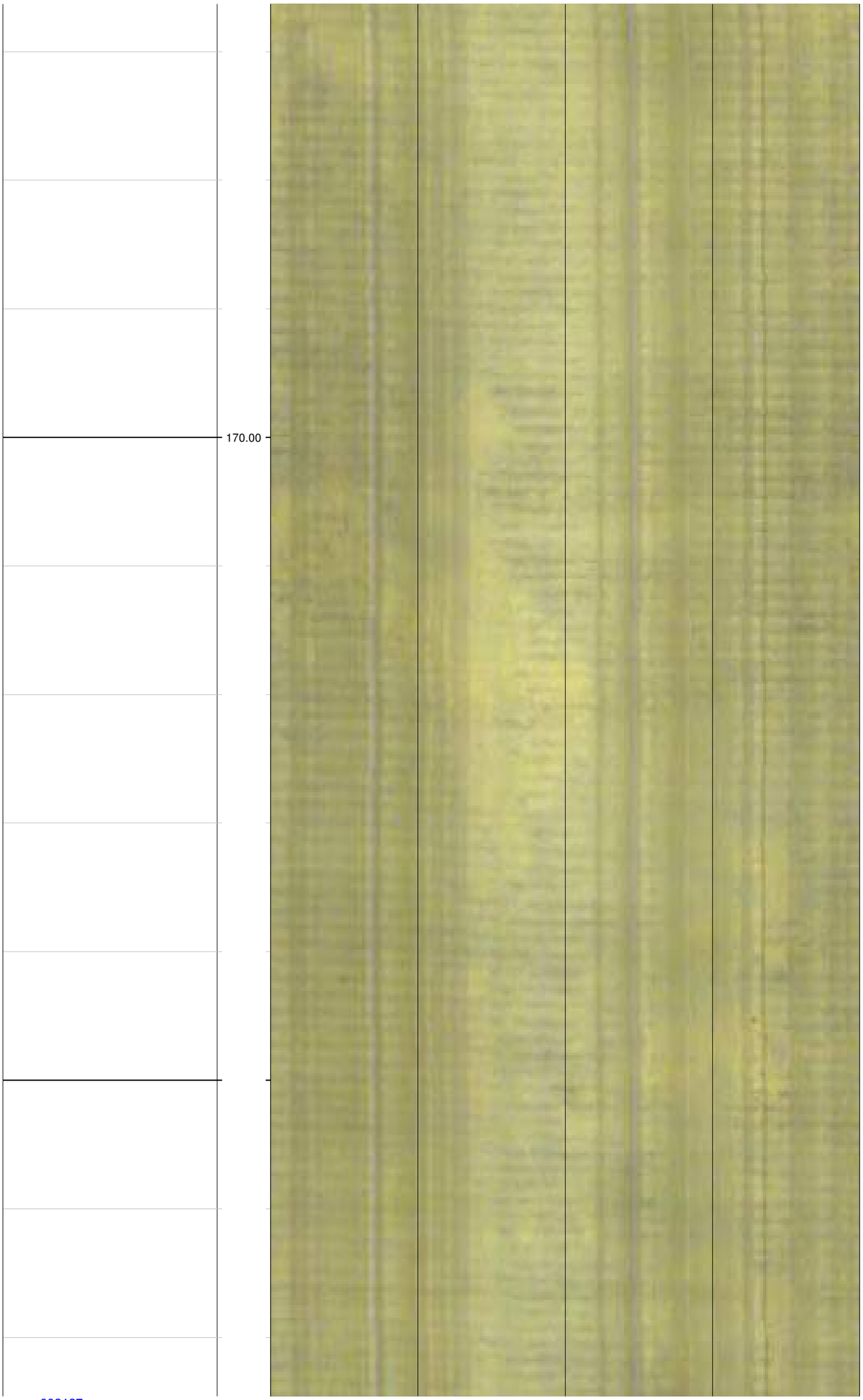
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002129

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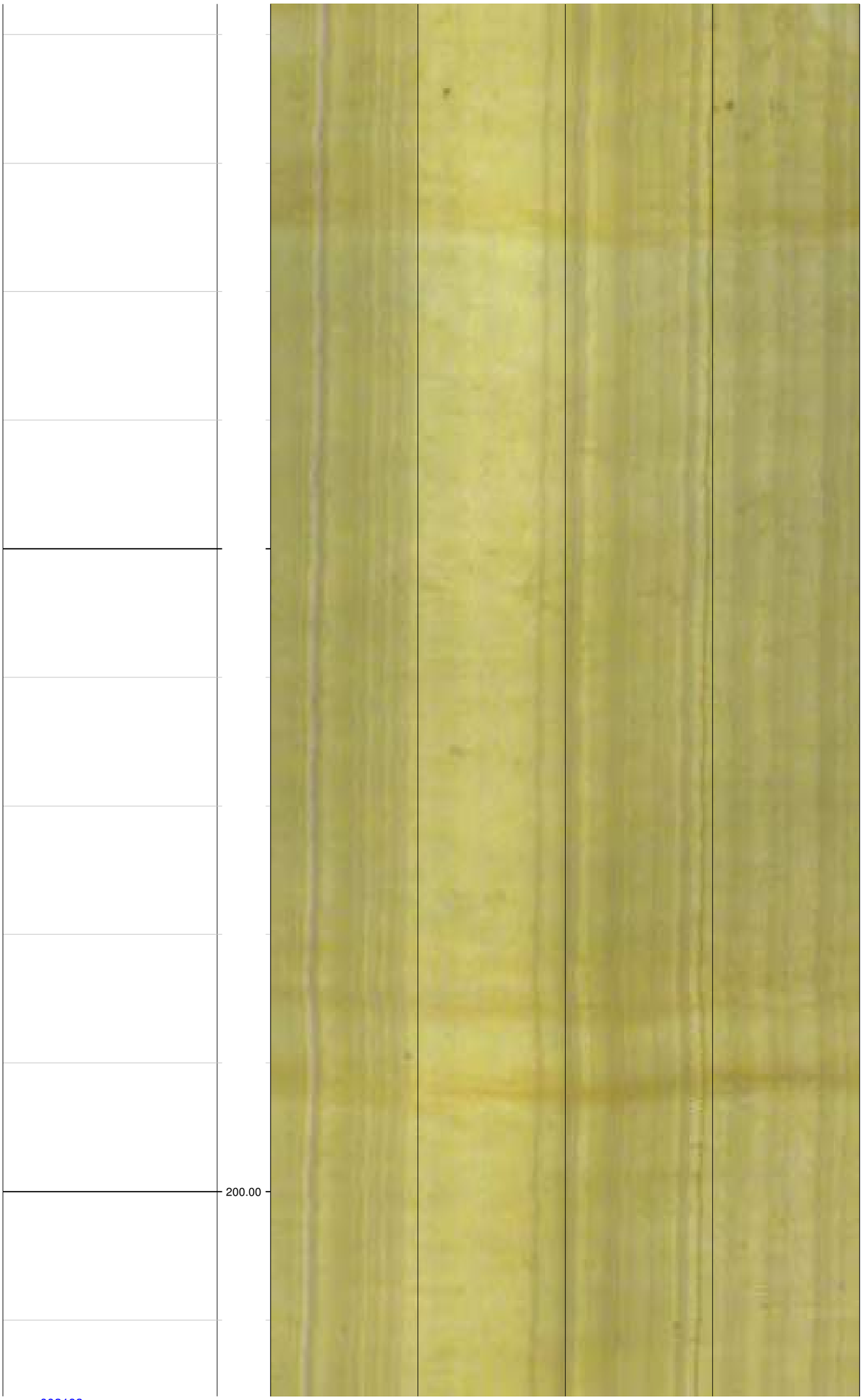
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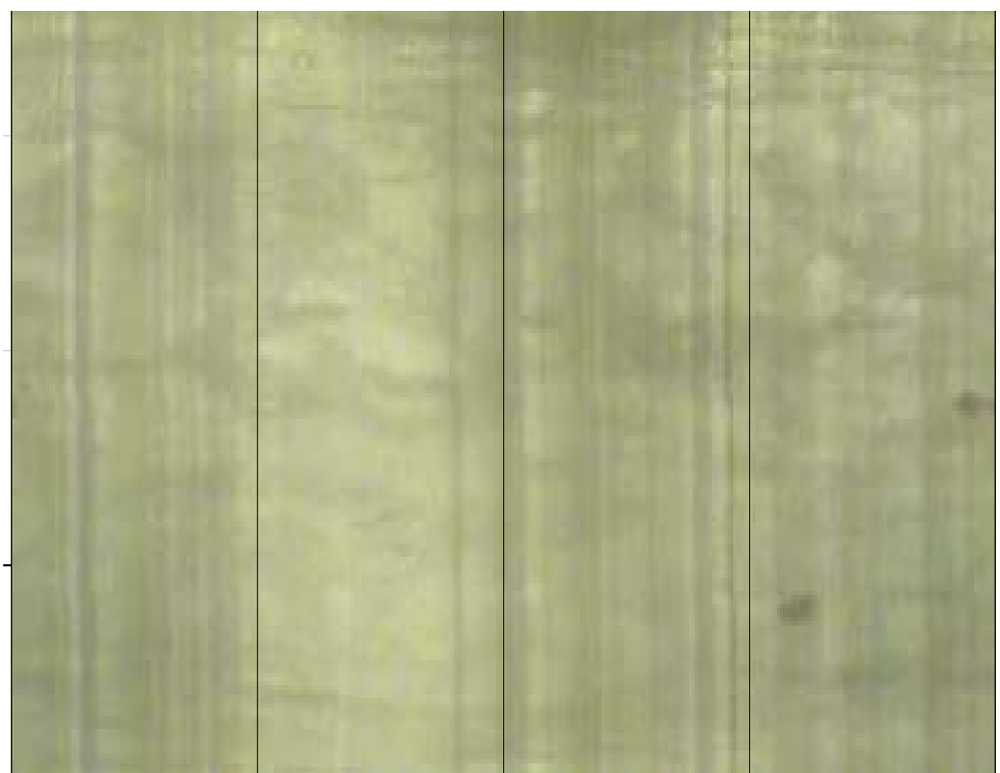


Depth	Image-NM				
1ft:5ft	0°	90°	180°	270°	0°

APPENDIX E
IDW DISPOSAL DOCUMENTATION

REPUBLIC SERVICES

Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date
	5119205407	4/17/2021

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5119 - Tessman Road Landfill

Generator Name: US ENVIRONMENTAL PROTECTION AGENCY

Generator Site Address: 12040 POTRANCO ROAD

City: SAN ANTONIO **County:** **State:** TX **Zip:**

Name of Waste: INVESTIGATION DERIVED WASTE (IDW)

Estimated Annual Volume: 3 Drums

II. Special Waste Department Decision: ☑ Approved ☐ Rejected

Management Method(s): ☐ Landfill ☑ Solidification ☐ Bioremediation ☐ Deep Well ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☑ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☑ Not Applicable

Precautions, Conditions or Limitations on Approval

SOLIDIFICATION REQUIRED. Waste containing free liquid or failing the paint filter test must be solidified immediately upon receipt at the landfill facility. Once the material is able to pass a paint filter test, it is acceptable for landfill disposal.

PROPER PPE must be worn when handling this material.

Special Waste Analyst Signature: Joseph M. Sorokach

Date: 4/22/2020

Name (Printed): Joseph Sorokach

III. Facility Decision: ☑ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: Kathryn Engelberg

Date: 4/22/2020

Name (Printed): Kathryn Engelberg

REPUBLIC SERVICES

Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date
	5119205408	4/17/2021

. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5119 - Tessman Road Landfill

Generator Name: US ENVIRONMENTAL PROTECTION AGENCY

Generator Site Address: 12040 POTRANCO ROAD

City: SAN ANTONIO | **County:** | **State:** TX | **Zip:**

Name of Waste: INVESTIGATION DERIVED WASTE (IDW)

Estimated Annual Volume: 10 Drums

II. Special Waste Department Decision: ☑ Approved ☐ Rejected

Management Method(s): ☑ Landfill ☐ Solidification ☐ Bioremediation ☐ Deep Well ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☑ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☑ Not Applicable

Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 4/22/2020

III. Facility Decision: ☑ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: Kathryn Eugelberg **Name (Printed):** Kathryn Eugelberg

Date: 4/22/2020

SITE

BFI/TESSMAN RD LANDFILL 210-661-4104
7000 IH 10 EAST 7000 IH 10 EAST SAN ANTONIO, TX

CUSTOMER

915958
EA ENGINEERING, SCENCE & TECHNOLOGY INC
405 SH-121 BLDG C, SUITE 100
LEWISVILLE, TX 75067

MAY 21 2020

Contract:5119205408
~~Generator:US ENVIRONMENTAL PROTECTION AGENCY~~

SITE	TICKET #	CELL
WEIGHMASTER	755508	
DATE/TIME IN	Daphne G.	DATE/TIME OUT
VEHICLE	4/28/20 10:33 am	CONTAINER 4/28/20 10:52 am
REFERENCE	DIO	
BILL OF LADING	~~TERRABELA ON SD/SAM BRISENO/6936~~	

SCALE IN GROSS WEIGHT 27,300 NET TONS 2.56
SCALE OUT TARE WEIGHT 22,180 NET WEIGHT 5,120

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
10.00	DR	Tracking QTY				
10.00	dr	SW-CONT SOIL				
1.00		ENVIRONMENTAL FEE 1				
1.00		FUEL RECOVERY FEE				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (04/19)

SIGNATURE

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Printed/Typed Name X DAVID DEIGERT (EA) Signature X Month 04 Day 28 Year 2020

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name SAM BRISEÑO Signature Month 4 Day 28 Year 20

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name Signature Month 4 Day 28 Year 2020

REV 04/19

ORIGINAL - RETURN TO GENERATOR

COM000033
RS-F15

REPUBLIC SERVICES

NON-HAZARDOUS WASTE MANIFEST

693683

Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of

GENERATOR

3. Generator's Name and Mailing Address
US ENVIRONMENTAL PROTECTION AGENCY
1201 ELM ST SUITE 500
DALLAS TX 75270
4. Phone ( ) 214-665-8409

5. Generating Location (if different)
US ENVIRONMENTAL PROTECTION AGENCY
12040 POTRANCO ROAD
SAN ANTONIO TX 78253
6. Phone ( ) 214-665-8409

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
TERRABELLA ENVIRONMENTAL	TXRODOO 79486	210-663-4370
10. Transporter #2 Company Name	11. US EPA ID Number	12. Transporter #2's Phone
13. Designated T/S/D Facility Name and Site Address TESSMAN LANDFILL H1410 7000 IH 10 EAST SAN ANTONIO TEXAS 78219	14. US EPA ID Number	15. Facility's Phone 210-661-4104

16. Waste Shipping Name and Description	17. Republic Services Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. IDW WASTE	5119205408	10	MD	10 drums	
b.					
c. C.					

21. Additional Descriptions for Materials Listed Above
D

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Printed/Typed Name	Signature	Month	Day	Year
X DAVID DEIGERT (EA)	X	04	28	2020

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
SAM BRISEÑO		4	28	20

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year
		4	28	2020

REV 04/19

ORIGINAL - RETURN TO GENERATOR

COM000033
RS-F15

SITE	TICKET #	CELL
BFI/TESSMAN RD LANDFILL 210-661-4104 7000 IH 10 EAST 7000 IH 10 EAST SAN ANTONIO, TX		
CUSTOMER 915958 EA ENGINEERING, SCENCE & TECHNOLOGY INC 405 SH-121 BLDG C, SUITE 100 LEWISVILLE, TX 75067 MAY 21 2020 Contract:5119205407 Generator:US ENVIRONMENTAL PROTECTION AGENCY	WEIGHMASTER 755492	
	DATE/TIME IN IN - Jennifer	DATE/TIME OUT Daphne G.
	VEHICLE 4/28/20 10:08 am	CONTAINER 4/28/20 10:33 am
	REFERENCE D10	
	BILL OF LADING TERRABELLA BOXTRL/ SAM BRISEM/	

SCALE IN GROSS WEIGHT 28,380 NET TONS 0.53 INBOUND
SCALE OUT TARE WEIGHT 27,320 NET WEIGHT 1,060 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
3.00	DR	Tracking QTY				
3.00	dr	SW-SPECIAL WASTE-LIQUID Origin:SOLDIFICATION 100%				
1.00		ENVIRONMENTAL FEE 1				
1.00		FUEL RECOVERY FEE				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (04/19) SIGNATURE

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Printed/Typed Name	Signature	Month	Day	Year
X DAVID DEIGERT (EA)	X [signature]	04	28	2020

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
SAM BRISEM	[signature]	04	28	20

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year
[signature]	[signature]	4	28	2020

ORIGINAL - RETURN TO GENERATOR

REV 04/19 COM000033 RS-F15

REPUBLIC SERVICES

NON-HAZARDOUS WASTE MANIFEST

693684

Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of

GENERATOR

3. Generator's Name and Mailing Address
US ENVIRONMENTAL PROTECTION AGENCY
1201 ELM ST SUITE 500
DALLAS TX 75270
4. Phone ( ) 214-665-8409

5. Generating Location (if different)
US ENVIRONMENTAL PROTECTION AGENCY
12040 POTRANCO ROAD
SAN ANTONIO TX 78253
6. Phone ( ) 214-665-8409

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
TERRABELLA ENVIRONMENTAL	TX R000079486	210-663-4370
10. Transporter #2 Company Name	11. US EPA ID Number	12. Transporter #2's Phone

13. Designated T/S/D Facility Name and Site Address	14. US EPA ID Number	15. Facility's Phone
TESSMAN LANDFILL H1410 7000 IH 10 EAST SAN ANTONIO TEXAS 78219		210-661-4104

	16. Waste Shipping Name and Description	17. Republic Services Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a.	IDW WASTE /WATER	5119205407	3	MD	3 drums	
b.						
c.	C.					

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Printed/Typed Name	Signature	Month	Day	Year
X DAVID DELUERT (EA)	X	04	28	2020

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
SAM BRISEÑO		04	28	20

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year
		4	28	2020

ORIGINAL - RETURN TO GENERATOR

REV 04/19

COM000033
RS-F15

APPENDIX F

WELL PLUGGING AND ABANDONMENT TECHNICAL MEMORANDUM

Well Plugging and Abandonment Technical Memorandum

River City Superfund Site
Remedial Investigation
San Antonio, Bexar County, Texas
EPA Identification No. TXN000606915

Remedial Action Contract 2 Full Service
Contract: EP-W-06-004
Task Order: 68HE0618F0301

Prepared for

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
405 State Highway 121
Building C, Suite 100
Lewisville, Texas 75067
(972) 315-3922

March 2021
Revision: 00
EA Project No.: 14342.165

TABLE OF CONTENTS

Page

LIST OF FIGURES ii

LIST OF TABLES ii

LIST OF ACRONYMS AND ABBREVIATIONS iii

1. INTRODUCTION 1

1.1 SITE BACKGROUND 1
1.2 PURPOSE 1

2. FIELD ACTIVITIES 2

2.1 SITE CLEARING 2
2.2 WELL PAD REPAIR 2
2.3 WELL PLUGGING & ABANDONMENT 2

3. CONCLUSIONS 3

APPENDIX A FIELD FORMS
APPENDIX B PHOTOGRAPHIC DOCUMENTATION
APPENDIX C STATE WELL REPORTS

LIST OF FIGURES

Number	Title
1	Site Location
2	Well Pad Repair Locations
3	Well Pad Repair Location W106-293
4	Wells Plugged and Abandoned

LIST OF TABLES

Number	Title
1	Well Repairs
2	Well Plugging and Abandonments

LIST OF ACRONYMS AND ABBREVIATIONS

EA	EA Engineering, Science, and Technology, Inc., PBC
EPA	U.S. Environmental Protection Agency
NPL	National Priorities List
RCMF	River City Metal Finishing
RI	Remedial Investigation
Site	River City Metal Finishing Superfund Site
TDLR	Texas Department of Licensing and Regulation

1. INTRODUCTION

EA Engineering, Science, and Technology, Inc., PBC (EA) has prepared this Technical Memorandum for Task Order 68HE0618F0301 under U.S. Environmental Protection Agency (EPA) Remedial Action Contract Number EP-W-06-004. The Technical Memorandum documents the site clearing, well pad repair, and well plug and abandonment event conducted 26 to 28 October 2020 at the River City Metal Finishing Superfund Site (site) and surrounding area located in San Antonio, Bexar County, Texas (Figure 1).

1.1 SITE BACKGROUND

The site is located at 12040 Potranco Road, San Antonio, Bexar County, Texas, and includes the former River City Metal Finishing (RCMF) property. Figure 1 depicts the site location. The RCMF property is approximately 0.62 acres and is generally covered with crushed gravel with vegetation along the perimeter of the property. The former RCMF plating building and other on-site structures have been removed. A chain-link fence surrounds the property on all sides, with gates on the north and south sides. In 2019, sections of the chain link fence were replaced and repaired, and silt fencing was installed for erosion control.

The RCMF site operated approximately from 1994 until 2002. Contaminant releases from the facility have resulted in site contaminants entering shallow ground water and potential migration of the contamination into the Edwards Aquifer. The Texas Commission on Environmental Quality referred the site to EPA due to hexavalent chromium in groundwater used for drinking, and EPA received a letter of support for placing this site on the National Priorities List (NPL) from the state of Texas. The site was added to the NPL in May 2018.

A series of historical field investigations by multiple entities occurred from 2008 through 2016. Field sampling activities for Remedial Investigation (RI) were conducted in multiple field events from March 2019 to July 2020 and included, but not limited to soil sampling and borings, groundwater samples, water level elevation measurements and borehole geophysical data.

1.2 PURPOSE

The purpose for this Technical Memorandum is to document the activities and results associated with the site clearing, well pad repair, and plug and abandonment event performed in support of the RI at the site and surrounding area. This event concludes the RI activities at the site.

2. FIELD ACTIVITIES

The site clearing, well pad repair, plug and abandonment activities took place during the 26 to 28 October 2020. The details and results of the field activities are described in the following sections. Field activities are also documented on field forms in Appendix A, and photographic documentation in Appendix B.

2.1 SITE CLEARING

EA provided oversight of clearing activities conducted by EA's subcontractor, ETech Environmental & Safety Solutions, Inc. Site clearing took place on 26 October 2020 and vegetation and brush piles were mowed and removed. Photographs of the activity are included in Appendix B.

2.2 WELL PAD REPAIR

Five public water wells close to the site required surface completion repairs (Figure 2 and 3). Drilled and installed between 1950 and 1970, over time the well pads and vaults had deteriorated due to aging and weathering. Table 1 summarizes these wells' conditions and repairs completed at each of the wells.

EA provided oversight of well repair conducted by EA's subcontractor, Utopia Sales & Service Inc. on 27 and 28 October 2020. During this event, the existing well pads were removed, and 3-foot by 3-foot by 6-inch-thick concrete pads were installed at each well in accordance with the State of Texas Water Well Drillers and Pump Installers Administrative Rules. Reinforcing steel rebars were installed with the concrete to enhance well pads' strength and structural integrity. The top of the pads slopes away from the wellhead to drain. Well caps with locks were installed.

Two locations (W108-120 and W106-293) required a box cover/shelter which was sized and installed to cover the stickup casing at these locations. Photographic documentation is included in Appendix B.

2.3 WELL PLUGGING & ABANDONMENT

During site activities related to the RI, 8 groundwater monitoring wells were identified for plugging and abandonment. All wells were plugged and abandoned in accordance with Texas Department of Licensing and Regulation (TDLR) Administrative Code, Chapter 76, Rule §76.1004 and other city and/or county requirements by the City of San Antonio and Bexar County. Well plugging reports are included in Appendix C. Table 2 summarizes the plugging and abandonment activities, and plugged wells are shown on Figure 4.

EA provided oversight of plugging and abandonment conducted by EA's subcontractor Harrison & Cooper, Inc. on 27 and 28 October 2020. Prior to plugging, the total depths of the wells were measured. Plugging entailed pressure-grouting with a tremie-pipe from total depth to two feet below the ground surface. The remaining two feet of the well was topped with a cement plug to

serve as an atmospheric barrier. Cement was measured to fill the well completely and prevent settling. All existing surface completions (e.g., vault, well pad, bollards, etc.) were removed and the ground surface was restored.

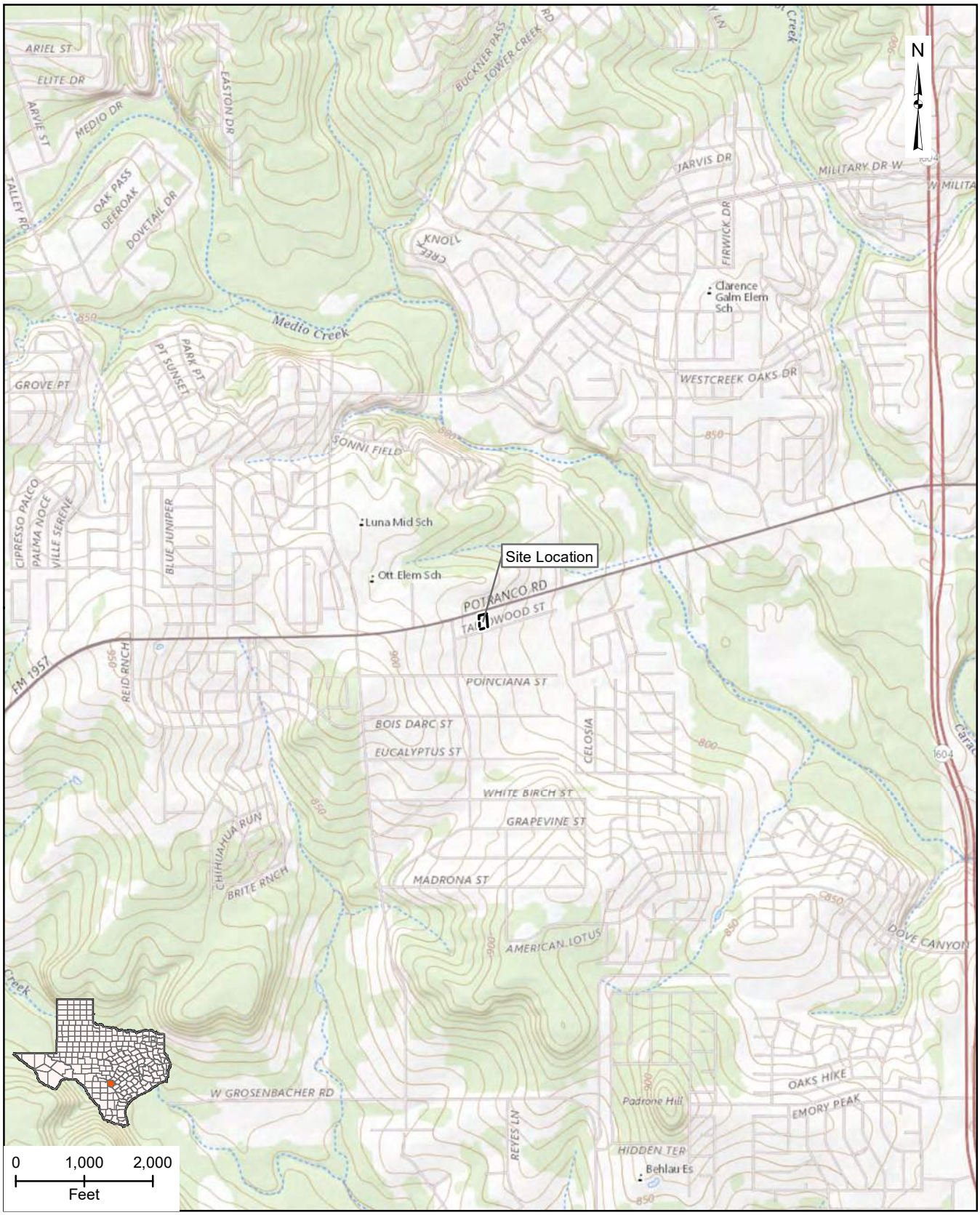
All well material, well vaults, shrouds cement pads, etc., generated by the activities were removed from the site and disposed of by the Contractor as ordinary construction waste.

3. CONCLUSIONS

The conclusions of the well plugging, repair, and clearing activities are as follows:

- Site was cleared.
- A total of 5 well pads were repaired.
- A total of 8 wells were properly plugged and abandoned per TDLR Administrative Code, Chapter 76, Rule §76.1004 and other city and/or county requirements.

Figures

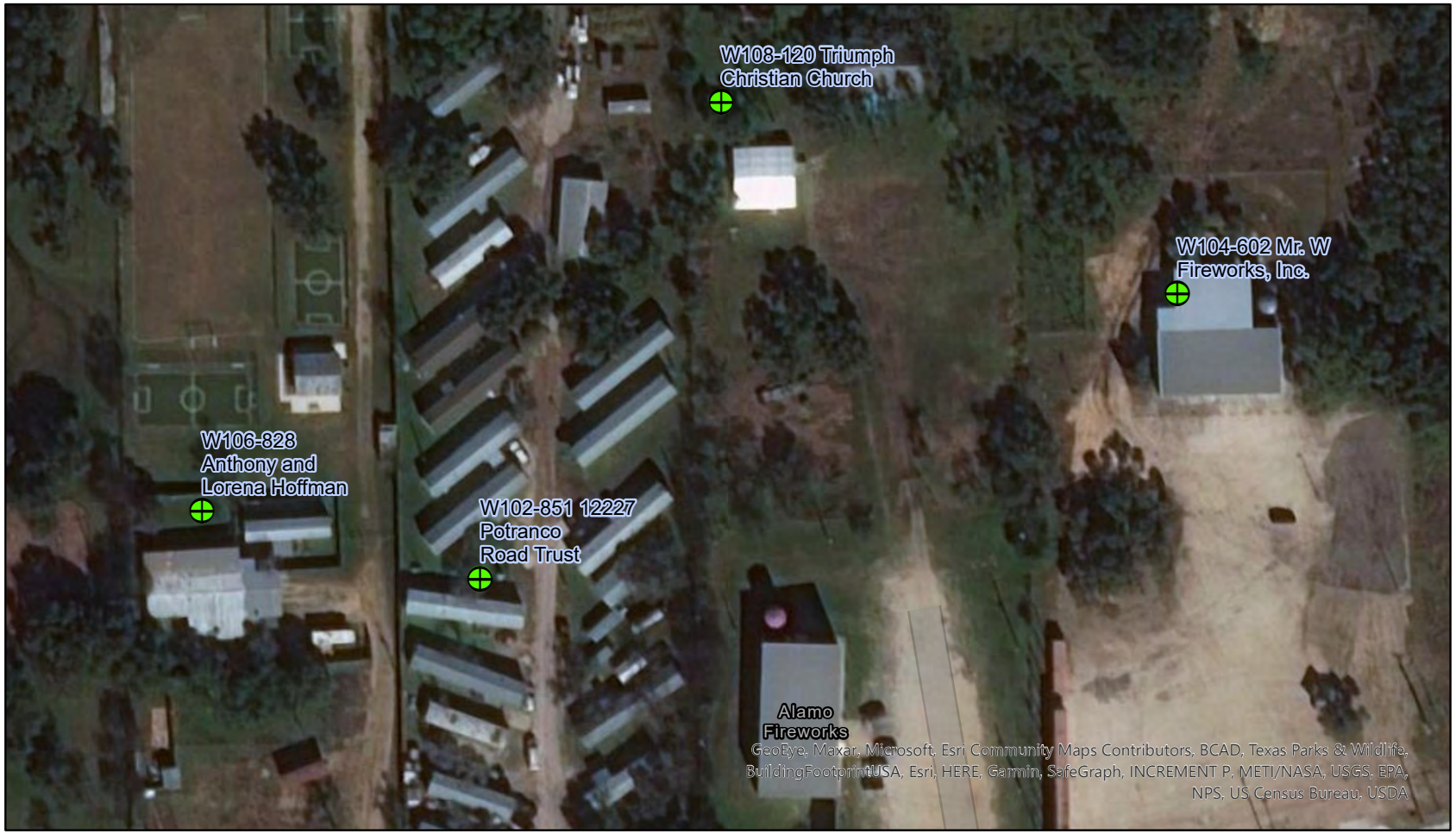


River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line

Figure 1
Site Location Map

2020-07-17 M:\Federal\EPA\RAC II\0165-River City RI-FS\GIS\MXDs\RC_SiteLoc.mxd EA-Dallas jschwertz



9/25/2020

0 0.01 0.01 0.03 Miles

N

EDWARDS AQUIFER AUTHORITY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EA

Figure 2
Well Pad Repair
Locations

Disclaimer: This map was modified from a demonstrative use map from the Edwards Aquifer Authority (EAA). This map is to be used as an informational tool only.

9/25/2020

0 0.01 0.01 0.03 Miles

N

Figure 3
Well Pad Repair Location
W106-293

Disclaimer: This map was modified from a demonstrative use map from the Edwards Aquifer Authority (EAA). This map is to be used as an informational tool only.

River City Metal Finishing Superfund Site
San Antonio, Bexar County, Texas

Imagery Source: Google Earth Pro, 2018

Figure 4
Wells Plugged and Abandoned

2020-07-17 M:\Federal\EPA\RAC II\0165-River City RI-FS\GIS\MXDs\RC_MWonsite.mxd EA-Dallas jschwertz

Tables

Table 1 Well Repairs

Well Identification	Property	Completed Actions
Public Water Supply Wells		
W102-851	12227 Potranco Road	Damaged well vault was removed, and a well pad was constructed around the well.
W104-602	12157 Potranco Road	Damaged well vault was removed, and a well pad was constructed around the well.
W106-293	11514 Pontranco Road	Damaged well vault was removed, and a well pad was constructed around the well. Box/cover/shelter installed to cover stickup casing.
W106-828	12275 Potranco Road	Damaged well vault was removed, and a well pad was constructed around the well.
W108-120	12189 Potranco Road	Damaged well vault was removed, and a well pad was constructed around the well. Box/cover/shelter installed to cover stickup casing.

Table 2 Well Plugging and Abandonments

Well Identification	Casing Diameter (inches, nominal)	Reported Total Depth (ft btoc)[1]	Measured Total Depth (ft btoc)[2]	Date Plugged
MW-01	2-inch PVC	27.27	26.86	27-Oct-20
MW-02	4-inch PVC	31.50	31.50	27-Oct-20
MW-03	4-inch PVC	31.65	31.21	27-Oct-20
MW-04	4-inch PVC	31.27	31.30	27-Oct-20
MW-05	4-inch PVC	31.72	31.70	27-Oct-20
MW-06	8-inch steel	179.30	179.30	27-Oct-20
MW-07	8-inch steel	226.30	226.30	27-Oct-20
MW-08	8-inch steel	209.50	209.50	27-Oct-20

NOTES:

[1]Reported total depth measurements taken during 2019 and 2020 remedial investigation field sampling events

[2]Measured total depth during plugging and abandonment

ft = foot
PVC = polyvinyl chloride
btoc = below top of casing

Appendix A

Field Forms

APPENDIX C

DAILY SAFETY MEETING FORM

Date: 10/26/2020 Time: 0800 Project No.: 14342765

Site Name/Location: River City, San Antonio TX

Site Activities Planned for Today: Vegitation Removal

Safety Topics Discussed
Protective clothing and equipment: level D PPE
Chemical hazards: Gasoline
Physical hazards: Slips, Trips, Falls, Pinch Points
Environmental and biohazards: Snakes, ticks, chiggers
Equipment hazards: tractor, lawn mower, weed eater
Decontamination procedures:
Other:
Review of emergency procedures and comments:

DAILY SAFETY MEETING FORM (CONTINUED)

Attendees	
Printed Name	**Signature**
Robert Barker	
Darren Harris	
Joshua Kelly	

Meeting Conducted by:

Robert Barker
Name

Geologist
Title

Signature

APPENDIX B

DAILY SITE LOG

Site Name: Rivercity Date: 10/26/20

Name (print)	Company	Time	
		In	Out
Robert Barker	EA	0730	1430
DARREN HARRIS	ETECH	0730	1430
Joshua Kelly	Etech	0830	1430

Comments:

APPENDIX C

DAILY SAFETY MEETING FORM

Date: 10/27/20 Time: 1100 Project No.: 14342165

Site Name/Location: River City, San Antonio TX

Site Activities Planned for Today: Pad Redevelopment

Safety Topics Discussed
Protective clothing and equipment: Level D
Chemical hazards: NO
Physical hazards: Trips, falls, heavy lifting
Environmental and biohazards: Cold
Equipment hazards: Pinch, Welding, Jackhammer
Decontamination procedures:
Other:
Review of emergency procedures and comments:

DAILY SAFETY MEETING FORM (CONTINUED)

Attendees	
Printed Name	**Signature**
Robert Barker	
Geoff Scully	
Chad Hillis	

Meeting Conducted by:

Robert Barker
Name

Geologist
Title

Signature

APPENDIX B

DAILY SITE LOG

Site Name: River City Date: 10/27/20

Name (print)	Company	Time In	Time Out
Robert Barker	EA	1030	1730
Geoff Scott	UWWS	11:15	1730
Ben Jacobson	EAA	11:24	1600
Chad Hiller	UWWS	11:55	1730
Roger Andrade	EAA	1:04	1600

Comments:

APPENDIX C

DAILY SAFETY MEETING FORM

Date: 10/28/10 Time: 0800 Project No.: 14342165

Site Name/Location: River City, San Antonio

Site Activities Planned for Today: Pad Redevelopment, Plug and Abandonment

Safety Topics Discussed
Protective clothing and equipment: Level D PPE
Chemical hazards: None
Physical hazards: ~~Co~~ Trips, Falls, Heavy lifting
Environmental and biohazards: Cold
Equipment hazards: Drill Rig, Jackhammer, Welder
Decontamination procedures:
Other:
Review of emergency procedures and comments:

DAILY SAFETY MEETING FORM (CONTINUED)

Attendees	
Printed Name	**Signature**
Robert Barker	[signature]
DAVID LAGOSZI	[signature]
Sam Martinez	[signature]
[illegible]	[signature]
Kenny Cotek	[signature]
Geoffrey Scott	[signature]
Chad Hillis	[signature]
T. J. Wheeler	[signature]
Micheal Smart	[signature]

Meeting Conducted by:

Robert Barker
Name

Geologist
Title

[signature]
Signature

APPENDIX B

DAILY SITE LOG

Site Name: River City Date: 10/28/20

Name (print)	Company	Time In	Time Out
Robert Barker	EA	0800	1600
DAVID LAGOSZI	HCT DRILLING	0830	1500
Sam Martinez	HCZ Drilling	8:30	1500
Ken Cooper	HCZ Drilling	8:30	1500
Ethan Lowe	HCI	0830	1500
Geoff Sally	UWWS	9:45	1600
Chad Hill	UWWS	9:40	1600
Michael Smart	UWWS	9:40	1600
T.J. Wheeler	UWWS	9:40	1600

Comments:

APPENDIX C

DAILY SAFETY MEETING FORM

Date: 10/28/10 Time: 0800 Project No.: 14342165

Site Name/Location: River City, San Antonio

Site Activities Planned for Today: Pad Redevelopment, Plug and Abandonment

Safety Topics Discussed
Protective clothing and equipment: Level D PPE
Chemical hazards: None
Physical hazards: ~~Co~~ Trips, Falls, Heavy lifting
Environmental and biohazards: Cold
Equipment hazards: Drill Rig, Jackhammer, Welder
Decontamination procedures:
Other:
Review of emergency procedures and comments:

DAILY SAFETY MEETING FORM (CONTINUED)

Attendees	
Printed Name	**Signature**
Robert Barker	[signature]
DAVID LAGOSKI	[signature]
Sam Martinez	[signature]
[illegible]	[signature]
Kenny Cotek	[signature]
Geoffrey Scott	[signature]
Chad Hillis	[signature]
T. J. Wheeler	[signature]
Micheal Smart	[signature]

Meeting Conducted by:

Robert Barker
Name

Geologist
Title

[signature]
Signature

APPENDIX B

DAILY SITE LOG

Site Name: River City Date: 10/28/20

Name (print)	Company	Time In	Time Out
Robert Barker	EA	0800	1600
DAVID LAGOSZI	HCT DRILLING	0830	1500
Sam Martinez	HCZ Drilling	8:30	1500
Ken Cooper	HCZ Drilling	8:30	1500
Ethan Lowe	HCI	0830	1500
Geoff Sally	UWWS	9:45	1600
Chad Hill	UWWS	9:40	1600
Michael Smart	UWWS	9:40	1600
T.J. Wheeler	UWWS	9:40	1600

Comments:

Appendix B

Photographic Documentation

Photograph 1 Date: 26 October 2020
Description: Potranco Road entrance - Before site clearing.

Photograph 2 Date: 26 October 2020
Description: Onsite – Before site clearing.

Photograph 3 Date: 26 October 2020
Description: Potranco Road entrance – After site clearing.

Photograph 4 Date: 26 October 2020
Description: Onsite – After site clearing.

Photograph 5 Date: 27 October 2020
Description: W106-293 – Before pad repair.

Photograph 7 Date: 27 October 2020
Description: W106-293 – After Pad repair.

Photograph 6 Date: 27 October 2020
Description: W102-851 – Before pad repair.

Photograph 8 Date: 28 October 2020
Description:W102-851 – After pad repair.

Photograph 9 Date: 28 October 2020
Description: MW-06 - Before Plug and Abandonment

Photograph 10 Date: 28 October 2020
Description: Site – Before Plug and Abandonment.

Photograph 11 Date: 28 October 2020
Description: MW-06 – After Plug and Abandonment.

Photograph 12 Date: 28 October 2020
Description: Site – After Plug and Abandonment.

Appendix C

State Well Reports

STATE OF TEXAS PLUGGING REPORT for Tracking #207342

Owner:	**River City Metal Finishing**	Owner Well #:	**SB-1/MW-1**
Address:	**12040 Potranco Road San Antonio, TX 78253**	Grid #:	**68-35-4**
		Latitude:	**29° 25' 59" N**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Longitude:	**098° 43' 17" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Vortex Drilling, Inc.**	Date Drilled:	**5/19/2010**
Driller:	**James E Neal**	License Number:	**4868**

Well Report Tracking #217762

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8**	**0**	**25**

Plugging Information

Date Plugged: **10/27/2020** Plugger: **David Lagoski**

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**26.86**	**Grout 2 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207348

Owner:	**EPA Region 6**	Owner Well #:	**MW-02**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
		Latitude:	**29° 25' 48.65" N**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Vortex Drilling**	Date Drilled:	**4/5/2019**
Driller:	**Robert Joiner**	License Number:	**54776**

Well Report Tracking #512466

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**30**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**31.5**	**Grout 2 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207346

Owner:	**EPA Region 6**	Owner Well #:	**MW-03**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Vortex Drilling**	Date Drilled:	**4/5/2019**
Driller:	**Robert Joiner**	License Number:	**54776**

Well Report Tracking #512468

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**30**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**31.21**	**Grout 2 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207349

Owner:	**EPA Region 6**	Owner Well #:	**MW-04**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 48.65" N**
		Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Vortex Drilling**	Date Drilled:	**4/5/2019**
Driller:	**Robert Joiner**	License Number:	**54776**

Well Report Tracking #512527

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**30**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**31.3**	**Grout 2 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207347

Owner:	**EPA Region 6**	Owner Well #:	**MW-05**
Address:	**1445 Ross Avenue, Suite 1200 Dallas , TX 75202**	Grid #:	**68-35-4**
		Latitude:	**29° 25' 48.65" N**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Longitude:	**098° 43' 54.2" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Vortex Drilling**	Date Drilled:	**4/5/2019**
Driller:	**Robert Joiner**	License Number:	**54776**

Well Report Tracking #512530

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**30**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**31.7**	**Grout 2 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207344

Owner:	**EPA**	Owner Well #:	**MW-06**
Address:	**1201 Elm Street** **Dallas, TX 75270**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road** **San Antonio, TX 78253**	Latitude:	**29° 25' 41.98" N**
		Longitude:	**098° 43' 40.71" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Harrison & Cooper; Inc.**	Date Drilled:	**10/9/2019**
Driller:	**Ken D Cooper**	License Number:	**51990**

Well Report Tracking #527442

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**12**	**0**	**42**
	7.875	**40**	**180**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**179.3**	**Grout 20 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207345

Owner:	**EPA**	Owner Well #:	**MW-07**
Address:	**1201 Elm Street Dallas, TX 75270**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 41.98" N**
		Longitude:	**098° 43' 40.71" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Harrison & Cooper; Inc.**	Date Drilled:	**10/10/2019**
Driller:	**Ken D Cooper**	License Number:	**51990**

Well Report Tracking #527444

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**12**	**0**	**41**
	7.875	**40**	**230**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well: **No Data**

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**226.3**	**Grout 22 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**
7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

STATE OF TEXAS PLUGGING REPORT for Tracking #207343

Owner:	**EPA**	Owner Well #:	**MW-08**
Address:	**1201 Elm Street Dallas, TX 75270**	Grid #:	**68-35-4**
Well Location:	**12040 Potranco Road San Antonio, TX 78253**	Latitude:	**29° 25' 41.98" N**
		Longitude:	**098° 43' 40.71" W**
Well County:	**Bexar**	Elevation:	**No Data**
Well Type:	**Monitor**		

Drilling Information

Company:	**Harrison & Cooper; Inc.**	Date Drilled:	**10/10/2019**
Driller:	**Ken D Cooper**	License Number:	**51990**

Well Report Tracking #527445

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**12**	**0**	**42**
	7.875	**40**	**220**

Plugging Information

Date Plugged: **10/27/2020** Plugger:

Plug Method: **Tremmie pipe cement from bottom to top**

Casing Left in Well:

No Data

Plug(s) Placed in Well:

Top (ft.)	*Bottom (ft.)*	*Description (number of sacks & material)*
0	**209.5**	**Grout 22 Bags/Sacks**

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Harrison and Cooper, Inc.**

7414 85th Street
Lubbock, TX 79424

Driller Name: **David Lagoski** License Number: **58503**

Comments: **No Data**

APPENDIX G
CUSTOM SOIL RESOURCE REPORT

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Bexar County, Texas

October 1, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

002186

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Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....11
Map Unit Descriptions.....11
Bexar County, Texas.....13
BpC—Whitewright clay loam 1 to 5 percent slopes.....13
BsC—Whitewright-Austin complex, 1 to 5 percent slopes.....14
TaB—Eckrant cobbly clay, 1 to 8 percent slopes.....15
References.....18

002188

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

002189

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

002192

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 24, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 22, 2018—Jan 4, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BpC	Whitewright clay loam 1 to 5 percent slopes	5.4	28.5%
BsC	Whitewright-Austin complex, 1 to 5 percent slopes	10.1	53.2%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	3.5	18.4%
Totals for Area of Interest		**19.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bexar County, Texas

BpC—Whitewright clay loam 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: f394
Elevation: 400 to 2,000 feet
Mean annual precipitation: 28 to 44 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 225 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Whitewright and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Whitewright

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 6 inches: clay loam
H2 - 6 to 15 inches: silty clay
H3 - 15 to 20 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Surface area covered with cobbles, stones or boulders: 10.0 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

BsC—Whitewright-Austin complex, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: f397
Elevation: 400 to 2,000 feet
Mean annual precipitation: 28 to 44 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 220 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Whitewright and similar soils: 65 percent
Austin and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Whitewright

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 6 inches: clay loam
H2 - 6 to 15 inches: silty clay
H3 - 15 to 20 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

Description of Austin

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from chalk

Typical profile

H1 - 0 to 28 inches: silty clay
H2 - 28 to 42 inches: silty clay
H3 - 42 to 72 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: 24 to 43 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Available water capacity: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

TaB—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0sg
Elevation: 650 to 1,900 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: cobbly clay
A2 - 4 to 11 inches: very cobbly clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Bexar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear

Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

References

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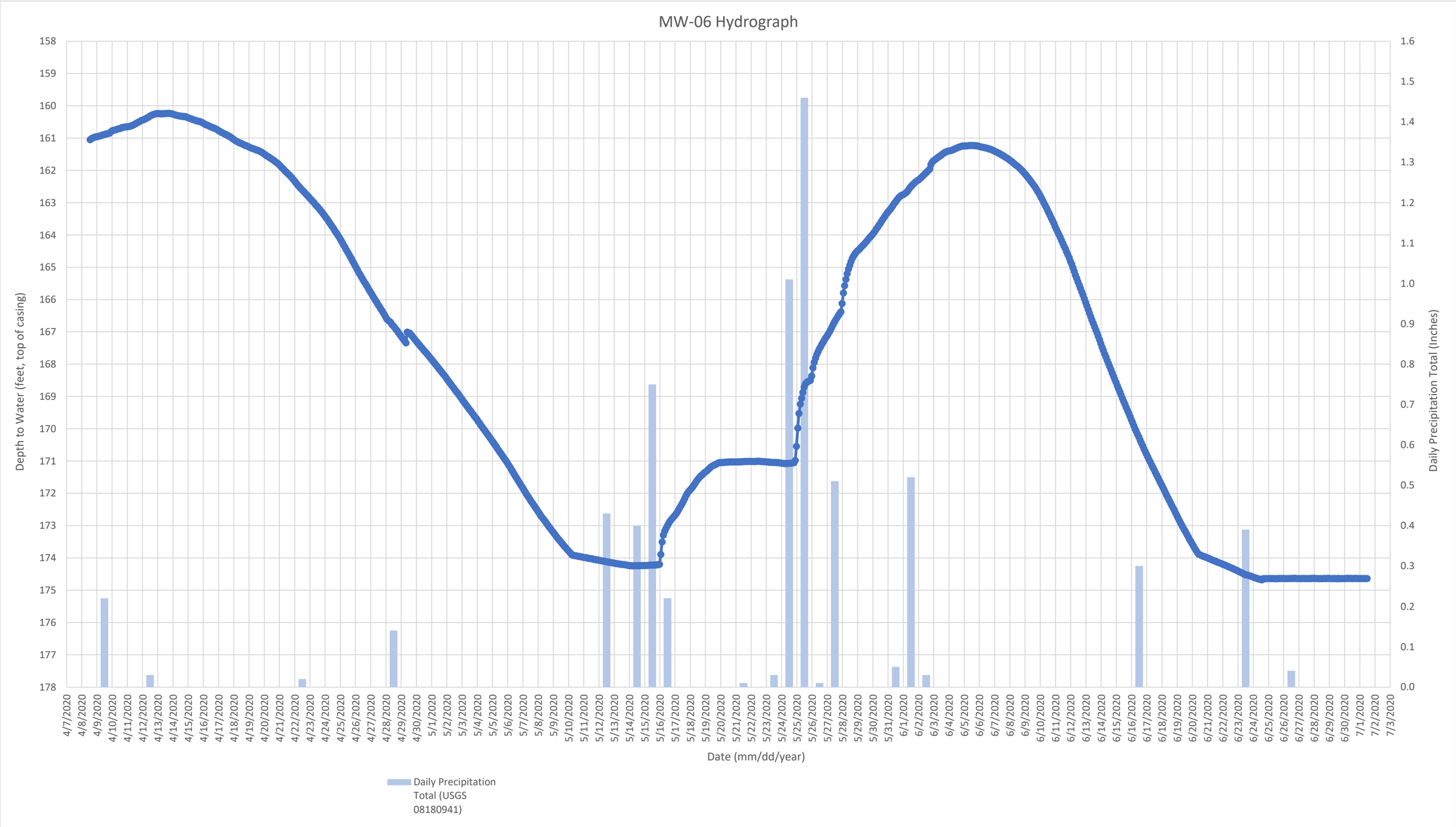
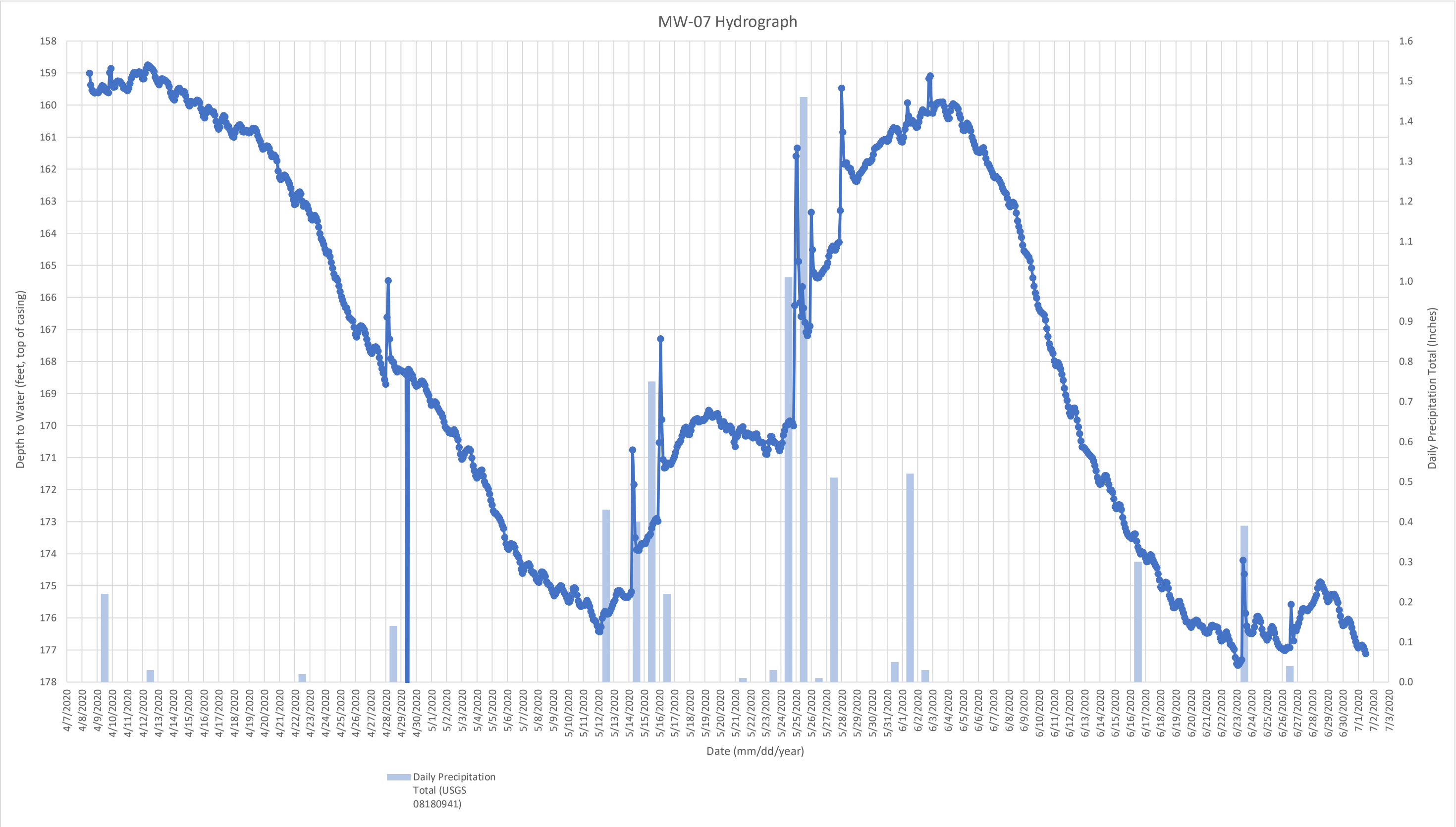
APPENDIX H
LONG-TERM WATER LEVEL MEASUREMENT GRAPHS

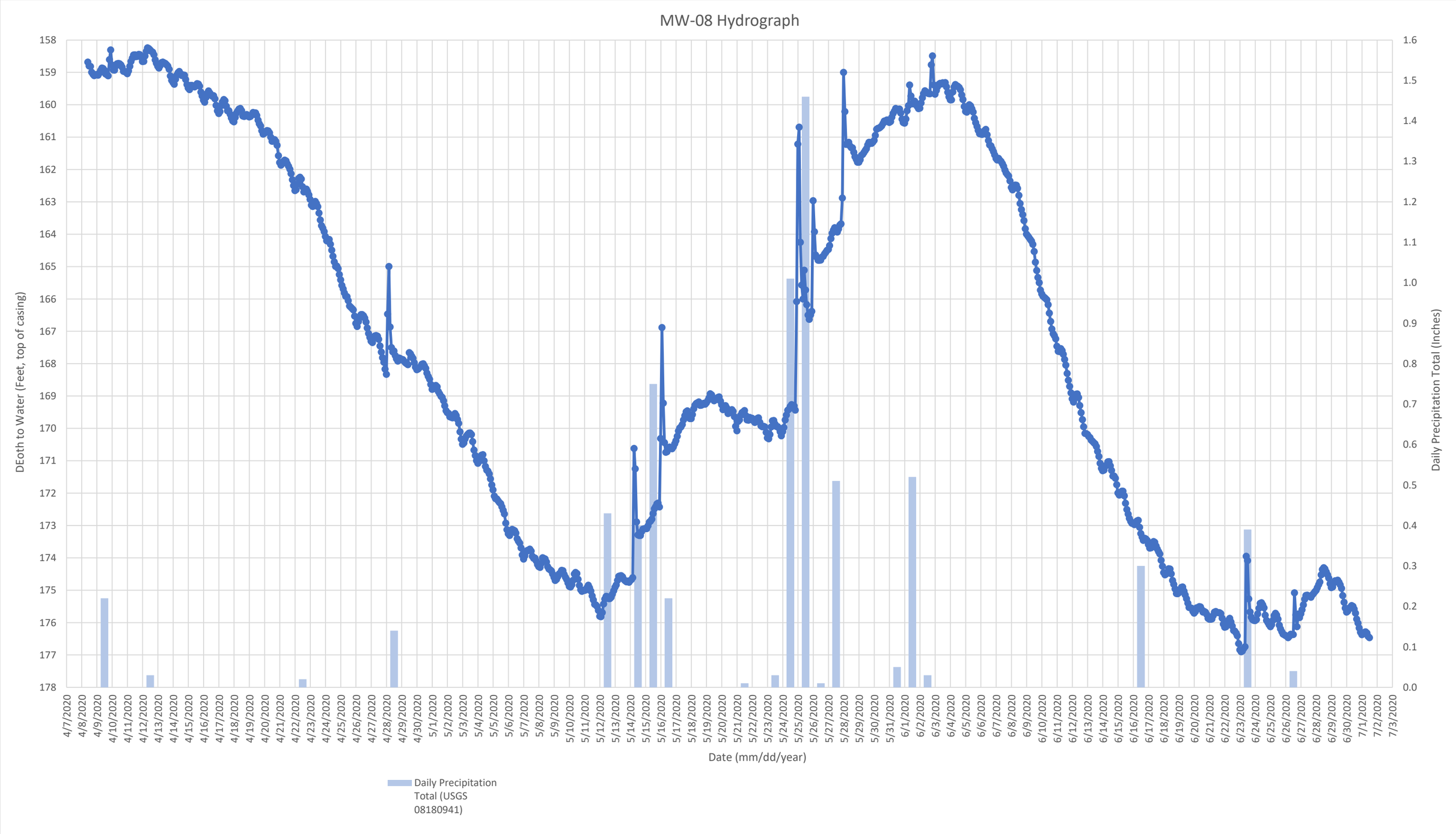
Appendix H
Figure 1



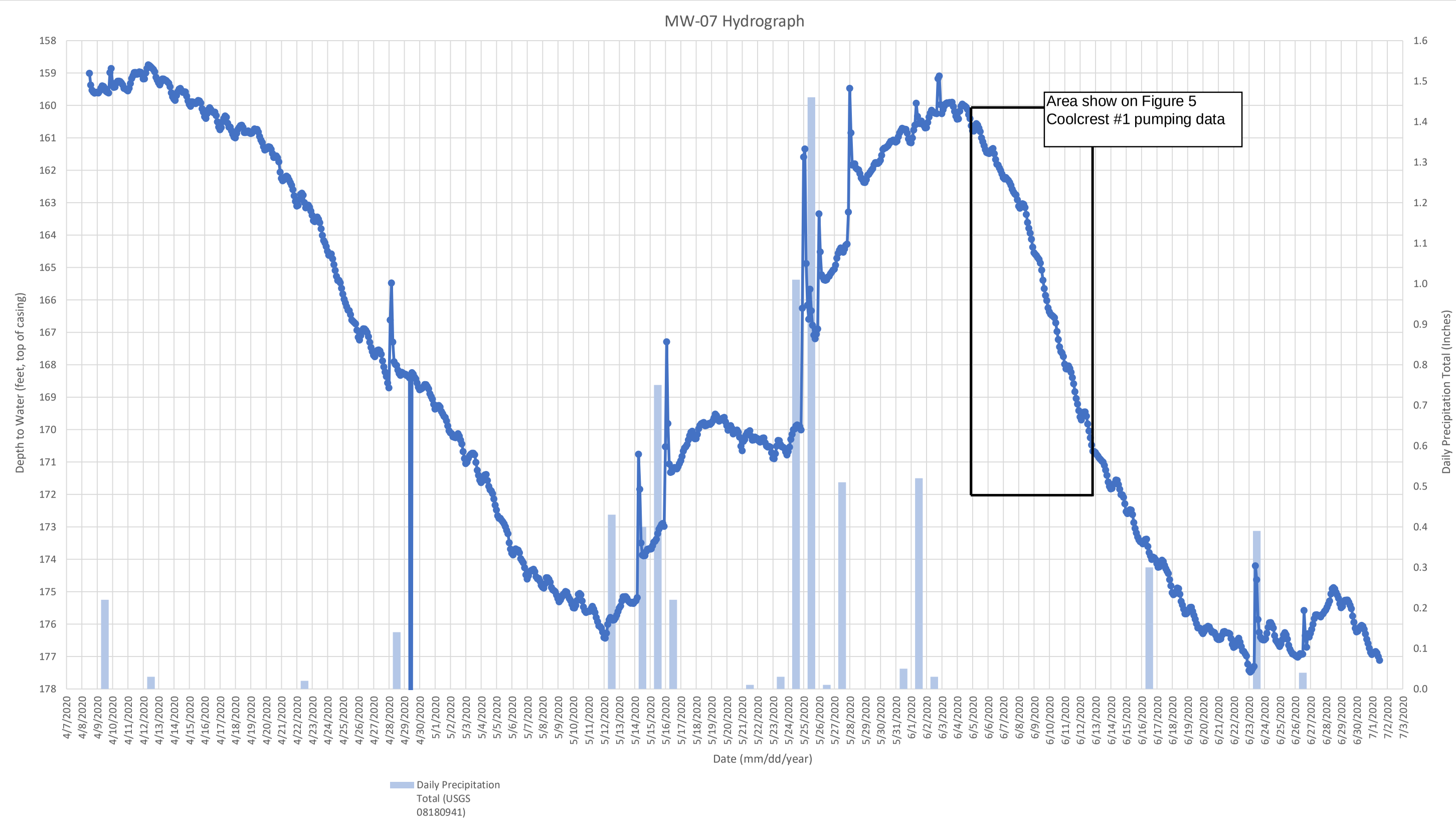
Appendix H
Figure 2



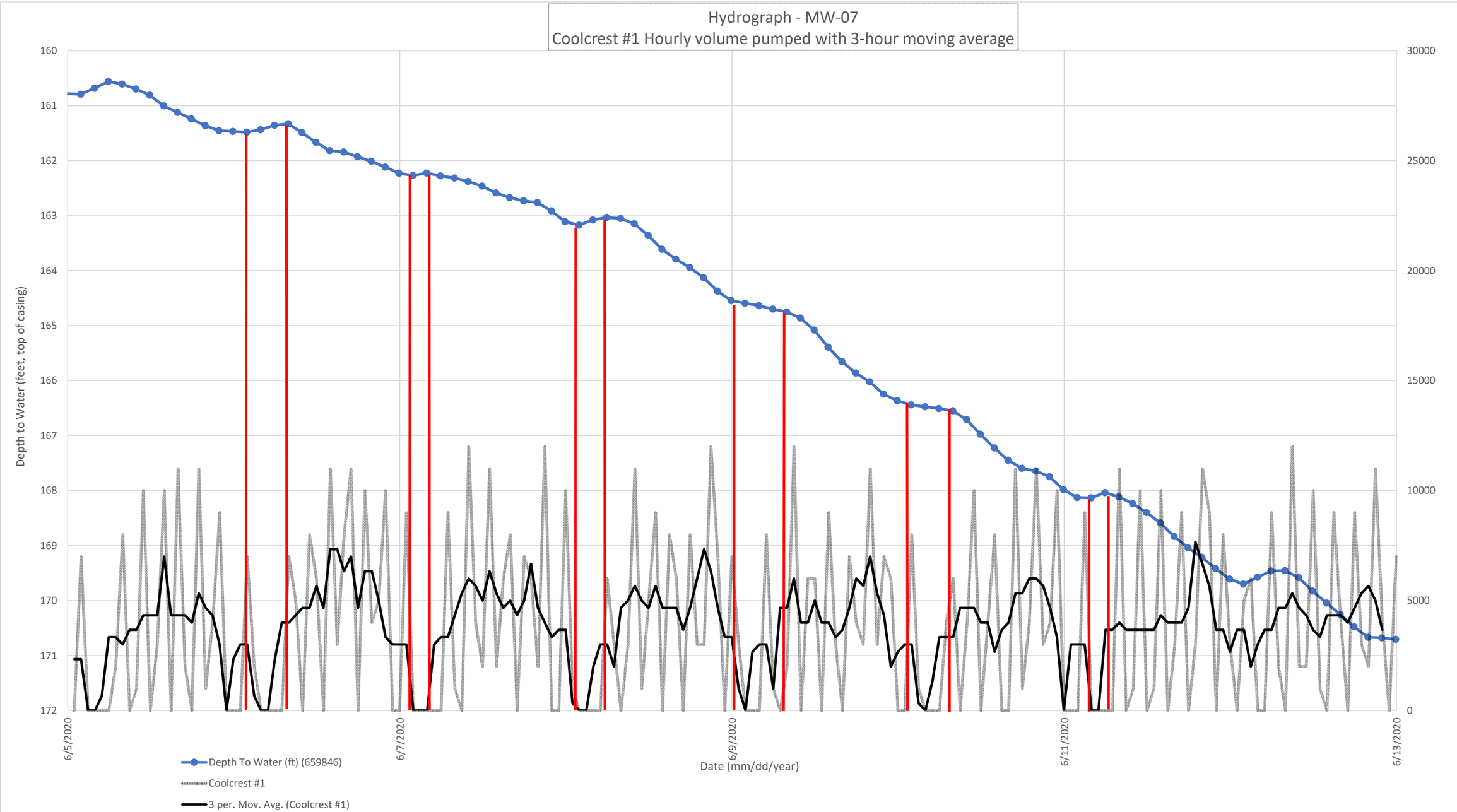
Appendix G
Figure 3



Appendix H
Figure 4



Appendix H
Figure 5



APPENDIX I
LABORATORY DATABASE (Provided on CD)

APPENDIX J
EDWARDS AQUIFER AUTHORITY HEXAVALENT CHROMIUM ANALYTICAL RESULTS

Appendix J
Hexavalent Chromium Analytical Results from Groundwater Wells Surrounding the RCMF Site

Location ID	Analyte	Date	Time	Result Value	Result Unit	Latitude	Longitude	County	Location Type	Aquifer	Special
AS-69-22-907	Chromium, Hexavalent	11/13/2019	12:15	0.06	ug/l	29.652579	-99.257724	Bandera	Groundwater	Trinity	
AY-68-19-5SK	Chromium, Hexavalent	10/15/2019	9:50	0.11	ug/l	29.6313	-98.7103	Bexar	Groundwater	Trinity	
AY-68-21-9WW	Chromium, Hexavalent	2/13/2020	12:00		ug/l	29.65946063	-98.3868438	Bexar	Groundwater	Trinity	
AY-68-22-7HW	Chromium, Hexavalent	2/13/2020	11:00	0.09	ug/l	29.66334685	-98.37982211	Bexar	Groundwater	Trinity	
AY-68-27-208	Chromium, Hexavalent	10/15/2019	11:45	0.04	ug/l	29.62	-98.684167	Bexar	Groundwater	Trinity	
AY-68-27-2GH	Chromium, Hexavalent	10/16/2019	10:15		ug/l	29.5897	-98.6879	Bexar	Groundwater	Trinity	
AY-68-27-2HN	Chromium, Hexavalent	11/19/2019	10:05		ug/l	29.616555	-98.682362	Bexar	Groundwater	Trinity	
AY-68-27-2WM	Chromium, Hexavalent	9/25/2019	11:10	0.15	ug/l	29.61029135	-98.69987519	Bexar	Groundwater	Trinity	
AY-68-27-5LP	Chromium, Hexavalent	9/26/2019	10:00	0.09	ug/l	29.5902778	-98.6880556	Bexar	Groundwater	Trinity	
AY-68-27-611	Chromium, Hexavalent	1/15/2020	11:40	0.09	ug/l	29.574999	-98.627499	Bexar	Groundwater	Edwards	
AY-68-28-407	Chromium, Hexavalent	7/31/2019	11:25	0.08	ug/l	29.57361	-98.585555	Bexar	Groundwater	Edwards	
AY-68-28-515	Chromium, Hexavalent	1/14/2020	11:35	0.05	ug/l	29.563611	-98.561666	Bexar	Groundwater	Edwards	
AY-68-28-517	Chromium, Hexavalent	1/21/2020	13:20	0.21	ug/l	29.576943	-98.575277	Bexar	Groundwater	Edwards	
AY-68-28-519	Chromium, Hexavalent	8/7/2019	11:40	0.14	ug/l	29.569166	-98.553888	Bexar	Groundwater	Edwards	
AY-68-28-609	Chromium, Hexavalent	8/14/2019	10:30	0.05	ug/l	29.583054	-98.537499	Bexar	Groundwater	Edwards	
AY-68-29-213	Chromium, Hexavalent	1/9/2020	10:50	0.08	ug/l	29.584721	-98.452777	Bexar	Groundwater	Edwards	
AY-68-34-6RG	Chromium, Hexavalent	4/17/2019	11:55	0.13	ug/l	29.427433	-98.760914	Bexar	Groundwater	Edwards	RCMF
AY-68-34-6RP-1	Chromium, Hexavalent	8/16/2018	10:05	0.29	ug/l	29.4261382	-98.7528055	Bexar	Groundwater	Edwards	RCMF
AY-68-34-6RP-1	Chromium, Hexavalent	4/16/2019	9:15	0.23	ug/l	29.4261382	-98.7528055	Bexar	Groundwater	Edwards	RCMF
AY-68-34-6RV	Chromium, Hexavalent	3/3/2020	10:25	0.21	ug/l	29.43077432	-98.76093585	Bexar	Groundwater	Edwards	RCMF
AY-68-35-402	Chromium, Hexavalent	7/26/2018	9:20	0.13	ug/l	29.4272243	-98.7367274	Bexar	Groundwater	Edwards	RCMF
AY-68-35-402	Chromium, Hexavalent	4/15/2019	14:45	0.15	ug/l	29.4272243	-98.7367274	Bexar	Groundwater	Edwards	RCMF
AY-68-35-402	Chromium, Hexavalent	3/5/2020	9:45	0.1	ug/l	29.4272243	-98.7367274	Bexar	Groundwater	Edwards	RCMF
AY-68-35-403	Chromium, Hexavalent	7/26/2018	10:15	0.17	ug/l	29.4191104	-98.727916	Bexar	Groundwater	Edwards	RCMF
AY-68-35-403	Chromium, Hexavalent	4/15/2019	15:50	0.15	ug/l	29.4191104	-98.727916	Bexar	Groundwater	Edwards	RCMF
AY-68-35-403	Chromium, Hexavalent	3/5/2020	8:45	0.18	ug/l	29.4191104	-98.727916	Bexar	Groundwater	Edwards	RCMF
AY-68-35-4AF	Chromium, Hexavalent	4/16/2019	10:40		ug/l	29.43293	-98.72017	Bexar	Groundwater	Edwards	RCMF
AY-68-35-4AH	Chromium, Hexavalent	8/15/2018	9:45	0.16	ug/l	29.43096	-98.73563	Bexar	Groundwater	Edwards	RCMF
AY-68-35-4GB	Chromium, Hexavalent	7/30/2018	9:50	0.13	ug/l	29.445572	-98.749447	Bexar	Groundwater	Edwards	RCMF
AY-68-35-4GB	Chromium, Hexavalent	2/27/2020	11:05	0.1	ug/l	29.445572	-98.749447	Bexar	Groundwater	Edwards	RCMF
AY-68-35-4LA	Chromium, Hexavalent	4/16/2019	10:25	0.11	ug/l	29.445132	-98.75081	Bexar	Groundwater	Edwards	RCMF
AY-68-35-4RH	Chromium, Hexavalent	4/17/2019	13:25	0.09	ug/l	29.448759	-98.748137	Bexar	Groundwater	Edwards	RCMF
AY-68-35-505	Chromium, Hexavalent	4/17/2019	9:20	0.16	ug/l	29.431389	-98.689722	Bexar	Groundwater	Edwards	RCMF
AY-68-35-5MR	Chromium, Hexavalent	7/26/2018	11:20	0.19	ug/l	29.4199993	-98.6874996	Bexar	Groundwater	Edwards	RCMF
AY-68-35-711	Chromium, Hexavalent	8/15/2018	11:38	0.16	ug/l	29.385	-98.738056	Bexar	Groundwater	Edwards	RCMF
AY-68-35-714	Chromium, Hexavalent	8/2/2018	8:52	0.18	ug/l	29.40775	-98.7295271	Bexar	Groundwater	Edwards	RCMF
AY-68-35-714	Chromium, Hexavalent	4/16/2019	10:15	0.15	ug/l	29.40775	-98.7295271	Bexar	Groundwater	Edwards	RCMF
AY-68-35-810	Chromium, Hexavalent	4/16/2019	11:35	0.15	ug/l	29.406945	-98.704445	Bexar	Groundwater	Edwards	RCMF
DX-68-15-901	Chromium, Hexavalent	9/3/2019	13:05	0.09	ug/l	29.75946	-98.140581	Comal	Spring	Edwards	
DX-68-15-914	Chromium, Hexavalent	9/3/2019	13:35	0.08	ug/l	29.760556	-98.138611	Comal	Spring	Edwards	
DX-68-23-301	Chromium, Hexavalent	9/4/2019	10:55	0.2	ug/l	29.710833	-98.137221	Comal	Spring	Edwards	
DX-68-23-321	Chromium, Hexavalent	9/4/2019	13:05	0.19	ug/l	29.713888	-98.136666	Comal	Spring	Edwards	
DX-68-23-324	Chromium, Hexavalent	9/4/2019	11:55	0.21	ug/l	29.715277	-98.134721	Comal	Spring	Edwards	
DX-68-24-415	Chromium, Hexavalent	9/19/2019	10:50		ug/l	29.703813	-98.086265	Comal	Groundwater	Edwards Saline	
DX-68-24-416	Chromium, Hexavalent	9/19/2019	15:10		ug/l	29.703936	-98.086507	Comal	Groundwater	Edwards Saline	
LR-67-01-801	Chromium, Hexavalent	9/3/2019	9:40	0.08	ug/l	29.894151	-97.930037	Hays	Spring	Edwards	
LR-67-01-819	Chromium, Hexavalent	9/3/2019	10:50	0.11	ug/l	29.889721	-97.936388	Hays	Spring	Edwards	
LR-67-09-105	Chromium, Hexavalent	3/10/2020	11:05	0.12	ug/l	29.844444	-97.984444	Hays	Groundwater	Edwards	
LR-67-09-106	Chromium, Hexavalent	3/10/2020	9:40	0.13	ug/l	29.852423	-97.987262	Hays	Groundwater	Edwards	
LR-67-09-1BK	Chromium, Hexavalent	8/13/2019	9:50	0.09	ug/l	29.85584	-97.995374	Hays	Groundwater	Edwards	
LR-67-09-1KW	Chromium, Hexavalent	8/13/2019	11:10	0.1	ug/l	29.854082	-97.992164	Hays	Groundwater	Edwards	
San Pedro Springs	Chromium, Hexavalent	9/4/2019	8:50	0.15	ug/l	29.447221	-98.501666	Bexar	Spring	Edwards	
TD-69-30-306	Chromium, Hexavalent	11/20/2019	10:30	0.03	ug/l	29.615771	-99.256988	Medina	Groundwater	Trinity	
TD-69-30-905	Chromium, Hexavalent	11/20/2019	13:15	0.08	ug/l	29.530612	-99.250516	Medina	Groundwater	Trinity	
TD-69-31-407	Chromium, Hexavalent	11/20/2019	12:30	0.03	ug/l	29.544439	-99.230053	Medina	Groundwater	Trinity	
TD-69-38-906	Chromium, Hexavalent	2/26/2020	10:15	0.23	ug/l	29.388654	-99.264524	Medina	Groundwater	Edwards	
YP-69-51-102	Chromium, Hexavalent	2/4/2020	10:10	0.14	ug/l	29.222447	-99.731511	Uvalde	Groundwater	Edwards	

APPENDIX K
TEXAS PARKS AND WILDLIFE EMAIL DATED 31 AUGUST 2020

Wied, Brian

Subject: TPWD Review (#44620) River City Metal Finishing monitoring, San Antonio, TX

From: Russell Hooten <Russell.Hooten@tpwd.texas.gov>
Sent: Monday, August 31, 2020 11:48 AM
To: Wallace-Wymore, Kimberly <kwymore@eaest.com>
Cc: Russell Hooten <Russell.Hooten@tpwd.texas.gov>
Subject: TPWD Review (#44620) River City Metal Finishing monitoring, San Antonio, TX

Hello Kim,

Thank you for submitting the proposed environmental monitoring project located along Potranco Road at the former River City Metal Finishing facility in San Antonio, Bexar County, Texas, to Texas Parks and Wildlife Department (TPWD) for review. Based on a review of the documentation and project description provided, TPWD - Wildlife Habitat Assessment Program does not anticipate significant adverse impacts to rare, threatened, or endangered species, or other fish and wildlife resources. However, please note it is the responsibility of the project proponent to comply with all federal, state, and local laws that protect fish and wildlife. Provided the current project plans do not change, TPWD considers coordination to be complete.

Sincerely,
Russell

Russell Hooten
Wildlife Habitat Assessment Program
TPWD-Wildlife Division
6300 Ocean Drive, NRC 2501
Unit 5846
Corpus Christi, TX 78412
361-825-3240
russell.hooten@tpwd.texas.gov

APPENDIX L
RESPONSES TO COMMENTS ON THE REMEDIAL INVESTIGATION REPORT

EA Engineering, Science, and Technology, Inc., PBC

405 State Highway 121 Bypass
Building C, Suite 100
Lewisville, TX 75067
Telephone: 972-315-3922
Fax: 972-315-5181
www.eaest.com

11 March 2021

TECHNICAL MEMORANDUM

TO: Stephen Tzhone, U.S. Environmental Protection Agency (EPA) Region 6 Task Order Monitor

FROM: Tim Startz, EA Engineering, Science, and Technology, Inc., PBC (EA)

DATE: 11 March 2021

SUBJECT: Responses to Comments on the Remedial Investigation Report, River City Metal Finishing Superfund Site, San Antonio, Bexar County, Texas

This technical memorandum provides responses to EPA, Texas Commission on Environmental Quality (TCEQ), US Geological Survey (USGS), and the Edwards Aquifer Authority (EAA) comments on the Remedial Investigation (RI) Report. EA submitted the Revision 01 RI Report on 16 November 2020.

EPA COMMENTS

General Comments (27 October 2020)

1. At what point will the additional groundwater samples will be collected to characterize migration? How will the lateral extend to contamination be defined going forward?

   Response: The results of the RI concluded that contamination from the shallow, class 3 groundwater, does not pose a risk to contaminating the Edwards aquifer. The contaminated groundwater is limited to the immediate area of the former facility building and does not represent an area-wide concern. The shallow wells MW-02 to MW-05 had been dry since they were installed. The shallow well MW-01, which was located in the perched water zone, did not recharge following sample events and the water level had dissipated after repair of the damaged well seal in 2019, indicating that the contaminated shallow water is not likely to migrate offsite. In addition, the shallow well MW-01 and other onsite monitoring wells were abandoned to eliminate the possibility of leaving a conduit in place for migration of site contaminants. Therefore, there are no current plans in place for further groundwater monitoring or characterization.

2. Will there be any periodic monitoring of public drinking water wells downgradient of the site?

Response: Periodic monitoring of public drinking water will take place in accordance with state or local regulations.

3. **Page 1-5** – The Banister Engineering document reports that chromium 6 was reported at 17.1 mg/L in 2010. Are the units correct? This is a significantly higher level of detection for chromium 6 when compared to the levels reported in the risk assessment.

   Response: The text on page 1-5 indicates that chromium (not chromium 6) was detected at a concentration of 17.1 mg/L from MW-01 in 2010.

USGS COMMENTS

Comments (31 October 2020)

1. **Page i:** The listed table of contents (TOC) do not match the headings in the report text. Please check report text versus headings to make sure that if there is a heading listed in TOC that you have a heading in the report.

   Response: The TOC in Revision 01 has been updated to match the report headings.

2. **Page vii:** Please check acronym definition for 'CERCLIS'. The acronym 'CERCLIS' is defined on EPA webpage at https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=&dirEntryID=2785 as the 'Comprehensive Environmental Response, Compensation, and Liability Information System'

   Response: The acronym for CERCLIS has been corrected to Comprehensive Environmental Response, Compensation, and Liability Information System.

3. **Figure 1-**2: Suggest Update Potranco Road labels to 'FM 1957' instead of '1957' and '1604' to 'Loop 1604'. The FM designation stands for Farm-to-Market.

   Response: Figure 1-2 has been revised to show FM 1957.

4. **Page ES-2, Second paragraph:** Please add EPA 2018c reference to reference list. Could be typo and could be 2018b.

   Response: The reference on page ES-2, end of the second paragraph, was changed to (EPA 2018b)

5. **Page ES-4, Surface Soil:** First use of TPH, please define.

   Response: TPH was defined in the text as "total petroleum hydrocarbons".

6. **Page ES-4, last paragraph, first sentence, minor editorial comment:** Remove "in" after MW-01.

Response: The word "in" was deleted from this sentence.

7. **Page ES-5, Results and Conclusions, Soil, first paragraph, last sentence:** Suggest referencing a figure here.

   Response: Figure 1-3 was referenced after the last sentence of the first paragraph.

8. **Page ES**-5, Groundwater second sentence: Suggest mentioning that when EA invested this well that the surface completion was inadequate and allowed precipitation runoff to run down well head. EA constructed proper well head to eliminate precipitation runoff into well boring.

   Response: The following sentence was added after the second sentence in this section:

   "During the early phases of the RI, the surface completion for MW-01 was observed to be inadequate and was subsequently repaired to eliminate precipitation run-off into the well boring."

9. **Page ES-7, data gaps and recommendations:** (a). Suggest still attempting collecting surface runoff samples to determine if there is any transport off site via surface sampler. Suggest using a passive sampler device or an automated sampler to catch a run-off sample. Concern here is that the concentration of Cr in MW-01 might be related somewhat to precipitation runoff into the poorly constructed well. Soil samples have been collected over the area with minimal Cr, but if there is an unknown hot spot during runoff events a surface water sample may indicate a potential source. (b). In addition, the reviewer thought at some point that flowmeters were going to be used in the deep wells. Suggest conducting flow meter tests in those wells to see how water is moving within those boreholes before wells are abandoned. Flowmeter data could provide another line of evidence that there might not be the right groundwater movement within the Austin Chalk for contamination to move vertically.

   Response: The results of the RI concluded that contamination from the shallow, class 3 groundwater does not pose a risk to contaminating the Edwards aquifer. In addition, the shallow well (MW-01) and other on-site monitoring wells were abandoned to eliminate the possibility of leaving a conduit in place for migration of site contaminants. Therefore there are no plans in place for further surface water or groundwater monitoring or characterization.

10. **Page 1-1, Section 1.1.2: Minor editorial comment:** Suggest labeling the locations of the physical fitness center and automotive center on figure 1-2.

    Response: Figure 1-2 has been revised to label the fitness center and Potranco Automotive.

11. **Page 1-2, section 1.2.2, minor suggestion:** Suggest mentioning that there were 10 soil locations and that one of the soil locations was placed in ditch to the southeast to

determine if there were any COPCs off site. So were soils collected while drilling the wells as well (ones shown on figure), so maybe that's why they are located on map. If so, then would mention that in text to make data collection efforts clear. Later in the report this is clearly stated, so suggest modifying text here to make it clear that soils were collected during well installation.

Response: Disagree, the purpose of this subsection is to call out soil as an exposure area for investigation. Specifics on data collection were intentionally excluded to not distract from the objective of this subsection.

12. **Page 1-4, Section 1.2.5.1:** 2008 Pre-comprehensive Environmental Response, Comprehensive and Liability Information System Site Inspection (Pre-CERCLIS)' is not listed in table of contents (TOC) under section '1.2.5 Previous Investigations' (page i). Subsections from here to below as also missing from TOC. See comment 1.

    Response: EA's style guide, approved for use on the RAC II contract, does not include 4th tier subheadings or greater.

13. **Page 1-6, Section 1.3*:*** Please add ERA to acronym list.

    Response: Ecological Risk Assessment (ERA) was added to the acronyms and abbreviations.

14. **Page 2-3, Section 2.2.2:** Text states that samples collected on this date were considered not unusable. Suggest explaining why the data was considered unusable.

    Response: Analytical results from the June 2019 groundwater sampling event were considered unusable because the groundwater sampled was actually deionized water that was poured into the monitoring wells following development. After the analysis occurred, it was determined that the samples were not representative of groundwater chemistry and therefore the data was not used.

15. **Page 2-4, last paragraph, minor editorial:** See "MW-04y". Typo?

    Response: The typo was corrected to read "MW-04".

16. **Page 2-5:** Subsection TOCs missing again here as mentioned in comment 1 and comment 11.

    Response: See response to comment number 12.

17. **Page 2-6, Section 2.2.9.1**: Subsection should be its own section equivalent to '2.2.9 Synoptic Groundwater Elevation Survey' instead of a subsection. The information discussed regarding groundwater sampling has nothing to do with the collection of water-level measurements and construction of potentiometric maps.

    Response: Section 2.2.9 was converted to a 4th tier sub heading to keep consistent with the other subsections.

18. **Page 2-6, section 2.2.9.1:** Last sentence in introductory paragraph discussing two sampling events that resulted in usable groundwater data may have incorrect date. The sentence should probably be corrected to 'December 2019 and April 2020' instead of 'April 2019' as the subsequent discussion in this section refers to 1) December 2019 sampling event and 2) April 2020 sampling event.

    Response: April 2019 was revised to April 2020 in this subsection.

19. **Page 2-6, Section 2.2.9.1, December Groundwater Sampling Event, minor editorial comment**: Please hyphenate water quality parameters and add confirm that in the list of field parameters that "conductivity" is actually conductivity since most like "specific conductance". Similar parameters, but there are slight differences. In addition, add "were" before stabilization in this sentence "A groundwater sample was collected after water-quality parameters …."

    Response: Hyphen added to water quality. EA confirms that conductivity was measured in units of uS/cm. Lastly, the sentence regarding a groundwater sample is correct grammar-wise.

20. **Table 2-2:** Some of the same construction details also listed in Table 3-1 along with water-level data. Suggest combining the tables to remove some of duplication. Units for depths are listed as 'btoc' – below top of casing in table 2-2. However, in table 3-1, the screened interval and the depth are referenced to 'bgs' – below ground surface. This can only work if the top of the well is exactly flush with the ground surface. If this is the case, then choose one designation – either 'btoc' or 'bgs' for both tables. If casings are not flush with ground surface, then the depths and units will need to be verified – need to use a common reference for depth. MW01- In table 2-2 the screened interval is listed as 17.25 to 27.25 ft btoc; in table 3-1 the screened interval is listed as 15.00 to 27.25 ft bgs. Which is correct? Table 2-2 lists well diameter as 4 inches; table 3-1 lists well diameter as 2 inches. Which is correct? Wells MW-02, MW-03, MW-04, and MW-05: Table 2-2 lists well diameter as 4", screened interval 13-28 ft btoc for all wells; table 3-1 lists these same wells as having a well diameter of 2" and screened intervals of 10-28 ft bgs. Additionally, depths of these wells in table 2-2 and table 3-1 are the same but are reported with units of 'btoc' and 'bgs'. Wells MW-06, MW-07, and MW-08: Table 2-2 lists diameter of well as 12" steel; table 3-1 lists diameter of wells as 2". Total monitoring well depths referenced to 'ft btoc' in table 2-2 for these wells show the same values referenced to 'ft bgs' in table 3-1.

    Response: No changes have been made with respect to btoc. Water levels are measured from the top of casing, which is surveyed to with in 0.01-inch above mean sea level. The well diameters and depths have been revised to match the correct measurements.

21. **Table 3-1:** Suggest provided open hole interval in screen column for the MW-06 -MW-08. Assume steel casing in upper portion of well and then open hole rest of the length of well bore.

    Response: Table 3-1 has been revised to include the depth and diameter of the surface casing, and depth and diameter of the open borehole.

22. **Figure 2-2:** Water-level measurements for wells MW-06 (691.77), MW-07 (690.86), and MW-08 (691.09) are exactly the same as the measurements from December 2019 for these wells as shown on Fig. 2.1 – December 2019 potentiometric surface map. Looks like this figure was not updated with April 2020 values. Water level (WL) contours for April 2020 do not match the water-level data. The WL contours shown on map are 682, 682, and 684 – all of the WL points that are displayed on this figure are greater than these values (>690 ft).

    Response: Figure 2-2 has been revised to show the correct water level elevations. The contours are correct, but the elevations (numbers next to the wells) have been revised.

23. **Page 2-7, April 2020 Groundwater Sampling Event:** Assumed that the lithology logs and the borehole geophysics conducted in 2019 on these wells that the data was used to determine locations for the passive samplers. Suggest saying that here and having figures that show locations of the passive samplers within borehole along with borehole geophysics. After further review suggest having section 2.2.10 before the April 2020 Ground Sampling Event since geophysics occurred prior to sampling and that data was used to help determine locations.

    Response: It was the intent to use the geophysical logs to pick groundwater sample intervals. However, after a review of the logs it was apparent that samplers could be deployed every 10 feet and capture the few fractures that were identified by the logs. The text was revised to state that geophysical logging was conducted first and was used in selecting sample intervals.

24. **Page 2-7, Section 2.2.10:** The objectives of the borehole geophysical logging included 'characterize vertical flow direction and magnitude in the borehole' – the suite of logs that were run (listed on last 2 paragraphs of section on p. 2-8) do not list any flowmeter tools – which is what would have been needed to determine vertical flow direction and magnitude. Suggest deleting reference to flow direction and magnitude in objectives of borehole geophysical logging section from report text.

    Response: Agree, this has been removed from the text.

25. **Page 2-8, Section 2.2.11:** Paragraph discusses how changes in water levels in three onsite monitoring wells (MW-06, MW-07, and MW-08) completed in the Austin Chalk compare to water-level fluctuations in the Edwards aquifer. Need to name which

Edwards aquifer well that was used in the comparison to the Austin Chalk data and reference the source of the data or the URL where the Edwards aquifer data can be obtained. Will also need to add the Edwards aquifer well location to one of the location maps and reference that figure in this section. Would be useful to add the graph that is mentioned in the text to show readers how the data compares.

Response: Agree, the text was revised as follows:

Data collected was initially graphed ***and compared to the Coolcrest #2 PSW, approximately 0.35 mile south-southwest of the site*** to discern if patterns were present

26. **Page 2-9, Section 2.3.1, second paragraph, minor editorial:** First use of CLP, please define here. 'Subcontracted non-CLP laboratories" – need to name labs used for data reduction to be consistent with previous naming of labs used for testing. Suggest updating 'Data Evaluation Summary Report' to 'Data Evaluation Technical Memorandum' as listed in References to be consistent.

    Response: CLP was defined in the text as contract laboratory program and data evaluation summary report was revised to data evaluation technical memorandum.

27. **Page 2-9, Section 2.3.2, first sentence:** Need to include reference for 'EPA's National Functional Guidelines' – in subsequent sentences this reference is EPA (2014).

    Response: The EPA Functional Guidelines reference (EPA 2014) was added at the end of the first sentence of Section 2.3.2.

28. **Page 2-10, first line**: change 'was' to 'were' as you are discussing 'criteria and methods' – plural.

    Response: Agree, this change was made to the text.

29. **Page 3-1: Bulleted items**: Suggest reordering the listing of the bulleted items to match the order they are presented in subsequent sections in the report text.

    Response: Agree, the bullets were rearranged to be in order of the section they appear in the text.

30. **Figure 3-1:** Cross section trace shows a jog to the south and west of well GW-04 before continuing to the south to connect with well GW-06. In looking at figure 3-2 (cross section A-A') the jog appears to be associated with an additional well data point labeled 'No. 140079'. The well location needs to be added to fig. 3-1 and the source of this well data needs to be identified – if from TWDB or TCEQ – need to note that. Geologic fault lines (Unspecified and Normal) on the location map are difficult to see – the lines need to be thickened and made bolder. Add reference for hydrogeology source (TNRIS, 2007). Small cap of Pecan Gap showing on geologic map that does not show up on cross section (see below):

Response: The symbol and label for No. 140079 was added to Figure 3-1. The geologic fault lines were made more prominent, and the reference (TNRIS 2007) was added. The Pecan Gap located northwest of MW-01 was also added.

31. **Page 3-1, Section 3.1:** Suggest adding reference to fig. 1-2 (site layout map) to second paragraph discussing location of site.

    Response: Agree, a reference to Figure 1-2 was added to the second paragraph.

32. **Figure 3-2:** Add faults (dashed vertical lines on cross section) and upthrown/downthrown symbols (arrows with U/D) to the Legend. Add source of well information/other identifier for well 'No. 140079'. Note 'Lithology and completion details for GW-11 unknown, two nearby wells used for aproximation': Correct spelling – should be 'approximation'. If lithology and completion details are from other nearby wells – why not use those wells in the cross section? If lithology and completion information for GW-11 is unknown – do you know the total depth of the well? At a minimum you need to note/name which 'nearby wells' were used and source of that data in the note on the cross section and note what data is being used in the cross section – i.e. just geologic information, or depth/casing & open interval.

    Response: EA will add the requested information to Figure 3-2. Additionally, well 'No 140079' is TWDB state well report tracking #140079. This well is an unused SAWS well that was not available for sampling, and no other ID was assigned.

    GW-11 was shown because it was a TCEQ sample location. GW-11 is also the "Little Lions Learning Academy" supply well (a PWS), a historical TCEQ sample location, which was also sampled [by EA] during the EPA RI. No well report was found on TWDB at the time of drafting this figure, as such the completion details, including total depth are unknown.

33. **Figure 3-3**: Suggest updating figure title to reflect 'local' vs. 'regional' cross sections. Add labels for each of the monitoring well locations so readers will understand which well is which.

Response: Figure 3-3 has been revised to show the monitoring well labels and the title has been updated to "Cross Section Location Map for On-site Monitoring Wells".

34. **Page 3-1, Section 3.2 first paragraph, first sentence**: Suggest changing location of site from 'within the northern third of Bexar County' to 'in western Bexar County'. The site is on west side of San Antonio and approximately halfway between north and southern borders.

    Response: Agree, the text was revised to read "western Bexar County".

35. **Page 3-1, Section 3.2, first paragraph, fourth sentence**: Change 'is' to 'are' as reference is to both location map and cross section (plural).

    Response: Agree, 'is' was replaced with 'are' in the first paragraph, fourth sentence of Section 3.2.

36. **Page 3-2, Section 3.2, first paragraph, second sentence:** Suggest modifying sentence from 'occur as one or more large faults or a set of smaller faults or fracture zones' to 'occur as one or more large faults, sets of smaller faults, or fracture zones.

    Response: Agree, this change was made to the text.

37. **Page 3-2, Section 3.2.1, second paragraph:** Suggest adding some references here to provide where information was found to support these findings.

    Response: The second paragraph was taken from the 2018 EPA HRS, the reference at the end of this paragraph is correct.

38. **Page 3-3, Section 3.2.3, Buda Limestone, first paragraph, second sentence:** Correct spelling – should be 'pelecypod'.

    Response: Agree, the spelling for pelecypod was corrected in the text.

39. **Page 3-3, Section 3.2.4, Del Rio Clay, first paragraph, fourth sentence:** Correct spelling – should be 'pelecypod'.

    Response: Agree, the spelling for pelecypod was corrected in the text.

40. **Page 3-3, Section 3.2.5, first paragraph, fourth sentence:** Correct spelling – should be 'pelecypod'.

    Response: Agree, the spelling for pelecypod was corrected in the text.

41. **Page 3-3, Section 3.2.6:** Need reference(s) for information included in Edwards Group section. Example first paragraph, second sentence, need to provide reference for the seven members that are discussed in subsequent paragraphs. Also suggest modifying sentence to read "seven informal members."

Response: References were added to Section 3.2.6. The first sentence was revised to indicate "…seven informal members".

42. **Page 3-3, Section 3.2.6, second paragraph:** The informal geologic members discussed in the second paragraph have different types of capitalization- the units are informal and should all be lower case in the text. Next to last line – Person Formation is an official designation and should be capitalized. Capitalize 'Formation' in 'Pearson Formation'. Last paragraph: Same as previous paragraph comments – the members of the Kainer Formation are informal members, and the member names should not be capitalized.

    Response: The text was revised to lower case letters for the informal geologic members.

43. **Page 3-4**: Need to verify and update summary table showing top of formation and bottom or formation depths: Well MW-06 only goes to 180 ft depth. Wells MW-07 and MW-08 both have shales at the bottom of the wells per boring logs in Appendix C (MW-07 218-230 ft; MW-08 210-220 ft) and these shale units are noted on figs. 3-4 and 3-5. There is no mention of shale at the bottoms of these wells in report text table. 2nd paragraph – local site cross sections shown as A-A' and B-B'. Previous regional hydrogeologic cross section shown as A-A'. Suggest renaming local geology cross sections B-B' and C-C' so as not to confuse the A-A' traces for regional versus local scales.

    Response: The table on page 3-4 was revised to show the depth of the shale. The cross sections in Figures 3-4 and 3-5 were revised to B-B' and C-C', respectively.

44. **Figure 3-4:** The key shows duplicates are listed with parenthesis, but no data showing this on figure. Also, assume the data shown on MW-07 is from passive samplers and would state that on figure. Suggest outlining hexavalent chromium concentrations on figure in black and boldface – the red font is difficult to see against the hatched background. Add date(s) for water-level (WL) data used to construct the approximate water table. This should be the WL that was collected at the time that the hexavalent chromium samples were collected. Otherwise you need to note date for WL measured and date for collection of water-quality samples.

    Response: Figure 3-4 was revised to (1) remove the reference to duplicate samples, (2) add a note that MW-07 groundwater samples were collected with dual-membrane samplers, (3) change bold red text to bold black text, and (4) include a date for WL measurements and groundwater samples.

45. **Figure 3-5:** Define the symbol 'J' in Legend. Suggest outlining hexavalent chromium concentrations on figure in black and boldface – the red font is difficult to see against the hatched background. Add date(s) for water-level information used to construct the approximate water table and dates when hexavalent chromium water-quality samples were collected.

Response: Figure 3-5 was revised to: (1) define "J', (2) change bold red to bold black, and (3) add dates for WLs and groundwater samples.

46. **Figure 3-6:** Check color match for Whitewright Clay Loam – shade on map doesn't really match shade in Legend.

    Response: Confirmed, the RGB color on the legend matches the color in the figure.

47. **Figure 3-7:** Legend has symbols for GW sample locations (white) and wells not sampled (red) but there are no wells shown on the map, not even within the study boundary where wells are located. Remove these symbols from Legend if no wells are going to be shown in this picture. Not sure what the purpose is for this figure – is it to show that the land surface elevation decreases from west to east? If so, you may be able to incorporate the topographic map into another figure and decrease the total number of figures in the report.

    Response: The groundwater sample location and well symbol were removed from the legend.

48. **Page 3-4, Section 3.3:** Please check USDA reference here. Reference lists is from 2020 and not 2018. However, during further review last reference (USDA, 2018) in reference list is on bottom of references, so please move it into alphabetical order.

    Response: The reference was corrected to USDA 2018.

49. **Page 3-5, Section 3.4.1, first paragraph, first sentence:** Text refers to fig. 3-5 when discussing topography of site – this should probably be fig. 3-7 (topographic map). Fig. 3-5 is a cross section.

    Response: Agree, the correct figure reference was added to this sentence.

50. **Page 3-5, Section 3.4.2, second paragraph, first sentence:** Add 'in' so that sentence reads '….to several springs in northern Bexar and Comal…..'

    Response: Agree, the word "in" was added to this sentence.

51. **Page 3-5, Section 3.4.2, last paragraph, third sentence:** Change 'sole source of PWS' to 'major source of 'PWS'. The City of San Antonio has diversified their water sources and the Edwards aquifer, while a major source, is no longer the sole source of water.

    Response: Agree, the word "sole" was replaced with "major" in this sentence.

52. **Page 3-6, first paragraph:** Add reference for remark regarding reported yields up to 4,000 gpm. Third sentence suggest modifying sentence 'The Edwards aquifer was encountered…' to 'The top of the Edwards aquifer was encountered…'. Fourth sentence-

Add site number for Coolcrest #2 as shown on fig. 1-5 in the text so that readers can locate the well and add date for reported depth to water of 241 ft.

Response: The text was revised to add a reference for the well yield. 'The top of ..' was added before Edwards aquifer and a well number was placed in parentheses next to Coolcrest No. 2.

53. **Page 3-6, second paragraph:** Can you add reference for EAA rules? They should be posted on their website.

    Response: A reference was added for the EAA rules.

54. **Page 3-6, Section 3.4.3, first paragraph:** Monitoring well construction information shown in both Table 2-2 and Table 3-1. There are discrepancies between table 2-2 and table 3-3 with regards to casing intervals, etc.

    Response: Tables 2-2 and 3-1 were combined into one table, and monitoring well details and measurements were corrected.

55. **Page 3-6. Section 3.4.3, third sentence:** Awkward sentence. Suggest modifying to something like the following: "MW-2 through MW-4 have been dry since the installation of the wells suggesting there is no groundwater within this hydrogeologic interval at the Site".

    Response: Agree, the third sentence was replaced with the following:

    "MW-2 through MW-4 have been dry since the installation of the wells suggesting there is no groundwater within this hydrogeologic interval at the site."

56. **Page 3-6. Section 3.4.3, third paragraph:** The text mentions that 2 synoptic water-level (WL) measurement surveys were conducted in December 2019 and again in April 2020 and that additional continuous WL measurements were made during April-July 2020 and that this data was reviewed/compared with precipitation data. It would be very helpful to provide the April-July 2020 data as a combined time series graph with the water-level data plotted as a function of elevation amsl and compared to precipitation data included as a bar graph. That way the readers can have a better understanding of the relation between precipitation and changes in the water levels in these wells. The text mentions the discrete WL data as compared to more continuous WL data – are there differences in the amplitude of the WL changes, and were any of the levels higher or lower with respect to land surface than the discrete measurements? If so, these need to be noted as range in WLs for the site during the RI.

    Response: Hydrographs with precipitation data are now included as Appendix G.

57. **Page 3-6. Section 3.4.4:** Groundwater contours on fig. 2-2 do not match the data points on the figure. Data points shown on fig. 2-2 for April 2020 have the same values as shown on fig. 2-1 for December 2019.

    Response: Figure 2-2 was revised to show the correct water level elevations.

58. **Page 3-7, Section 3.4.5, first paragraph:** Suggest putting year after Garza since that is a reference. (1962). Second sentence suggest changing to include the Georgetown Formation as it is part of the Edwards aquifer so that the sentence reads '…..and is geologically separate from the Georgetown Formation and the Edwards Group (which comprises the Edwards….'

    Response: This section was revised to include the date (1962) before Garza and Georgetown Formation was added to the sentence.

59. **Page 3-7, Section 3.4.5, second paragraph:** First sentence: The Edwards aquifer is no longer the sole source of water for San Antonio. Suggest updating sentence to read 'is a primary source of PWS for the City of San Antonio'. Sentence 4: Should sentence read 'streamflow losses' instead of 'streamflow low'? Sentence 6: Suggest modifying sentence to read 'where it is withdrawn by wells and discharged to springs'.

    Response: The following was added to the first sentence:

    …. aquifers in the nation, 'is a primary source of PWS for the City of San Antonio'

    Sentence 4 was revised to read… "streamflow low was revised to streamflow losses."

    Sentence 6 was revised to read… "where it is withdrawn by wells and discharged to springs."

60. **Figure 4-1**: This figure is a little confusing since the text indicates that only exceedance of chromium was in SB-05, but figure key indicates red locations are exceedance of chromium. Should the other locations also have pop outs showing concentrations? Please clarify. Need to define 'J' listed in results column for sample SB-05. Need to add units for 'depth' in results for sample SB-05. In notes section: 3rd line - Correct spelling – 'colleced' should be 'collected, samples collected 1 April 2019 to 4 April 2019' does not match w/ dates shown for sample SB-05 (dates samples collected 4/2/2020). Unable to determine sample dates for remaining samples as none are listed, need to add reference for 'Residential RSL for Hexavalent Chromium'.

    Response: Figure 4-1 has been revised to only show a red symbol for SB-05, the word collected is correctly spelled in the notes and a note for "J" flagged data has been added. Regarding the sample date, the dates in the sample callout boxes have been revised to the correct date "2019."

61. **Figure 4-2:** Need to add units for 'depth' shown in sample results. In Note's section: 3rd line - Correct spelling – 'colleced' should be 'collected', samples collected from 1 April 2019 to 4 April 2019' – all of the sample results shown on this figure are from April 2020 – not April 2019, need to add reference for 'Residential RSL for Arsenic'.

    Response: Figure 4-3 has been revised with these changes. The sample dates on the call out boxes have been corrected to read "2019" instead of "2020."

62. **Figure 4-3: In Note's section:** Need to add reference for 'Residential RSL for Benzo(a)pyrene and Two sample concentrations are shown – update 'Highest concentration" to "Highest concentrations'. Need to add units for 'depth' shown in sample results. Need to define 'J' listed in results column for sample SB-07 and SB-10.

    Response: Figure 4-3 has been revised with these changes.

63. **Figure 4-4:** Need to define 'J' listed in results column for sample SB-01, SB-02, and SB-05. Update 'highest concentration' to 'highest concentrations'. Legend: correct spelling – should be 'Exceedance'. Need to add units for 'depth' shown in sample results. Add reference for and note exceedance value for hexavalent chromium.

    Response: Figure 4-4 has been revised with these changes.

64. **Figure 4-5:** Update 'highest concentration shown to 'highest concentrations shown'. Add reference for and note exceedance value for arsenic.

    Response: Figure 4-5 has been revised with these changes.

65. **Page 4-3 Section 4.5:** Based on the soils described earlier and the fact that the new shallow wells at the Site are dry the potential for infiltration of precipitation is very minimal and most precipitation would run off the site. As suggested previously, the collection of a run-off event is still a data gap, so suggest installing a passive event sampler or automatic sampler to collect this type of data.

    Response: A bullet was added to Section 8.5 to recommend collection of surface water following a precipitation run-off event.

66. **Figure 4-6:** Based on the background described in the report there have been problems for the contract laboratory to reach the reporting limits for chromium. It appears the calibration was set for higher concentrations which would make sense for MW-1, but not for the other deeper wells. Most of the results for chromium are flagged with "J" values that are basically an estimate between the method detection level and the reporting level. Is there a possibility of another round of sampling to get data that would meet the data quality objectives? "J" values are useful to say yes there is something there, but the result wouldn't be statistically valid regarding a regulatory standard or screening level. Not sure how MW-08 samples collected from 4/29/2020, can have a result of 0.022 at 156 feet and then a 0.154 J value at 166. Would assume all the runs at lab on that date

was from same batch. Maybe instrumentation calibrated on low end this date., thus J values for higher concentrations. Here is a list of corrections recommended for figure: Correct spelling of units – should be 'micrograms per liter', add reference USEPA Tap Water Regional Screening Level for hexavalent chromium, need to define 'J' listed in results column, need to define '*' listed in results column. Previous figures indicate the '*' represents a duplicate sample, define 'NA', and need to add units for 'depth' shown in sample results.

Response: Figure 4-6 has been revised with these changes. Regarding data usability, the laboratory documented the following:

"Method 218.6, R2003564-001 through -019 (save -003, -018, and -019), Samples were received at ALS Rochester after or close to the 24-hour holding time expiration. Upon evaluation of the pH of the samples, the samples were not within the method specified range needed to extend the holding time to 28 days. The samples were adjusted to the correct pH, but the adjustments were performed outside of the 24-hour holding time. Samples received with a pH >8 are unlikely to have the potential to reduce hexavalent chromium to trivalent chromium. The pH of all samples on this job were above a pH of 8 upon receipt."

67. **Figure 4-7:** Sample WW-04: In header, change 'Unit' to 'Date', need to add water-quality sample result units for 1) hexavalent chromium and 2) thallium, and Need to reference for and note exceedance values for hexavalent chromium and thallium.

    Response: Figure 4-7 has been revised with these changes.

68. **Page 4-5, table:** Table should show that results like lowest concentration for MW-06 was a "J" value.

    Response: Agree, a "J" value was added to the low concentration for MW-06 and the high concentrations for MW-07 and MW-08.

69. **Page 7-1, second paragraph, minor editorial comment:** Remove space between kart and features, so sentence is complete across page.

    Response: The space between karst and features has been removed.

70. **General comment:** RIs are typically very repetitive, but for this one it seems exceedingly repetitive. Didn't try to reorganize things here, but for like soils and groundwater there are like four sections that say the same thing.

    Response: Comment acknowledged.

71. **Page 8-**7: There are three data gaps listed here, but only two listed in executive summary.

    Response: The list of data gaps has been revised so that the ES matches Section 8.5.

72. **Page 9-3:** Please delete the repeated reference TCEQ, 2010. Also, Maclay reference wasn't found in text, so recommend deletion. EPA, 2017b wasn't found in document either. A number of references appear to be incomplete on where readers/public can go to access these publications that are reference in the RI. Suggest adding URLs with each reference so that the reader can go directly to the reference or let reader know where these references can be found- such as administrative record? Add reference for TNRIS (2007) – hydrogeology source on figure 3-1. Add references for imagery - 'Texas Strategic Mapping Program (2015)' and 'Texas Orthoimagery Program (2018)' – shown on numerous figures including fig. 4-7.

    Response: The references for TCEQ 2010, McClay 1984, and EPA 2017b were deleted from this section. URLs for references were provided where available. The other references were added to this section: TNRIS, 2007, Texas Strategic Mapping Program (2015)' and 'Texas Orthoimagery Program (2018).

TCEQ COMMENTS

General Comments*:*

The Texas Commission on Environmental Quality (TCEQ) has reviewed the referenced report and has the following comments on the Remedial Investigation Report, Revision 00.

1. Page ES-4, Shallow Perched Groundwater and page ES-5, Groundwater: It should be stated in both of these sections that monitoring well MW-01 had a surface seal problem and the water sampled in MW-01 is not considered to be representative of the groundwater in the Austin Chalk. To make this point clear, the discussion should include the information that the well didn't recharge after the surface seal was repaired. The second paragraph in Section 5.2.3 has a good description of this situation.

    Response: The following text was added to pages ES-4 and ES-5 to explain the perched water around the MW-01 well screen.

    "During the early phases of the RI in April 2019, the surface completion for MW-01 was observed to be inadequate and was subsequently repaired to eliminate precipitation runoff into the well boring."

2. Page ES-6, Human Health Risk Assessment: The first paragraph should include the HHRA results for receptor exposure to groundwater. Regarding the Groundwater Section, the MW-01 results should be removed from this discussion as earlier statements should have made it clear that the MW-01 results are not representative of Austin Chalk groundwater and are not used in the risk assessment. Also, as monitoring well MW-08 is located closer to the former RCMF building than monitoring well MW-06, it would be more accurate to state that hexavalent chromium risks from the Austin Chalk

groundwater appear to be limited to the central area of the site rather than the area of the former RCMF building;

Response: The sentence below was added to the first paragraph of the Human Health Risk Assessment section on page ES-6. Mention of MW-01 was removed from this section. Regarding MW-06 and MW-08, the text reads that MW-06 is located in the central portion of the site near the former RCMF building.

"Potential risks from exposure to groundwater are present due to high concentrations of hexavalent chromium. The non-carcinogenic hazards for hexavalent chromium in groundwater for the child and adult resident were 3 and 22, respectively."

3. Section 3.4.3, Depth to Groundwater: While discussing MW-01 and the lack of recharge, this section should mention that there was a surface seal problem and no recharge occurred after the surface seal was repaired, thus the likely source of the water in MW-01 was rainfall runoff;

   Response: The following text was added to the second paragraph in Section 3.4.3.

   "During the early phases of the RI in April 2019, the surface completion for MW-01 was observed to be inadequate and was subsequently repaired to eliminate precipitation runoff into the well boring. Following this repair, the water level in this well dropped substantially during each groundwater sampling event."

4. Additionally, the TCEQ has enclosed comments from Greg Zychowski, who reviewed the report regarding the ecological risk assessment.
   II. The Texas Commission on Environmental Quality (TCEQ) has reviewed the referenced report and has the following comments on the Human Health Risk Assessment Report, Revision 01:

5. Section 2.2.2.3, third paragraph – Statements made here imply that the perched zone is indicative of the Austin Chalk aquifer, please revise.

   Response: The following text was added after the first sentence, third paragraph of Section 2.2.2.3.

   During the early phases of the RI in April 2019, the surface completion for MW-01 was observed to be inadequate and was repaired to eliminate precipitation runoff into the well boring. The water level in MW-01 dropped and never recharged following subsequent groundwater sampling events, therefore suggesting that the water in MW-01 consisted of surface runoff that entered into the well through the inadequate surface seal.

6. Tables 2.3, 2.4, and 3.3 – Please remove the MW-01 data from each of these tables as this data is not representative of groundwater at the site.

Response: MW-01 data has been removed from Tables 2-3, 2-4 and 3-3.

7. Since the total chromium and hexavalent chromium groundwater results do not exceed the federal Maximum Contaminant Level (MCL), the TCEQ does not concur with the conclusion of the revised HHRA that there is unacceptable risk/hazard due to hexavalent chromium in groundwater;

   Response: Per the response to TCEQ comment No. 6, the document (and HHRA) has been revised to eliminate analytical results from groundwater samples collected from MW-01 as these data are not representative of groundwater at the site.

   In regard to determining cancer risk, while the total chromium and hexavalent chromium groundwater results do not exceed the MCL, it is noted that the HHRA does not consider the MCL appropriate for use in determining cancer risks and noncancer hazards. The HHRA evaluates cancer risks and noncancer hazards based upon toxicity values set forth by EPA or other appropriate toxicity sources. Therefore, potential unacceptable risks/hazards are based upon these toxicity values. The decision to use the MCL or a risk-based cleanup value as the appropriate criteria for total chromium and hexavalent chromium is a decision appropriate for the FS.

8. Although Table 9.8 of the revised HHRA shows a hazard quotient (HQ) of 2.4 for the resident (childhood + adulthood) from thallium in groundwater, remedial action under TRRP would not triggered because the groundwater exposure point concentration (≈0.3 ppb in Table 3.4) is less than the federal MCL (2 ppb) since the federal MCL is used to evaluate the acceptability of thallium results under TRRP.

   Response: Similar to the response to Comment #3, it is noted that the HHRA does not consider the MCL appropriate for use in determining cancer risks and noncancer hazards. The HHRA evaluates cancer risks and noncancer hazards based upon toxicity values set forth by the EPA or other appropriate toxicity sources. Therefore, potential unacceptable risks/hazards are based upon these toxicity values. The decision to use the MCL or a risk-based cleanup value as the appropriate criteria for thallium is a decision appropriate for the FS.

ERA Comments

9. According to the Ecological Risk Assessment (ERA) sections of the RI (pgs. ES-6 thr. ES-7, and 7-1), "threatened, rare and endangered species are present; however, there is no complete ecological pathway. The site is small enough (less than 1 acre) that no terrestrial wildlife receptors would be using it exclusively. It is in an industrial area so unlikely to be attractive to foraging or nesting terrestrial wildlife populations."

   The TCEQ's ERA program usually considers the presence of protected species within the affected area as grounds for a more in-depth ERA. Keeping this in mind, site representatives should provide a copy of the letter from the Texas Parks and Wildlife

Department (dated August 31, 2020), describing the lack of risk from site-related COPCs1 to protected species known to be present at or near the affected property.

Response: The 31 August 2020 email from Texas Parks and Wildlife has been added to the RI report as Appendix J.

10. Based on the information provided, it is assumed that in addition to incomplete surface water/sediment and soil ecological exposure pathways by deposition or overland flow, the groundwater-to-surface water ecological exposure pathway is also incomplete. Please note that in the event of a "substantial change in circumstances" based on new information regarding the known or suspected extent of COPCs, the TCEQ may request revisions to the scope of the ERA. See 30 TAC 350.35(d) for more information (TCEQ, 2009).

    Response: Comment acknowledged

EDWARDS AQUIFER AUTHORITY (EAA) COMMENTS

General Comments:
Comments on draft Remedial Investigation report for the River City Metal Finishing site
F. Paul Bertetti, Edwards Aquifer Authority

Overall, my comments are minor. The draft report presents a very good summary of information.

Specific comments:

1. Page ES-6 and other locations in the text: The term "historical detections" is used often to describe hexavalent chromium results the EAA has collected over the past couple of years (since summer of 2018). While these results are regional in nature, they are not particularly historical. The recent EAA results are consistent with UCMR-3 results for hexavalent chromium concentrations in the Edwards Aquifer. I do not object to the use of "historical" as long as it is understood that the EAA samples were collected over the same time frame as were samples collected for the RI.

    Response: Agree, the text was revised to clarify that EAA groundwater samples were collected during the same timeframe as the RI.

2. Page 4-4, Section 4.6.1: The text notes that concentrations of chromium in the Austin Chalk monitoring wells are over two times less than MW-01. I think that number should be over 200 times less (more than 6,000 ppb in MW-01 and about 30 ppb max in MW-06). This error also appears on Page 8-3, Section 8.3.5.1.

    Response: Agree, the text was revised in sections 4.6.1 and 8.3.5.1 to clarify that the concentration was over 200 times greater.

3. Page 5-5, Section 5.2.3: The text states that MW-01 was installed during the 2016 TCEQ investigation, but it was actually installed much earlier (as noted in Section 1.2.5.3) by Banester Eng. in 2010. This should be corrected or clarified if you mean to say MW-01 was the only available/existing site monitoring well for TCEQ to sample in 2016.

   Response: Agree, first paragraph of Section 5.2.3 was revised to state that MW-01 was installed during the 2010 Banester APAR investigation.

4. Figure 2-2: The contours in this figure are not consistent with the water level data shown. Either the data labels are incorrect for April 2020 (seems to be the case based on the data tables) or the contours are drawn in error. One or the other should be corrected.

   Response: Agree, the contours are correct, but the values shown are from another synoptic event. These values have been corrected.

5. Figures 2-1 and 2-2: These figures should clearly indicate that the contours and water levels are for the Austin Chalk.

   Response: Agree, the figure titles were changed to make it clear that the water levels and contours are from Austin Chalk monitoring wells.

6. General: Although it is generally understood that groundwater will tend to flow in a direction that is down gradient and orthogonal to the water elevation contours, the presence of fractures, faults, and karst features can significantly alter the specific flow direction. It would not be unexpected for flow within the saturated Austin Chalk to be in a direction that is different from what one would expect in a more homogeneous matrix. Moreover, the largest gradient at the site is vertical and gravity driven (at least 130 feet of head from the perched zone to the Austin Chalk water level). This downward dominated flow would likely follow a very different direction than that indicated by the Austin Chalk potentiometric surface and would be controlled by fractures or fault-related features. (We can assume that the vertical hydraulic conductivity for the fractures is large relative to the non-fractured/faulted strata and that downward flow occurs because chromium was detected in the saturated Austin Chalk despite the existence of the perched zone.)

   Response: Agree, the following text was added to Section 3.4.4.

   "When reviewing Figures 2-1 and 2-2 it is important to understand that groundwater will tend to flow in a direction that is down gradient and orthogonal to the water elevation contours, the presence of fractures, faults, and karst features can significantly alter the specific flow direction. Monitoring wells MW-06, MW-07, and MW-08 are situated within approximately 100 feet of each other, within a 0.62 acre site, so therefore it would not be unexpected for flow within the saturated Austin Chalk to be in a direction that is different from what is depicted on these figures."