UNDERGROUND STORAGE TANK
CORRECTIVE ACTION PLAN

Oakwood Fuel King
619 Oakwood Avenue NW
Huntsville, Madison County, Alabama
Facility I.D. No. 23044-089-012805
UST Incident No. UST20-03-03
PRE Project No. 12019-17

ATTF CP-17

April 12, 2024

UST OWNER

Arezo, Inc.
605 Oakwood Avenue NW
Huntsville, AL 35811

CONSULTANT

PRE, Inc.
124 Summit Parkway
Birmingham, AL 35209
Telephone (205) 942-6293

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UST RELEASE FACT SHEET

GENERAL INFORMATION:

SITE NAME: **Oakwood Fuel King**
ADDRESS: **619 Oakwood Avenue; Huntsville, Madison County, Alabama**
FACILITY I.D. NO. **23044-089-012805**
UST INCIDENT NO.: **UST20-03-03**

RESULTS OF EXPOSURE ASSESSMENT:

How many private drinking water wells are located within 1,000 ft. of site?	None
How many public water supply wells are located within 1 mile of the site?	2
Have any drinking water supply wells been impacted by contamination from this release?	Within WHP Area II
Is there an imminent threat of contamination to any drinking water wells? WHP Area II	{ X } Yes { } No
Have vapors or contaminated groundwater posed a threat to the public? WHP Area II	{X } Yes { } No
Are any underground utilities impacted or imminently threatened by the release?	{X } Yes { } No
Have surface waters been impacted by the release? Threatened	{ X } Yes { } No
Is there an imminent threat of contamination to surface waters? Threatened	{X} Yes { } No
What is the type of surrounding population?	Residential/ Commercial

CONTAMINATION DESCRIPTION:

Type of contamination at site: { X } Gasoline, { } Diesel, { } Waste Oil
{ } Kerosene, { } Other

Free product present in wells? { } Yes { X } No
Maximum Free Product Thickness Measured in the Wells:

Maximum Total BTEX in soil: 110.63 mg/kg in MW-6 (1/6/21)

Maximum TOTAL BTEX concentrations measured in groundwater: 10.745 mg/L in MW-4 (7/2/20)

UST SITE CLASSIFICATION SYSTEM

CHECKLIST

Please read all of the following statements and mark either yes or no if the statement applies to your site. If you have conducted a Preliminary or Secondary Investigation, all questions should be answered. Closure site assessment reports may not provide you with all the necessary information, but answer the statements with the knowledge obtained during the closure site assessment.

SITE NAME: **Oakwood Fuel King**
ADDRESS: **619 Oakwood Avenue; Huntsville, Madison County, Alabama**

FACILITY I.D. NO. **23044-089-012805**
UST INCIDENT NO.: **UST20-03-03**

OWNER NAME: **Monsour Azizkhani**
OWNER ADDRESS: **605 Oakwood Avenue; Huntsville, AL 35811**

NAME & ADDRESS OF PERSON
COMPLETING THIS FORM: **Bill Simmons, P. G.**
124 Summit Parkway, Birmingham, AL 35209

CLASSIFICATION	*DESCRIPTION*	*YES*	*NO*
CLASS A	IMMEDIATE THREAT TO HUMAN HEALTH, HUMAN SAFETY OR SENSITIVE ENVIRONMENTAL RECEPTOR		
A.1	Vapor concentrations at or approaching explosive levels that could cause health effects, are present in a residence or building.	☐	☒
A.2	Vapor concentrations at or approaching explosive levels are present in subsurface utility system(s), but no buildings or residences are impacted.	☐	☒
CLASS B	IMMEDIATE THREAT TO HUMAN HEALTH, HUMAN SAFETY OR SENSITIVE ENVIRONMENTAL RECEPTOR		
B.1	An active public water supply well, public water supply line, or public surface water intake is impacted or immediately threatened.	☒	☐
B.2	An active domestic water supply well, domestic water supply line or domestic surface water intake is impacted or immediately threatened.	☐	☒
B.3	The release is located within a designated Wellhead Protection Area I.	☐	☒
CLASS C	IMMEDIATE THREAT TO HUMAN HEALTH, HUMAN SAFETY OR SENSITIVE ENVIRONMENTAL RECEPTOR		
C.1	Ambient vapor/particulate concentrations exceed concentrations of concern from an acute exposure, or safety viewpoint.	☐	☒
C.2	Free product is present on the groundwater, at ground surface, on surface water bodies, in utilities other than water supply lines, or in surface water runoff.	☐	☒

CLASSIFICATION	*DESCRIPTION*	*YES*	*NO*
CLASS D	SHORT TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
D.1	There is a potential for explosive levels, or concentrations of vapors that could cause acute effects, to accumulate in a residence or other building.	☐	☒
D.2	A non-potable water supply well is impacted or immediately threatened.	☐	☒
D.3	Shallow contaminated surface soils are open to public access, and dwellings, parks, playgrounds, day care centers, schools or similar use facilities are within 500 feet of those soils.	☐	☒
CLASS E	SHORT TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
E.1	A sensitive habitat or sensitive resources (sport fish, economically important species, threatened and endangered species, etc.) are impacted and affected.	☐	☒
CLASS F	SHORT TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
F.1	Groundwater is impacted and a public well is located within 1 mile of the site. Public water intake.	☒	☐
F.2	Groundwater is impacted and a domestic well is located within 1,000 feet of the site.	☐	☒
F.3	Contaminated soils and/or groundwater are located within designated Wellhead Protection Areas (Areas II or III).	☒	☐
CLASS G	SHORT TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
G.1	Contaminated soils and/or groundwater are located within areas vulnerable to contamination from surface sources.	☒	☐
CLASS H	SHORT TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
H.1	Impacted surface water, stormwater or groundwater discharges within 500 feet of a surface water body used for human drinking water, whole body water-contact sports, or habitat to a protected or listed endangered plant and animal species.	☐	☒
CLASS I	LONG TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
I.1.	Site has contaminated soils and/or groundwater but does not meet any of the above mentioned criteria.	☐	☒

ADDITIONAL COMMENTS:

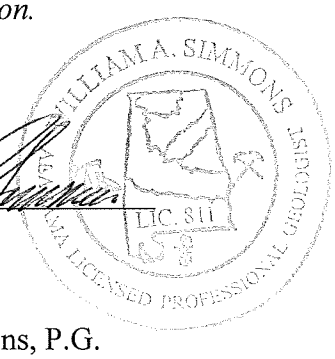
Complete the classification evaluation questions listed above. Upon completion, determine the highest rank of the site (A.1 is the highest rank) based on the statements answered with a yes.

Enter the determined classification ranking:	**B.1**

ADEM GROUNDWATER BRANCH
SITE CLASSIFICATION CHECKLIST
(5/8/95)

CERTIFICATION PAGE

I certify under penalty of law that this Corrective Action Plan and all plans, specifications, and technical data submitted within were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiring of the person or persons who directly gathered the enclosed information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.



Signature

William A. Simmons, P.G.
Name of Alabama Registered P. G.

811

Registration Number

Date

2.0 INTRODUCTION: SITE HISTORY AND STATUS

This *"Corrective Action Plan By RNA With MEME and Recovery Well Installation*" has been prepared pursuant to the Alabama Department of Environmental Management's (ADEM) February 2, 2024 approval letter for CAP development. This plan was developed by PRE, Inc., (PRE), an Alabama Tank Trust Fund (ATTF) Approved Consultant, on behalf of Arezo, Inc., owner of the subject UST system at the Oakwood Fuel King site. As directed by ADEM, this Corrective Action Plan (CAP) has been prepared for the site through Remediation by Natural Attenuation (RNA) with MEME. The scope of work for this project will be performed under cost proposals CP-18, CP-19, CP-20, & CP-21 (four quarters of RNA by groundwater monitoring with MEME) and cost proposal numbers that have already been approved. It is hoped that within one to two years, the Site Specific Target Levels (SSTLs) established for the site will be met. If the SSTLs are not achieved during this period, a contingency plan will be prepared for a treatment system for the site.

This CAP is based on previously submitted information generated as part of assessment activities performed by PRE. A topographic map, illustrating the site location is provided in Figure 1. As illustrated in Figure 1, the site is located in the northeast quarter of the southeast quarter of Section 26, Township 3 South, Range 1 West of the Huntsville topographic quadrangle in Huntsville, Madison County, Alabama. The approximate latitude is 34° 44' 56.37" North and the approximate longitude is 86° 35' 32.03" West. The address of the site is 619 Oakwood Avenue; Huntsville, Alabama. The site is located southeast corner of the intersection of Oakwood Avenue and Orchard Street NW. Surface material at the site is composed of asphalt and grass. The site layout is illustrated on the basic site map provided in Figure 2.

Past Use of the Site

The site has been a retail petroleum fueling facility since at least 1977 and reportedly sold gasoline and diesel.

Current Use of the Site

The site is currently a retail petroleum fueling facility and convenience store selling gasoline.

Description of Release at the Site

On March 9, 2020, an ADEM inspection noted fuel and water in a sub pump sump.

3.0 SUMMARY OF PREVIOUSLY CONDUCTED SITE ASSESSMENTS

Chronology of Site Assessment Work Summary

The following items constitute a chronology of events for the site to date.

Notification of Requirement to Conduct Preliminary Investigation	April 7, 2020
Date of ADEM Pre-Approval for Preliminary Investigation and Secondary Plan Development	April 7, 2020
ADEM Notice of ATTF Eligibility	April 8, 2020
Date of Contract between PRE, Inc. and Arezo, Inc.	April 20, 2020
Date of Preliminary Report	July 18, 2020
Date of Secondary Investigation Work Plan and CP-2	July 18, 2020
Date of Approval of Cost Proposal #2 for Secondary Investigation Activities and Authorization to Implement Secondary Investigation Plan	November 17, 2020
Date of Secondary Investigation Report	February 1, 2020
Date of Approval of Cost Proposal #3 for Additional Well Installation	July 12, 2021
Date of Additional Well Installation Report	September 13, 2021
Date of Tier I & II ARBCA Report	October 26, 2021
Date of GWM Report 1 of 4	November 30, 2021
Date of GWM Report 2 of 4	February 28, 2022
Date of GWM Report 3 of 4	May 31, 2022
Date of GWM Report 4 of 4	August 31, 2022
Date of GWM Report 1 of 4	January 31, 2023
Date of GWM Report 2 of 4	April 28, 2023
Date of GWM Report 3 of 4	July 31, 2023
Date of GWM Report 4 of 4	October 31, 2023
Date of ADEM Request for CAP Development	December 21, 2023
Date of ADEM Approval for CAP Development	February 2, 2024
Date of CAP by RNA with MEME	April 12, 2024

Regional Geology and Hydrogeology

The site is located in the Highland Rim Section of the Interior Low Plateaus physiographic province. Low relief and flat to rolling topography characterize the Interior Low Plateaus province. The bedrock of the area is the Tuscumbia Limestone. According to the Geological Survey of Alabama, the major aquifer in the area is the Tuscumbia-Fort Payne Aquifer. The aquifer is susceptible to contamination from the surface. Cavernous porosity is present where dissolution has enlarged fractures, bedding planes, and joints as numerous sinkholes are present in the area. The aquifer is recharged throughout its outcrop by water which infiltrates and percolates through the regolith.

(*United States Geologic Survey (USGS) Water Resources Investigations Report 87-4068 Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 1 booklet*)

Site Geology and Hydrogeology

The soils generally consist of between of fine sandy-silt, silty-clayey sand, and silty clay, which overlies micritic to oolitic, weathered, soft limestone lenses interbedded with silty clays. In some locations, fine grained, tan, silty sands were found overlying the clays at the site. The bedrock that underlies the site is the Mississippian Tuscumbia Limestone. The surface elevation at the site is approximately 634 feet above mean sea level, based on the site topographic map presented in Figure 1. Local relief change is up to a few feet.

The ground surface at the site is relatively flat and slopes gently to the east at the site. The permeability of the subsoil is moderate, with surface runoff from the site toward the south and north. An unnamed tributary of Pinhook Creek is present 60 feet to the north and the unnamed tributary enters Pinhook Creek approximately 480 feet east of the site.

Soils Investigation Results

The site geologic information was gathered from PRE's soil boring logs completed during the preliminary and secondary investigations (see Appendix A). During preliminary investigation drilling, the soils encountered in the borings MW-1 and MW-2 consisted of 0-5' of brown with yellow and orange mottling, damp to moist, moderate plastic, stiff, silty clay, with medium chert gravel; 5-10' of brown to buff with yellow mottling, damp, moderate plastic, stiff, sandy clay, with medium chert gravel; and 13-15' of brown with yellow mottling, damp, slightly plastic, stiff, silty clay classified as CL under the Unified Soil Classification System. MW-3 and MW-4 consisted of 0-5' of brown and gray, damp, slightly plastic, stiff, silty clay with manganese concretions; 5-10' of brown and gray, damp, slightly plastic, stiff, silty clay with limestone fragments; and 13-15' of brown and gray with yellow mottling, damp, slightly plastic, stiff, silty clay with limestone fragments classified as CL under the Unified Soil Classification System. During secondary investigation drilling, the borings of MW-5, MW-6, MW-7, MW-9 and MW-10 consisted of 0-5' of brown, gray or olive, damp to moist, slight to moderate plasticity, soft to stiff, silty clay; 5-16' of brown, red brown or orange brown, damp to wet, slightly plastic, stiff to hard, silty clay and clayey silt classified as CL under the

Unified Soil Classification System. The borings of MW-8, MW-11 and MW-12 consisted of 0-5' of yellow, tan or gray, damp to moist, slightly plastic, medium stiff to stiff, silty clay with occasional limestone fragments classified as CL under the Unified Soil Classification System. During the additional well installation, the borings MW-13 through MW-19 consisted of 0-5' of brown and gray mottled, damp to moist, slight to moderate plasticity, moderately soft to stiff, silty, sandy clay with small limestone fragments; 5-10' of brown or brown and gray mottled or olive gray, moist to damp, slightly plastic, soft to very stiff, silty, sandy clay and clay with small to large limestone fragments classified as CL under the Unified Soil Classification System; and 10-15' of light brown and gray mottled with some red and yellow mottling (MW-13 and MW-17), damp to wet, slightly plastic, soft to very stiff, silty, sandy clay and clay with small to large limestone fragments classified as CL under the Unified Soil Classification System. All borings were terminated at 15-16 feet below land surface. Soil boring logs are provided in Appendix A.

Groundwater Investigation Results

Table 2 depicts the depth (and elevation) to groundwater relative to an approximated ground surface elevation at 635 feet at the site shown on the USGS topographic map (the actual ground surface elevation therefore may be +/- five feet from what is shown in this report). Depth to groundwater at the site ranges from 2.39 to 4.12 feet as measured from top of casing and is flowing northeast (based on limited groundwater measurement with a limited number of on-site monitoring wells) at a gradient of 0.01 feet/feet (between MW-3 and MW-6 on February 7, 2024). See Figure 3 for a groundwater elevation and flow direction map.

4.0 SUMMARY OF PREVIOUSLY CONDUCTED CORRECTIVE ACTION

As of March 2024, an estimated 3,471 gallons of impacted groundwater, 162 gallons of which was free product equivalent, have been recovered by manual bailing and MEME events.

5.0 EXPOSURE ASSESSMENT

The site is located at 619 Oakwood Avenue NW in a mixed commercial and residential area of Huntsville, Alabama. Residences exist primarily north of the site. Residential properties and Commercial properties are present in all directions. An unnamed tributary of Pinhook Creek is located approximately 60 feet north of the site and Pinhook Creek is located approximately 480 feet east of the site. Figure 1A illustrates the site's adjoining properties as well as nearby properties.

Well Inventories

According to the *United States Geologic Survey (USGS) Water Resources Investigations Report 87-4068 Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 1* booklet, there are two public water supply wells within one mile of the site. According to Tim Storey of Huntsville Utilities, the nearest active public water supply wells are the Dallas and Lincoln wells. According to Huntsville Utilities, the subject site lies within a Wellhead Protection Area (WHPA) II for these two wells. The Dallas and Lincoln public water supply wells are described below.

- The Lincoln well is owned by the City of Huntsville for public water supply and is located approximately 3,550 feet east-southeast of the subject site. The date of installation is unknown. The well was installed at a total depth of 106 feet and is cased to 61 feet. It has a turbine driven method of lift and is pumped at 3,200 gallons per minute. The land surface altitude at the well is 640 feet.

One public well sample (Lincoln Well) was collected during this additional well installation and analyzed for Full VOCs using EPA Method 8260. Hydrocarbon concentrations were below detection limit for all parameters tested. The laboratory analytical report is provided in Appendix C.

- The Dallas well is owned by the City of Huntsville for public water supply and is located approximately 3,750 feet east-southeast of the subject site. The well was installed by Adams-Massey in 1953. The well has a diameter of 20 inches, was installed at a total depth of 104 feet, and is cased to 53 feet. It has a turbine driven method of lift and is pumped at 3,200 gallons per minute. The land surface altitude at the well is 637 feet.

Underground Utility Survey

Alabama Line Locate and Huntsville Utilities were contacted prior to drilling for identification of subsurface utility conduits. Underground utilities identified at or adjacent to the site include natural gas, water, sanitary sewer, phone (fiber optic), and storm sewer. According to Huntsville Utilities maps, there are water, and sanitary sewer, gas, phone (fiber optic), and storm water lines located beneath Oakwood Avenue NW and Orchard Street NW in the right of way as follows: Oakwood water main 18"

diameter cast iron with rubber gaskets (not gasoline resistant), Oakwood gas 8" diameter welded steel, 8" diameter sanitary sewer terra cotta line without gaskets with gravel backfill around the pipe and native soil above at an approximate depth of 6 feet flows west and south, and a storm sewer line without gaskets running diagonally northwest (before running south) along Orchard Street NW at approximately 3 feet. Oakwood Avenue NW has a fiber optic AT&T phone line near the property line. Orchard Street NW has a 6" diameter cast iron water line with rubber gaskets (not gasoline resistant). Orchard Street NW has a 2" diameter welded steel gas line. Surface water runs subsurface to an 18" diameter storm sewer (not gasoline resistant) and unnamed tributary to Pinhook Creek across Oakwood Avenue NW. No other details of the utilities are known at this time.

Potentially Affected Surface Water Bodies

As illustrated in Figure 1, the nearest surface water body to the site is an unnamed tributary to Pinhook Creek located approximately 60 feet north of the site and Pinhook Creek located approximately 480 feet east of the site. Pinhook Creek is not classified under ADEM Administrative Code R. 335-6-11-.02; therefore, it is acceptable to classify this stream as Fish & Wildlife.

Surface Water Sampling

One surface water sample SW-3 was collected from nearby surface water, illustrated on Figure 9. BTEX, MTBE, and naphthalene concentrations were below detection limit for each parameter tested. Please see the attached analytical report in Appendix C.

Extent of Surface Water Impacts

One surface water sample SW-3 was collected from nearby surface water. BTEX, MTBE, and naphthalene concentrations were below detection limit for each parameter tested. The potential exposures of hydrocarbons to Pinhook Creek have not been fully evaluated.

Risk Based Corrective Action Assessment

An Alabama Risk Based Corrective Action (ARBCA) was performed for the site in October, 2021 using the ADEM ARBCA Program, June 2002 software to estimate Site Specific Target Levels (SSTLs) for the site.

The following Tier 2 results are noted:

- The site passed the Tier 2 Indoor and Outdoor Inhalation Pathway for soil vapors for on-site commercial and construction worker.

- The site passed the Tier 2 Indoor and Outdoor Inhalation Pathway from groundwater vapors for on-site commercial and construction worker.

- The site **failed** the Tier 2 Groundwater Resource Protection Pathway for allowable source soil concentrations protective of a POE.

- The site **failed** the Tier 2 Groundwater Resource Protection Pathway for allowable groundwater concentrations at the source protective of a POE.

- The site **failed** the Tier 2 Groundwater Resource Protection Pathway for allowable groundwater concentration at POC wells.

- The site **failed** the Tier 2 Stream Protection Pathway for allowable source soil concentrations protective of a POE.

- The site **failed** the Tier 2 Stream Protection Pathway for allowable groundwater concentrations at the source protective of a POE.

The site either passed all other pathways or was found not to have a complete pathway for exposure.

Pilot Test

Some parameters were collected during the first Ecovac MEME event on June 15, 2023 at the site. Formal pilot testing activities have not been conducted at this site. However, several parameters were obtained from this MEME event. A radius of influence was estimated from this data.

Extractions wells utilized were MW-8 and MW-9 used simultaneously. Monitor well MW-8 extraction well head vacuum was 10 inches of mercury and MW-10 had 12 inches of mercury. Differential pressure readings were obtained from MW-9 and MW-15. After 8 hours, the differential pressure readings were 0.00 inches of water in MW-9 and 3.17 inches of water in MW-15. Vapors extracted from the subsurface were treated by thermal oxidization and catalytic oxidation and then emitted to the atmosphere at a destruction rate of 99.97 percent. Vapor flowrate from both wells ranged from 52 acfm at the beginning of the event and was 62 acfm at the end of the event (removing 5 acfm of bleed air from both wells from the total flow).

Pneumatic radius of influence was determined by plotting induced vacuum versus distance on a semi-log scale and the intercept of 0.1 inch of water is the radius of influence as per EPA Guidance. The pneumatic radius of influence graphed shows a radius of influence (ROI) of approximately 30 feet.

No free product was present in the monitor wells utilized and not in the vacuum truck upon completion of the event. Petroleum hydrocarbon extraction was calculated using the offgas concentrations, airflow velocities, and temperatures. A calculated total of 427 pounds or 71 equivalent gallons of petroleum hydrocarbons were removed from the subsurface during the event as stated by Ecovac Services. Ecovac Services reported

influent concentrations varied from 100,000 ppmv at the beginning and 38,000 ppmv at the end of the event.

6.0 RATIONALE FOR SELECTION OF REMEDIATION METHODS

Given that the groundwater hydrocarbon concentration values in twelve of the nineteen wells at the site have persistently exceeded SSTLs for either benzene or ethyl-benzene, PRE, Inc. is submitting a CAP by RNA with MEME as directed by ADEM. It is hoped that within two years, the groundwater concentration will be below the Site Specific Target Levels (SSTLs) established for the site. If not, then other corrective actions will be proposed.

7.0 PROPOSED REMEDIATION METHODS

Soil and Groundwater Remediation (With Free Product Equivalent Removal by MEME)

The goal of this Corrective Action Plan will be to remove any free phase product at the site (if present) and to lower the hydrocarbon mass in the liquid, absorbed, and dissolved phases of the subsurface. The existing monitor wells will be monitored for decreases in hydrocarbon concentrations and compared to the SSTLs for the site. PRE will conduct eight (8) 8-hour free phase product removal events per year basis using an out of state MEME contractor that simultaneously removes multi-phase volatile organic compounds (VOCs) from the subsurface from monitor wells during each 8 hour MEME event. The unit will be used to remove vapor, adsorbed, dissolved and liquid phases of hydrocarbons within a limited area of influence around the extraction wells. PRE proposes to extract multi-phase VOCs simultaneously from monitor wells with high levels of dissolved BTEX/MTBE in groundwater.

The MEME unit utilizes extraction piping (stinger) connected from the extraction well(s) through a header system to the MEME unit. The extracted vapor and liquid is passed through the MEME unit where these phases are separated. The vapors will be routed through an internal combustion engine (ICE) for thermal and catalytic degradation and then exhausted to the atmosphere. Vapor discharge concentrations and flow rates will be monitored to maintain off-gas concentrations below 0.1 of a pound per hour as required by ADEM Air Division. Excess fluids pass to a holding tank where they will be held until being disposed at a reclamation facility. A flow process diagram is provided in **Figure 13**.

PRE proposes conducting eight (8) 8-hour MEME events during the next year (two per quarterly period under cost proposals CP-18, CP-19, CP-20, & CP-21). If at the end of a one-to two-year period the hydrocarbon concentrations in the groundwater monitor wells have not shown a decline in concentrations, a treatment system will be considered for the site (to be discussed further in a later section of this plan).

Natural Attenuation

The EPA states that monitored natural attenuation relies on natural attenuation processes, within the context of a carefully controlled and monitored site cleanup approach, to achieve site specific remedial objectives within a time frame that is reasonable compared with other methods (EPA Bulletin #EPA 510-B-95-007 (April 1999)). A variety of physical, chemical, or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. These in-situ processes include biodegradation, dispersion, dilution, sorption, volatilization, and chemical or biological stabilization, transformation, of destruction of contaminants. The determination of this process is site specific. Site characterization must be geared toward supporting this remedial option.

Remediation by natural attenuation relies on empirical demonstration that natural attenuation is effective.

This Corrective Action Plan consists of an initial screening of natural attenuation and proposed site characterization monitoring through primary lines of evidence without a detailed evaluation of natural attenuation or an estimation of rates until appropriate data is obtained. This plan proposes collection of primary lines of evidence parameters (intrinsic bioremediation parameters) BTEX/MTBE, dissolved oxygen, pH, ORP, and conductivity) within a well array that will allow an initial evaluation of natural attenuation at a later date. If evaluation of collected empirical data concludes natural attenuation will not reduce hydrocarbon concentrations in the subsurface in a timely manner, then another corrective action plan should be developed that actively (and more timely) reduces hydrocarbon concentrations in the subsurface (generally within two to five years).

The EPA further requires in the above referenced document that independent and converging lines of evidence should be used to document and quantify natural attenuation (same reference as above) lines of evidence are used to evaluate natural attenuation: statistically significant historical database showing plume stabilization and/or loss of contaminant mass over time, contaminant and geochemical analytical data showing biodegradation, and microbiological laboratory data (not generally used). Quarterly Groundwater Monitoring Reports are proposed for duration of one year. All monitor wells will be gauged for groundwater levels and contaminate concentrations.

Remedial Overview

The proposed remediation method is to determine if the site could be remediated through natural attenuation once free phase product (if present) and adsorbed phase are removed by MEME events. This means that the site would be monitored until the reported chemical of concern (COC) contaminant concentrations are equal to or less than the approved Tier 2 Site Specific Target Levels. It is anticipated that natural attenuation would either show or not show significant declines within a one to two year period. If not, then a corrective action system has been prepared to remediate the site within an acceptable time frame. If the corrective action system is installed, at some point in the cleanup process, the system would be deactivated when SSTLs are met and the RNA portion of this CAP or Post Remedial Monitoring will then be implemented again.

Discussion

A Natural Attenuation (groundwater sampling) program, consisting of several events to document changes in the contaminant concentrations, as well as the plume dimensions, can provide adequate evidence of the water bearing unit's capacity for the elimination of petroleum hydrocarbons. It is possible that savings could result with sites that have low concentration soil sources in comparison to an engineered treatment system.

Quarterly groundwater monitoring (Natural Attenuation) events are proposed for one year in order to gather groundwater analytical data of the contaminant constituents and to establish a historical trend of reported constituent values. These values will be utilized through time to show that remediation by natural attenuation is occurring and that closure through natural attenuation is feasible. Although it may be possible that quarterly source removal events coupled with one to two years of Natural Attenuation monitoring may reduce concentrations to SSTLs, one year of monitoring may also provide information to allow an evaluation of Natural Attenuation progress toward SSTLs. The same in-situ processes (biodegradation, dispersion, sorption, and volatilization), may address soil impacts in the vadose zone and capillary fringe as well. Following one year of Natural Attenuation monitoring, a recommendation for abandonment of the monitor wells and "No Further Action" may be proposed when the reported contaminant values are equal to or less than the SSTLs for a period of one year of groundwater monitoring (Natural Attenuation) if the soil source has been eliminated.

Groundwater elevations and samples are proposed to be collected from all existing monitor wells. The groundwater samples are proposed to be analyzed quarterly for BTEX/MTBE (EPA Method 8260) and intrinsic bioremediation parameters (dissolved oxygen, pH, ORP, and conductivity). Remediation by natural attenuation parameters, including dissolved oxygen, ORP, temperature, conductivity, and pH will be collected in the field via properly calibrated meters. All data will be incorporated into ADEM's Natural Attenuation Monitoring Report (NAMR) forms and submitted to ADEM.

Aquifer Testing

Slug Tests and Permeability Coefficient

During the secondary investigation, three rising head slug tests were conducted in monitoring wells MW-2, MW-3, and MW-4. The slug tests were performed by quickly removing the groundwater with a bailer to instantaneously lower the groundwater table inside the wells. Measurements of the water rise versus time were then collected using a Solinst static water level meter. The water head versus time readings were plotted on semi log paper to evaluate the slope of the curve. Using a method developed by Herman Bouwer and R. C. Rice, 1976, other terms relating to the length of the screen and well radius were inputted. The permeability coefficient values "K" were computed.

Darcy Velocity

Hydraulic conductivity (K) was found to equal MW-2 = 2.462×10^{-5} ft/min, MW-3 = 9.208×10^{-6} ft/min, and MW-4 = 2.414×10^{-4} ft/min. The hydraulic gradient was 0.015 feet/feet (MW-2 and MW-8). Using the gradient (0.015 ft/ft) and the average K (9.174×10^{-5} ft/min), groundwater velocity is approximately 1.98×10^{-3} feet/day.

Hydraulic Interconnection

Three observations concerning the hydraulic interconnection of the two water bearing units encountered at the site follow: (1) A vertical gradient of approximately 0.102 ft/ft (MW-5 and MW-12) between the two wells exists, (2) the lower portion of the overburden within the aquifer (represented by MW-12) is impacted with dissolved phase hydrocarbons, and (3) the area of the site is a recharge area for the aquifer.

Proposed Execution of Corrective Action Plan

MEME events will be conducted on any wells found to contain free phase product during the course of this project (1-2 years). The MEME events and Groundwater Monitoring events will be conducted under cost proposals CP-18, CP-19, CP-20, & CP-21.

8.0 SCHEDULE OF IMPLEMENTATION

Once this plan and the associated cost proposals CP-18, CP-19, CP-20, & CP-21 are approved by ADEM, free product removal (equivalent) by MEME and groundwater monitoring (Natural Attenuation) will begin. The quarterly GWM events will be completed within one year.

CAP MONITORING PLAN

Monitor Well Gauging

All monitor wells will be gauged prior to purging/sampling. A Solinst interface probe will be checked to determine its operational status prior to departure. Bolts will be removed from each roadbox and accumulated rainwater inside the roadbox will be bailed (using a single use disposable cup). The gripper cap will be unlocked and released from the monitor well. The bolts and cap will be left off the well and the roadbox lid replaced to allow the well to equilibrate for approximately 15 minutes prior to gauging.

During gauging activities, a fresh pair of nitrile gloves will be used for each monitor well. If possible, cleaner wells will be gauged first to avoid cross contamination. Depth to bottom and depth to water measurements will be obtained in order to calculate the water volume in the well. The probe will be decontaminated with Alconox and water before, between, and after use. The purpose of this cleaning is to avoid cross contamination from site to site and sample to sample. Proper decontamination will be accomplished by washing with an Alconox solution of approximately 10 mL Alconox dissolved in one gallon of distilled water followed by rinsing with distilled water then rinsing with a 10% solution of methanol and water. This procedure will be repeated three times. Gauging data will be measured at the point where the monitor well was originally surveyed, which is the highest point of the well casing.

Free Product Inspection

If free product is detected in a well, the reading will be confirmed with a bailer (dedicated for product inspection) and documented. The groundwater elevation will be corrected to account for the presence of this product.

Manual Free Product Recovery

All monitor wells that have historically contained free product and any other monitor wells identified with free product will be gauged, then bailed until dry (this will be conducted during every quarterly groundwater monitoring event). The contents of the well(s) will be placed in a properly labeled 55-gallon drum.

Bioremediation Testing Indicators

In order to monitor the progress of Natural Attenuation, some measurements will be taken in the field as part of this evaluation as described in EPA 510-B-95-007 (May, 1995) and ASTM (1998). In order for aerobic biodegradation to occur, Dissolved Oxygen (DO) is required. Dissolved Oxygen (DO) measurements have an inverse correlation of DO to hydrocarbon concentration and indicate that aerobic biodegradation is occurring within a hydrocarbon plume. DO concentrations below 1-2 mg/L are an indication that aerobic degradation will proceed slowly if at all. Oxidation Reduction Potential (ORP) measurements define regions of the plume under oxidizing and/or reducing conditions. ORP measurements generally have an inverse correlation to hydrocarbon concentration and indicate the presence of either relatively oxidizing and/or reducing environments. The lower the ORP value the more relatively reducing or anaerobic the environment is. The higher the ORP value generally means relatively more oxidizing or aerobic the environment is. Hydrocarbon degradation reactions are more likely carried out only at near neutral pH (near 7). A very low or very high pH is an indication that biodegradation processes may be low if at all. pH may generally have an inverse correlation of pH to hydrocarbon concentration. Conductivity, when stabilized during bailing activity, indicates a representative sample can be taken. Conductivity may indicate if biodegradation is occurring and sometimes correlates positively to hydrocarbon concentration. Temperature is also a parameter that, when stabilized during bailing activity, indicates a representative sample can be taken. Most biological activity takes place within expected groundwater temperatures between 50 to 120 degrees Fahrenheit (10-50 degrees Centigrade). Generally, the higher the temperature, the higher biological activity (but begins to decrease above 100 degrees Fahrenheit). Ideally, a positive correlation of temperature to hydrocarbon concentration may exist within the plume.

The pH, ORP, and conductivity meter, as well as the DO and temperature meter will be calibrated and checked for proper operation prior to the site visit. Conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), temperature, and pH will be recorded in monitor wells not containing free product. DO and temperature will be recorded using an YSI 55 meter. A Hannah water test meter will be used for the other readings. Three successive readings of the bioremediation indicators will be recorded three minutes apart (or the shortest possible time intervals) following the bailing of one, two, and three well water volumes. This is conducted to evaluate the equilibrium of the water samples prior to the well bailing dry and to determine the range of values from stagnant to equilibrium conditions. Prior to groundwater extraction for each well volume extraction, DO and temperature will be determined in situ by lowering the DO probe into the monitor well to approximately one foot below the static water level and then moving the probe slightly to keep water moving over the sensor membrane with minimal addition of DO to the water. Conductivity, ORP, and pH will be performed at the surface following the removal of the first bailer of groundwater on each well volume extraction.

Groundwater Sampling

Groundwater sampling and chemical analysis follow the most recent AEIRG manual regarding Appendix C for sampling methods, Appendix D for QA/QC, Appendix E for field decontamination, and Appendix G for sampling containers etc. unless altered by ADEM approval.

The following matrix depicts the proposed groundwater sampling program for the site.

MW ID	BTEX/MTB/ Naph (Quarterly Events)	BTEX/MTBE/ Naph (Annual Event)	Intrinsic Bioremediation Parameters (Quarterly Events)	Intrinsic Bioremediation Parameters (Annual Event)
MW-1		X		X
MW-2	X	X	X	X
MW-3		X		X
MW-4	X	X	X	X
MW-5	X	X	X	X
MW-6	X	X	X	X
MW-7	X	X	X	X
MW-8	X	X	X	X
MW-9	X	X	X	X
MW-10		X		X
MW-11		X		X
MW-12		X		X
MW-13	X	X	X	X
MW-14	X	X	X	X
MW-15	X	X	X	X
MW-16	X	X	X	X
MW-17	X	X	X	X
MW-18	X	X	X	X
MW-19		X		X

These monitor wells will be sampled on a quarterly or annual basis as shown (Refer to the sections on Free Product Inspection and Free Product Recovery for free product

procedures). During all sampling events the groundwater samples will be analyzed for BTEX and MTBE (EPA Method 8260). The following procedures will be utilized in groundwater sampling.

A fresh pair of nitrile examination gloves will be worn prior to sampling each monitor well. If possible, the monitor wells will be sampled starting with the cleanest well and ending with the most contaminated well. Wells with free product (including sheens) will be sampled if feasible. No longer than 24 hours prior to sampling, 3 to 5 well casing volumes of water will be removed from the well prior to sampling (as stated above). The water will be removed by bailing. A 1.5-inch diameter disposable PVC bailer will be used to evacuate the wells. New disposable PVC bailers and nylon bailer cord will be used for each monitor well. The water will be stored in 55-gallon drums and labeled.

When bailing, personnel will not agitate the water which could release VOCs. The bailer will be gently lowered into the water, allowed to fill, and then removed. Wells with a slow recovery period will be bailed dry and then sampled within one hour or when recovered from between 50-80%. Bioremediation testing parameters will be collected as stated above during this well evacuation process to insure water quality stabilization has occurred. Stabilization is considered achieved if three samples vary less than 10% or the well becomes dry. Purge water will be containerized in 55-gallon drums and labeled. A fresh pair of nitrile gloves will be worn for sampling each monitor well. A 36-inch long 1.5-inch diameter, disposable, single use, PVC bailer with fresh cord will be used to obtain the sample. Disposal of the PVC bailer, cord, and sampling gloves will occur after use. Obtaining and combining five full bailers of water from each well sampled will ensure representative sampling and reduce cross contamination. Where silt is prevalent, the sample bailer will be rinsed once and a sample will be obtained from the second bailer full of water. When sampling, personnel will avoid disturbance of the sediments by obtaining the sample from the top of the water column. Personnel will avoid touching the rim of the sample container or bailer. Personnel will not pour the sample from the sample bailer over the bailer cord. Personnel will not allow the cord to touch the sample container. Personnel will avoid aeration of the sample during transfer of the water from the bailer to the sample container in order to minimize oxidation or loss of VOCs from the sample. The sample will be poured gently and carefully into the sample container in a steady stream. Groundwater samples to be analyzed will be transported to the laboratory in appropriate sample containers. While working, an acrylic board or similar material will serve as a flat cleanable surface on which to place duplicate samples. Groundwater samples are to be collected in duplicates. In order to eliminate trapped air, sample containers will be filled to the top so that a positive meniscus is formed. After waiting a few seconds for trapped air bubbles to rise to the surface, the technician will carefully and quickly slip the cap onto the container and tighten it securely. Next, the sample will be inverted and tapped gently against the palm of the hand and inspected for trapped air. If the sample contains air bubbles, the sample will be opened and more water added if sampling water is available, otherwise the sample will be discarded and the sampling process will be repeated with a new sample container. In order to promptly store the samples at four degrees Centigrade, samples will be positioned upright using a clean foam sponge holder and placed in an ice-filled, insulated cooler. Use of chemical

ice packs will not be allowed. Personnel will be sure to drain all water from the cooler before shipping samples and be certain that adequate packing material is used to prevent sample breakage. Personnel will pay special attention when labeling each sample vial and completing proper chain-of-custody documentation. The samples will be listed on the chain-of-custody along with all requested information. The laboratory sample identification label will be filled out with a waterproof pen and firmly affixed to each sample container either before or after sampling. Typically identification labels will require the job name, number, samplers name, date, sample identification, date of relinquishing samples to laboratory, analysis requested, and preservation method(s) used.

To preserve samples for laboratory analysis, acidification is required to bring the pH of the sample to just below 2. BTEX and MTBE will be analyzed by EPA Method 8260 and Total Lead by EPA Method 239.2. Sample containers for EPA Method 8260 will be placed in 40-mL glass vials with Teflon lined septum caps preserved with HCL. At the beginning of each sampling round, the amount of acid required to lower the sample to a pH of less than 2 will be determined by trial. The pH of the sample will be measured directly in the field since the holding time for pH by laboratory method (EPA Method 150.1) is too brief. Personnel will not add additional acid once the pH has been lowered to 2. Lowering the pH below 1.5 can have an adverse effect on sample integrity. After removing 3 to 5 well volumes from the first well to be sampled, personnel will add 2 to 10 drops of 15-25% HCL (HNO3 for Total Lead) into a 40 mL trial (practice) sampling vial (250 mL plastic bottle for Total Lead) (larger sampling containers will require more acid). The vial will be filled with water from the well to determine the pH of the water in the vial. If the pH is higher than 2 the procedure will be repeated until the pH is slightly less than 2. The procedure to determine the proper amount of acid to lower the pH to between 1.5 and 2 will be performed once per sampling event at a minimum. More frequent pH analysis may be required depending on the chemical usage at a particular site or if significantly different hydro-geochemical environments exist at the site. Personnel will discard the trial acidified sample in a disposal container located on site. After the amount of acid required to reach a pH of 2 is known, proper amounts of acid can be routinely added to each vial prior to adding the water to be analyzed. The volume of acid required depends on acid normality and water pH. Therefore, the amount of acid required is site-specific. It will be noted on the chain-of-custody form if more than 10 drops of HCL are required to reduce pH to the desired level.

Quality Assurance/Quality Control Samples

Three types of samples will be collected for quality assurance/quality control: duplicates, field equipment blanks, and trip blanks. A duplicate sample for each analytical method will be collected from one of the wells. The technician will keep the sample origin unknown until the sample results are received from the laboratory. A field method equipment blank (or rinseate blank) will be taken as part of each sampling round. An equipment blank consists of a sample of distilled water which has been collected by pouring distilled water onto each piece of equipment (that has entered multiple wells) after the equipment has been cleaned following decontamination procedures. Three

pieces of equipment are used in sampling multiple wells: the interface probe, ORP & Conductivity meter, and DO/temperature meter.

Trip blanks will be filled with distilled water from the laboratory, will accompany the sample containers to the field, and will travel with the collected groundwater samples back to the laboratory in a manner identical to the handling procedure used for the groundwater samples. A field equipment blank (one for each piece of equipment for each EPA analytical Method), one trip blank for each analytical method, and one duplicate sample for each EPA analytical method will be stored with the samples back to the laboratory for the same analyses as the groundwater samples. In summary, a list of QA/QC samples follows as per SW-846:

- Duplicates (one for each EPA analytical method and per each 20 samples collected)

Field Equipment Blanks (one for each piece of equipment entering multiple wells (3) for each EPA analytical method and per each 20 samples collected, and

- Trip Blanks (one for each EPA analytical method and per each 20 samples collected)

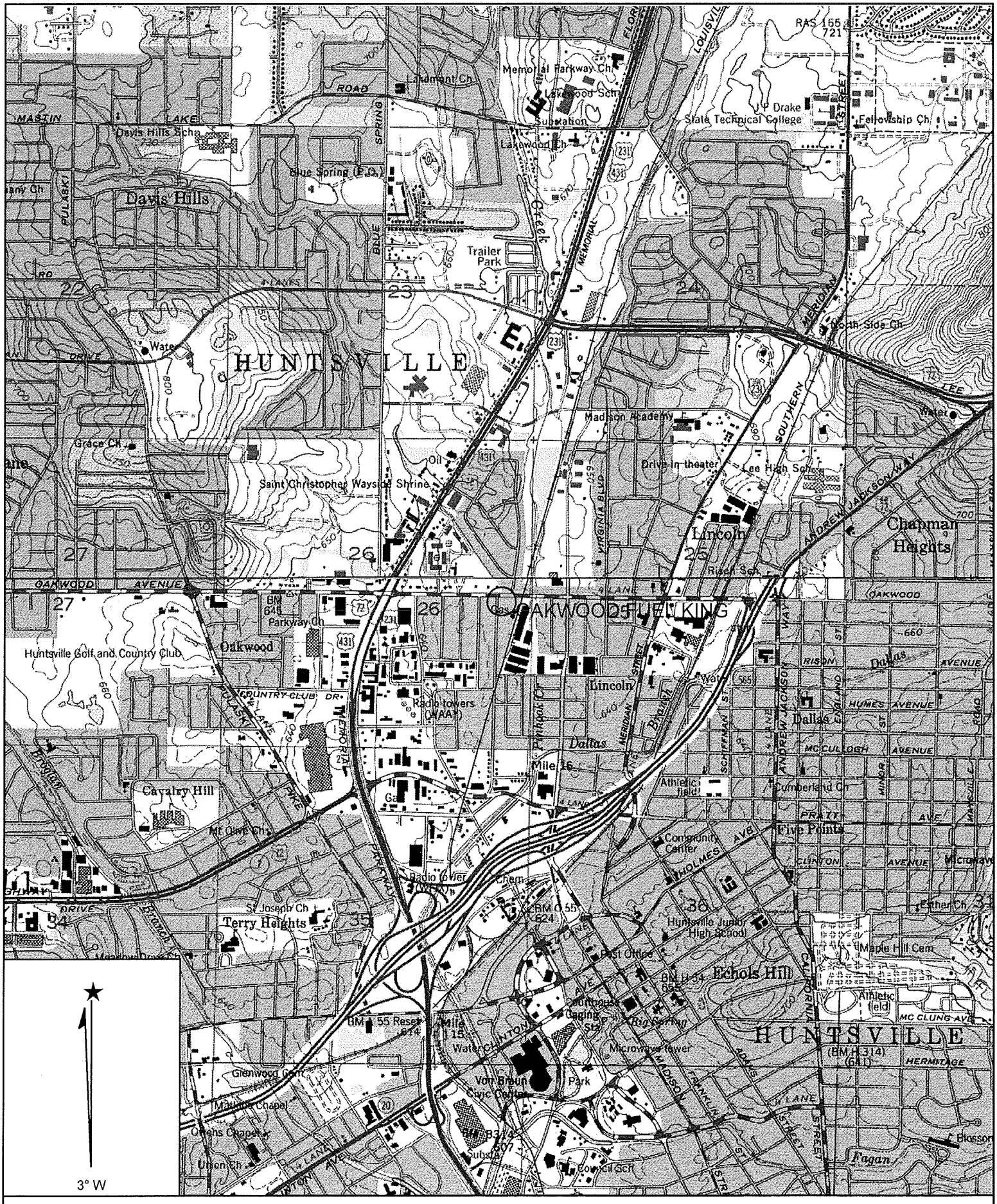
Reporting

A groundwater monitoring (Natural Attenuation) and sampling report and MEME report will be prepared. The report will consist of a Groundwater Monitoring and Sampling Report, Free Product Recovery Report, Summary of Events for the Current Reporting Period, MEME Report, ADEM Air Division Approval, Remediation Reporting, UST Site Classification System Checklist, UST Release Fact Sheet, ADEM Natural Attenuation Monitoring Report forms, site map, groundwater elevation and groundwater flow map, benzene concentration in groundwater map, total BTEX concentration in groundwater map, MTBE concentration in groundwater map, naphthalene concentration in groundwater map, total lead concentration in groundwater map, groundwater monitoring and sampling procedures, and laboratory analytical results with chain-of-custody documentation.

8.0 TIME TO CLOSURE

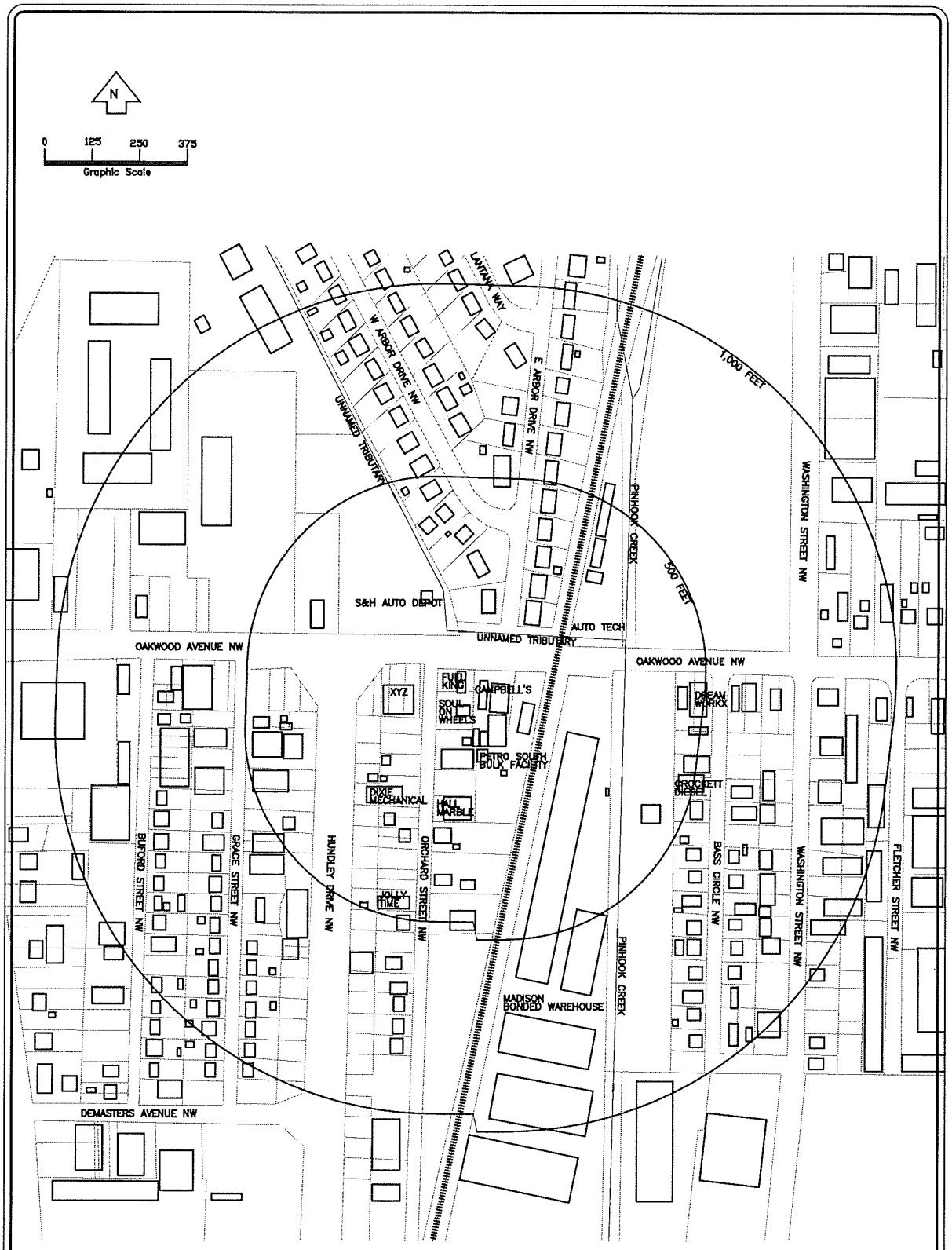
The MEME events are included in this corrective action plan to remove free product, free product equivalent, and impacted groundwater in the area affected by the events in the monitor wells treated. Based on experience with some sites, the cleanup time may be approximately one to two years using this technology if this approach works. If contamination is not sufficiently reduced within this time frame, then a contingency plan would be implemented.

FIGURES

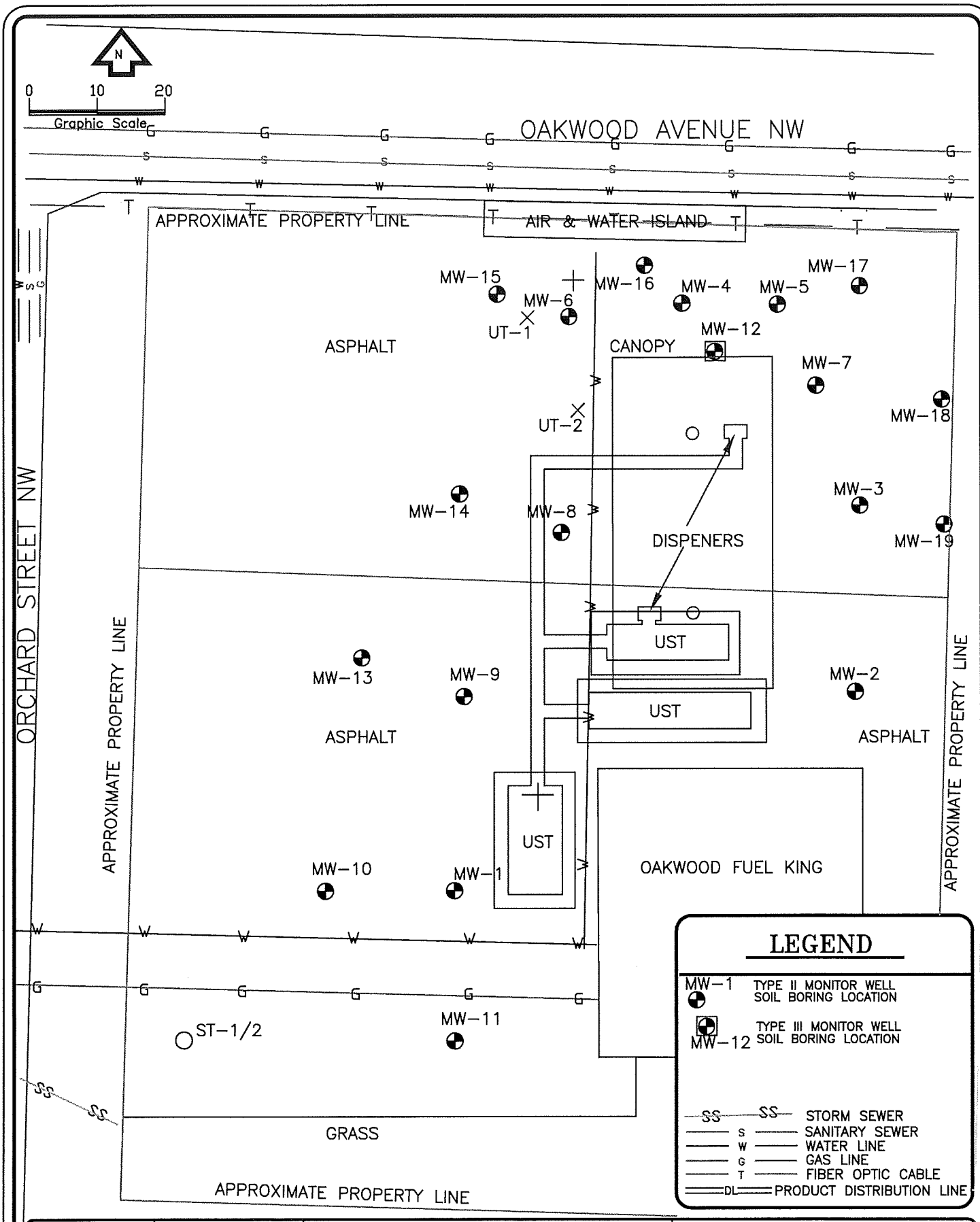


Name: HUNTSVILLE
Date: 7/16/2020
Scale: 1 inch equals 2000 feet

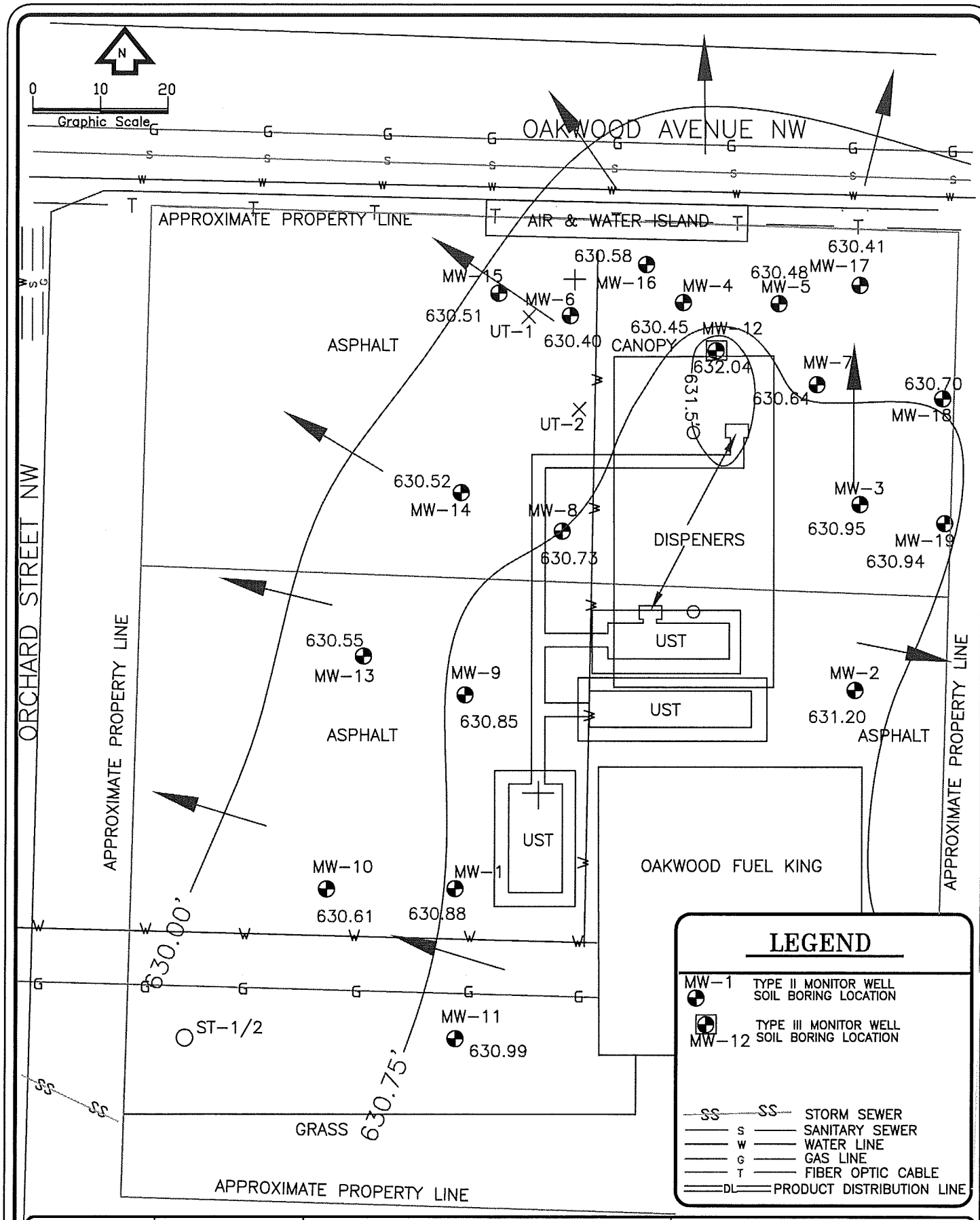
Location: 034° 44' 56.2" N 086° 35' 32.8" W
Caption: FIG 1-SITE VICINITY MAP; OAKWOOD FUEL KING; 619 OAKWOOD AVENUE; HUNTSVILLE, ALABAMA



DRAWN BY: BES	DATE: 7/15/20	PRE, INC.	FIGURE 1A 500' & 1000' RADIUS/ LAND USE MAP
CHKED BY: WAS	DATE: 7/15/20	ENVIRONMENTAL CONSULTANTS 124 SUMMIT PARKWAY; B'HAM, AL, 35209 VOICE NO. 205-942-8293, FAX NO. 205-942-1459	OAKWOOD FUEL KING 619 OAKWOOD AVENUE NW HUNTSVILLE, MADISON CO., ALABAMA
PIN: 12019-17	SCALE 1"=250'		



DRAWN BY: WAS	DATE: 9/27/21	PRE, INC.	FIGURE 2 BASIC SITE MAP WITH UTILITIES
CHKED BY: WAS	DATE: 9/27/21	ENVIRONMENTAL CONSULTANTS 124 SUMMIT PARKWAY, B'HAM, AL 35209 VOICE NO. 205-942-6293, FAX NO. 205-942-1459	AREZO/OAKWOOD FUEL KING 619 OAKWOOD AVENUE NW HUNTSVILLE, MADISON CO., ALABAMA
PIN: 12019-17	SCALE 1"=20'		

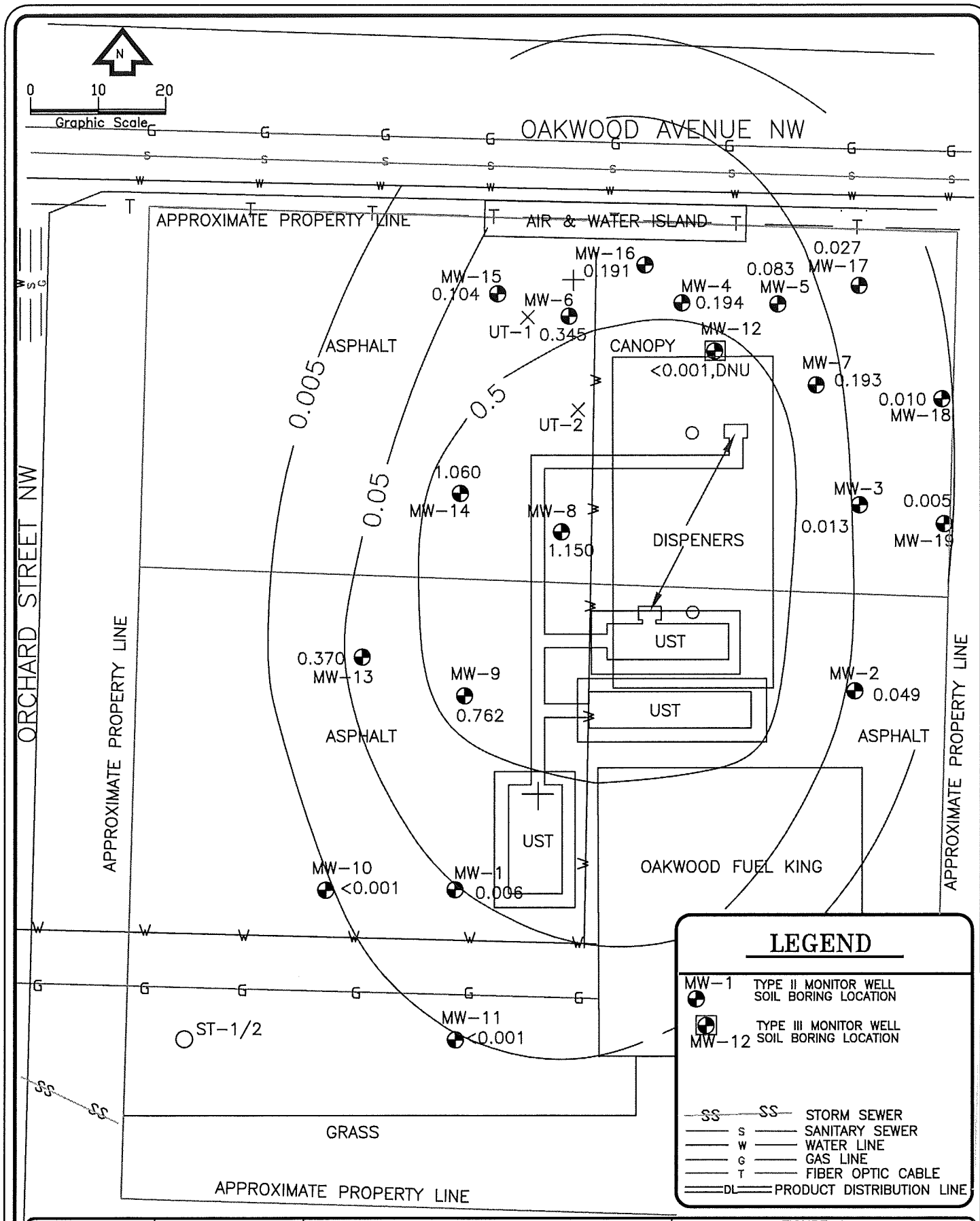


DRAWN BY: JT	DATE: 03/29/24
CHKED BY: WAS	DATE: 03/29/24
PIN: 12019-17	SCALE 1"=20'

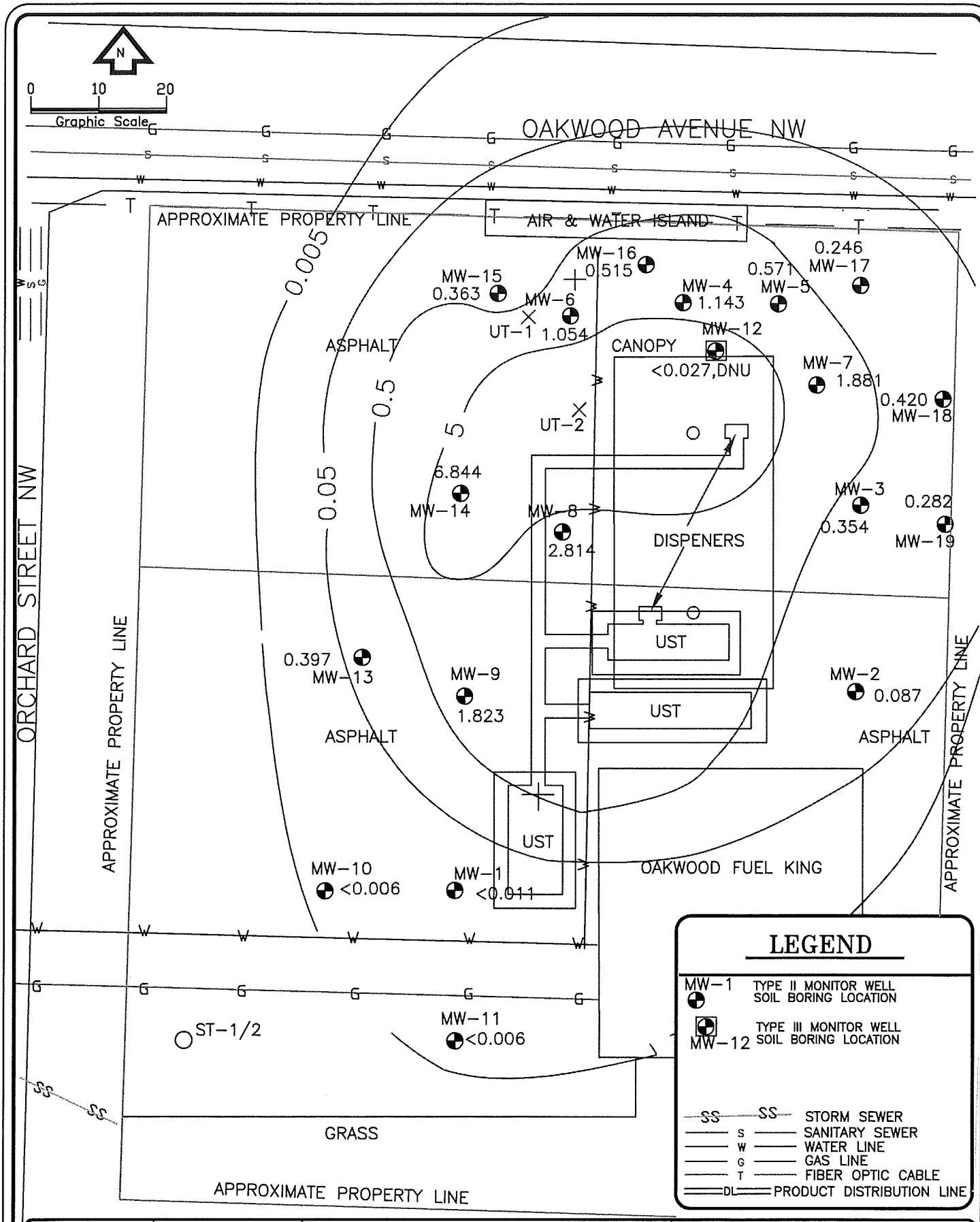
PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205-942-6293, FAX NO. 205-942-1459

FIGURE 3
GROUDWATER ELEVATION & FLOW DIRECTION
GAUGED ON 2/7/24

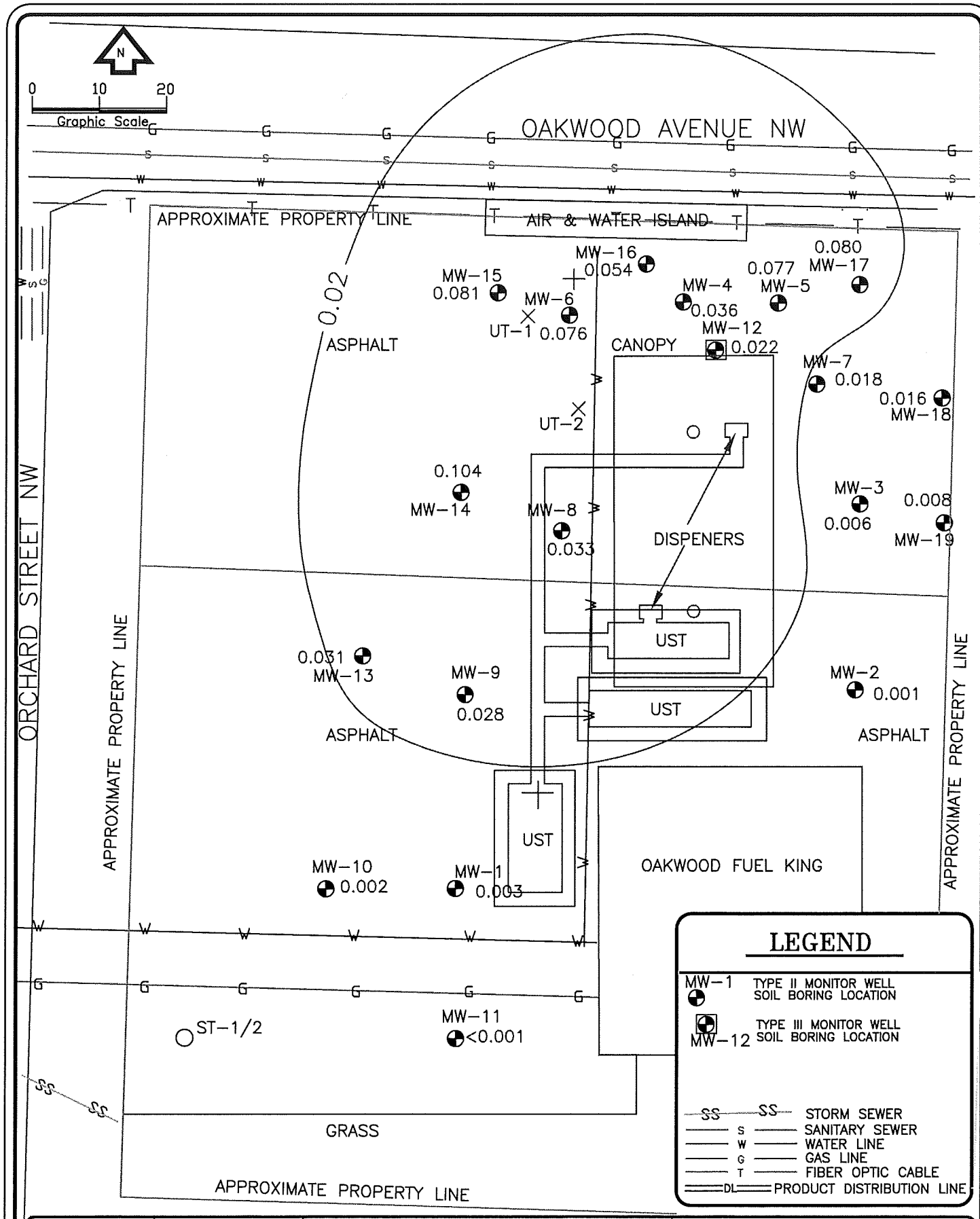
AREZO/OAKWOOD FUEL KING
619 OAKWOOD AVENUE NW
HUNTSVILLE, MADISON CO., ALABAMA



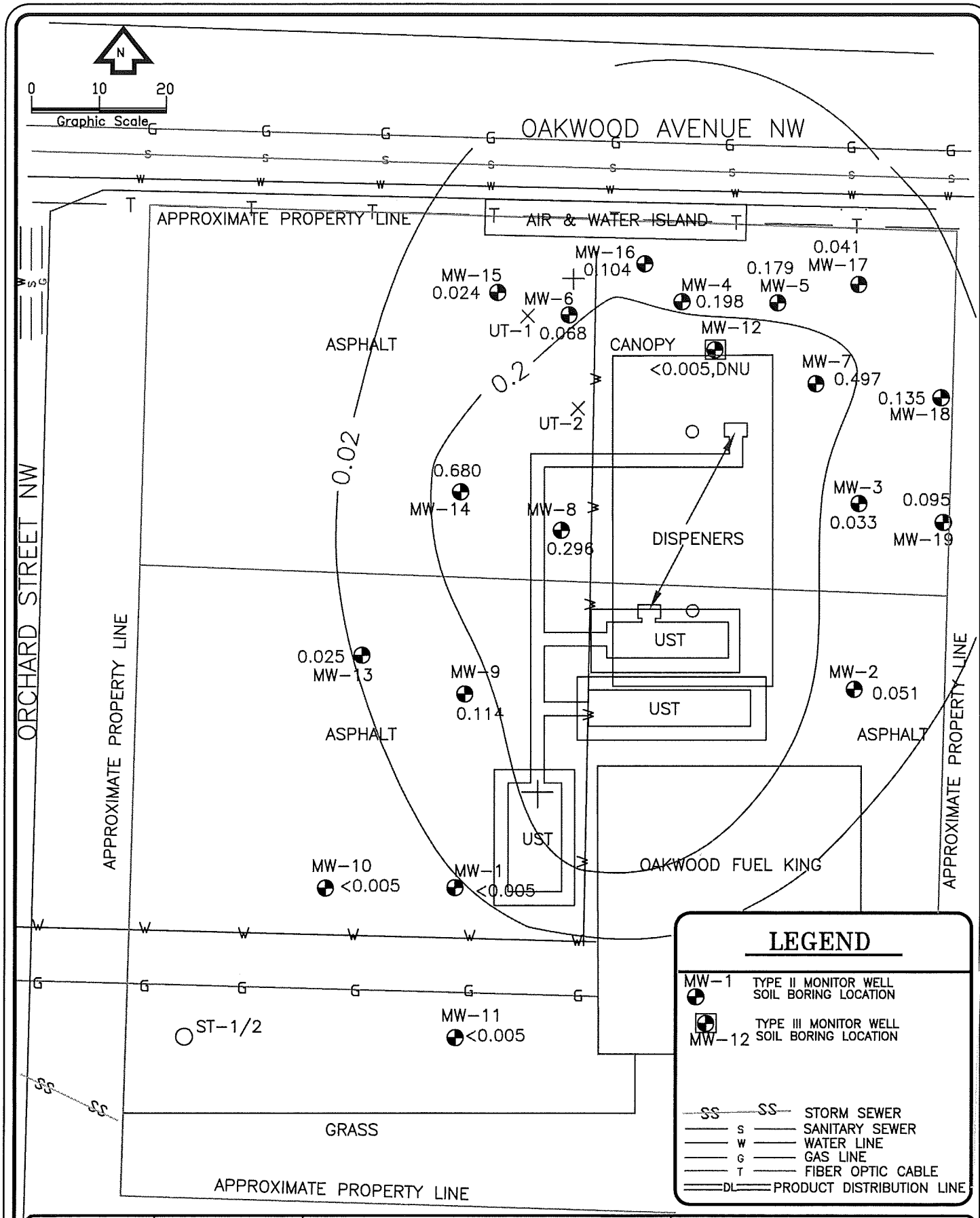
DRAWN BY: JT	DATE: 03/29/24	PRE, INC.	FIGURE 4 APPROXIMATE HORIZONTAL EXTENT OF BENZENE IN GROUNDWATER (ppm) SAMPLED ON 2/7-15/24
CHKED BY: WAS	DATE: 03/29/24	ENVIRONMENTAL CONSULTANTS 124 SUMMIT PARKWAY, B'HAM, AL 35209 VOICE NO. 205-942-6293, FAX NO. 205-942-1459	AREZO/OAKWOOD FUEL KING 619 OAKWOOD AVENUE NW HUNTSVILLE, MADISON CO., ALABAMA
PIN: 12019-17	SCALE 1"=20'		



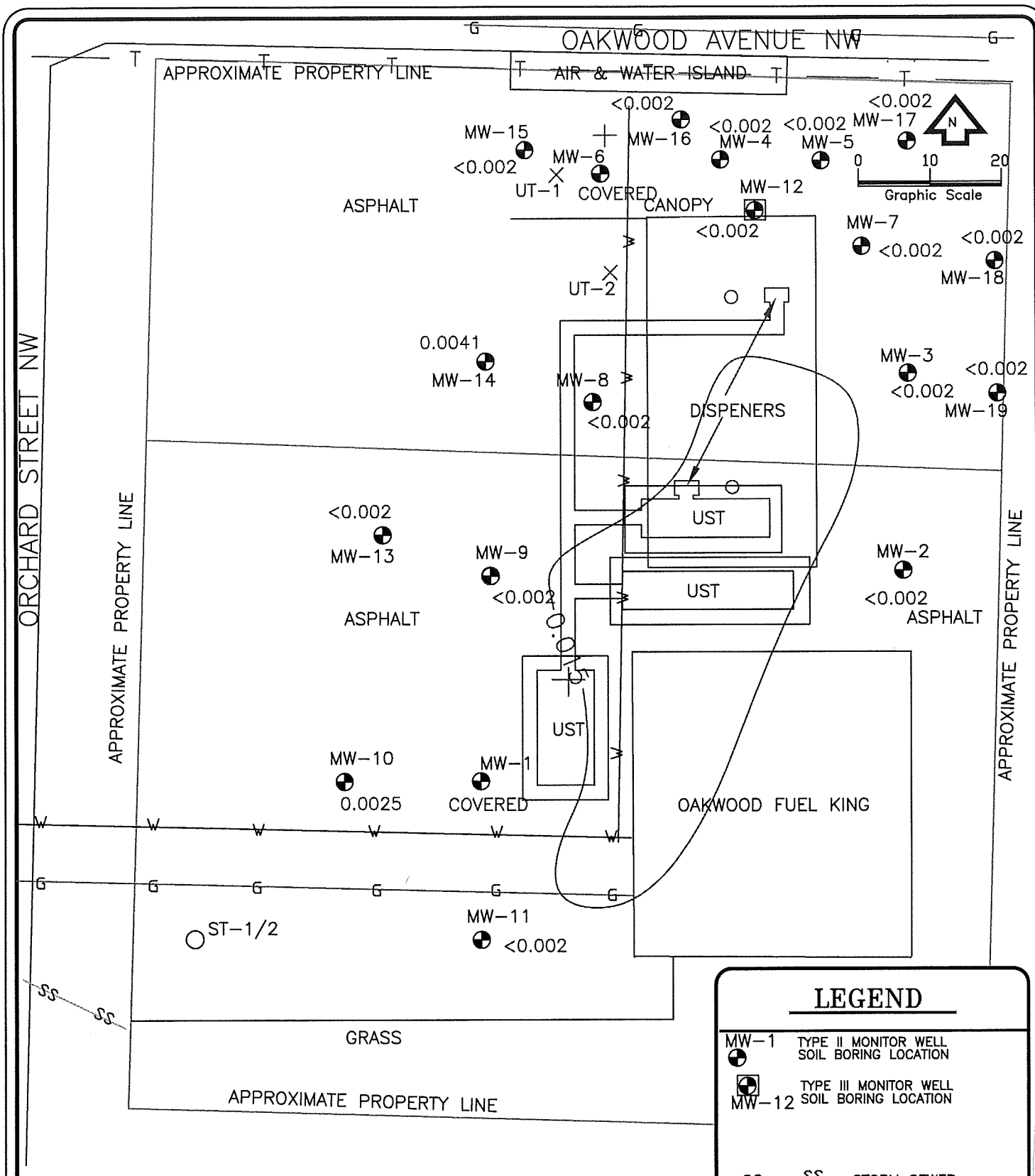
DRAWN BY: JT	DATE: 03/29/24	PRE, INC.	FIGURE 5 APPROXIMATE HORIZONTAL EXTENT OF TOTAL BTEX IN GROUNDWATER (ppm) SAMPLED ON 2/7-15/24
CHKED BY: WAS	DATE: 03/29/24	ENVIRONMENTAL CONSULTANTS	AREZO/OAKWOOD FUEL KING
PIN: 12019-17	SCALE 1"=20'	124 SUMMIT PARKWAY, B'HAM, AL 35209 VOICE NO. 205-942-6293, FAX NO. 205-942-1459	619 OAKWOOD AVENUE NW HUNTSVILLE, MADISON CO., ALABAMA



DRAWN BY: JT	DATE: 03/29/24	PRE, INC.	FIGURE 6 APPROXIMATE HORIZONTAL EXTENT OF MTBE IN GROUNDWATER (ppm) SAMPLED ON 2/7-15/24
CHKED BY: WAS	DATE: 03/29/24	ENVIRONMENTAL CONSULTANTS 124 SUMMIT PARKWAY, B'HAM, AL 35209 VOICE NO. 205-942-6293, FAX NO. 205-942-1459	AREZO/OAKWOOD FUEL KING 619 OAKWOOD AVENUE NW HUNTSVILLE, MADISON CO., ALABAMA
PIN: 12019-17	SCALE 1"=20'		



DRAWN BY: JSO	DATE: 03/29/24	PRE, INC.	FIGURE 7 APPROXIMATE HORIZONTAL EXTENT OF NAPHTHALENE IN GROUNDWATER (ppm) SAMPLED ON 2/7-15/24
CHKED BY: WAS	DATE: 03/29/24	ENVIRONMENTAL CONSULTANTS 124 SUMMIT PARKWAY, B'HAM, AL 35209 VOICE NO. 205-942-6293, FAX NO. 205-942-1459	AREZO/OAKWOOD FUEL KING 619 OAKWOOD AVENUE NW HUNTSVILLE, MADISON CO., ALABAMA
PIN: 12019-17	SCALE 1"=20'		



LEGEND

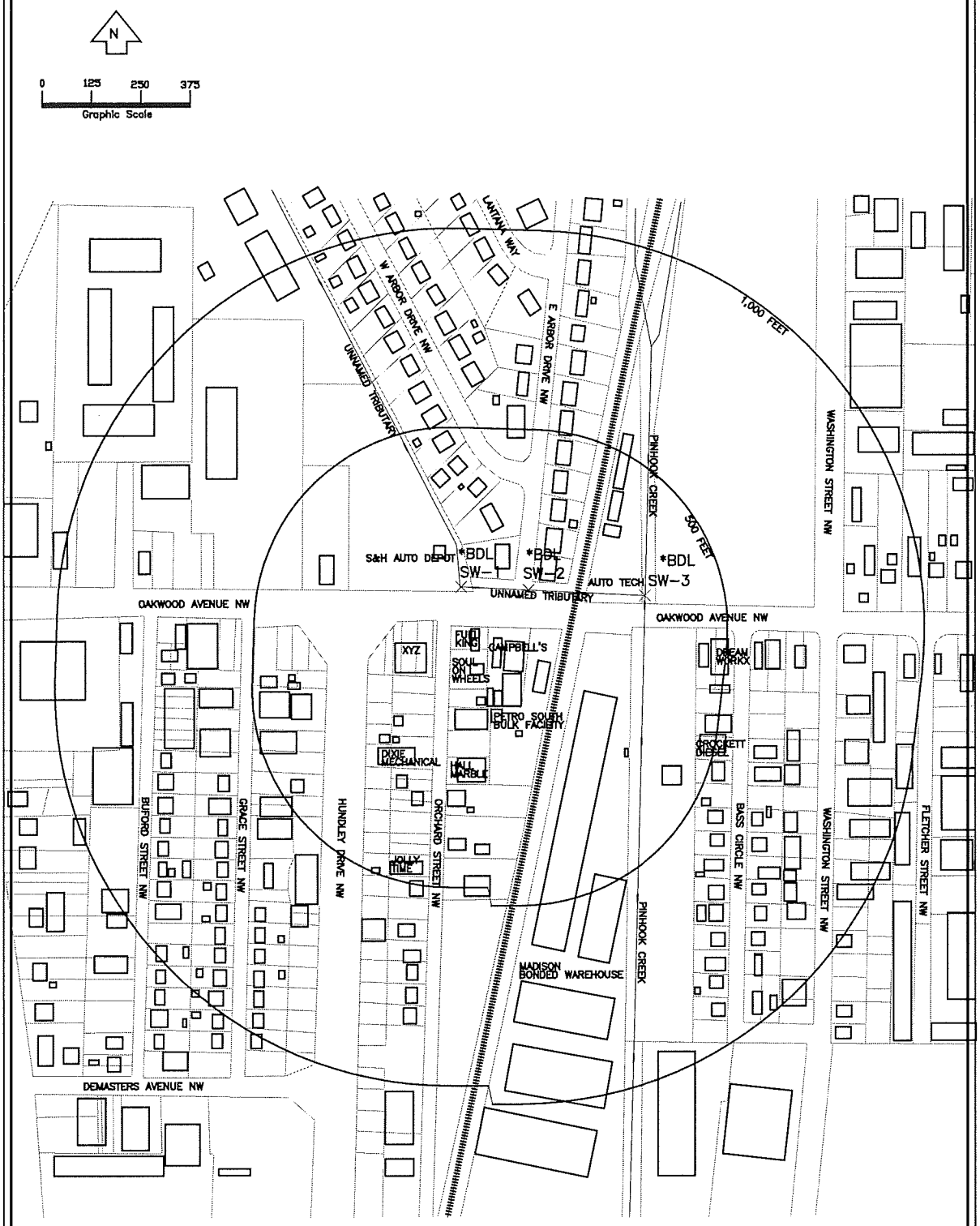
MW-1	TYPE II MONITOR WELL SOIL BORING LOCATION
MW-12	TYPE III MONITOR WELL SOIL BORING LOCATION
SS SS	STORM SEWER
S	SANITARY SEWER
W	WATER LINE
G	GAS LINE
T	FIBER OPTIC CABLE
DL	PRODUCT DISTRIBUTION LINE

DRAWN BY: BES	DATE: 9/27/21
CHKED BY: WAS	DATE: 9/27/21
PIN: 11709-3	SCALE 1"=20'

PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205-942-6293, FAX NO. 205-942-1459

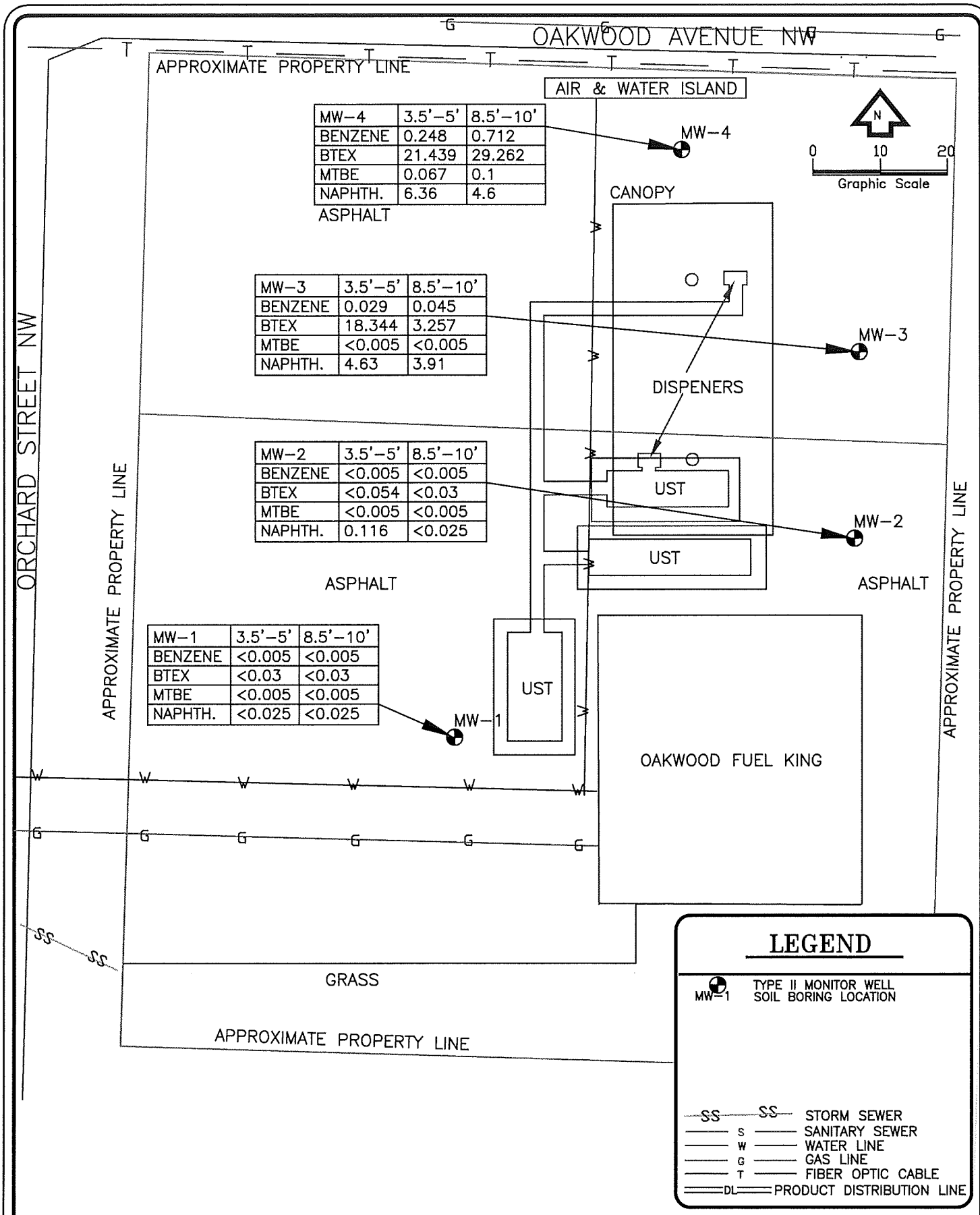
FIGURE 8
APPROXIMATE HORIZONTAL EXTENT OF TOTAL LEAD IN GROUNDWATER (ppm)
SAMPLED ON 9/14-15/21

AREZO/OAKWOOD FUEL KING
619 OAKWOOD AVENUE NW
HUNTSVILLE, MADISON CO., ALABAMA



*BDL–BELOW DETECTION LIMIT FOR BTEX, MTBE, NAPHTHALENE, AND TOTAL LEAD

DRAWN BY: JSO	DATE: 3/29/24	PRE, INC.	FIGURE 9
CHKED BY: WAS	DATE: 3/29/24	ENVIRONMENTAL CONSULTANTS	SURFACE WATER ANALYTICAL RESULTS (ppm)
PIN: 12019-17	SCALE 1"=250'	124 SUMMIT PARKWAY; B'HAM, AL, 35209	SAMPLED ON 2/15/24
		VOICE NO. 205-942-6293, FAX NO. 205-942-1459	OAKWOOD FUEL KING
			619 OAKWOOD AVENUE NW
			HUNTSVILLE, MADISON CO., ALABAMA



LEGEND

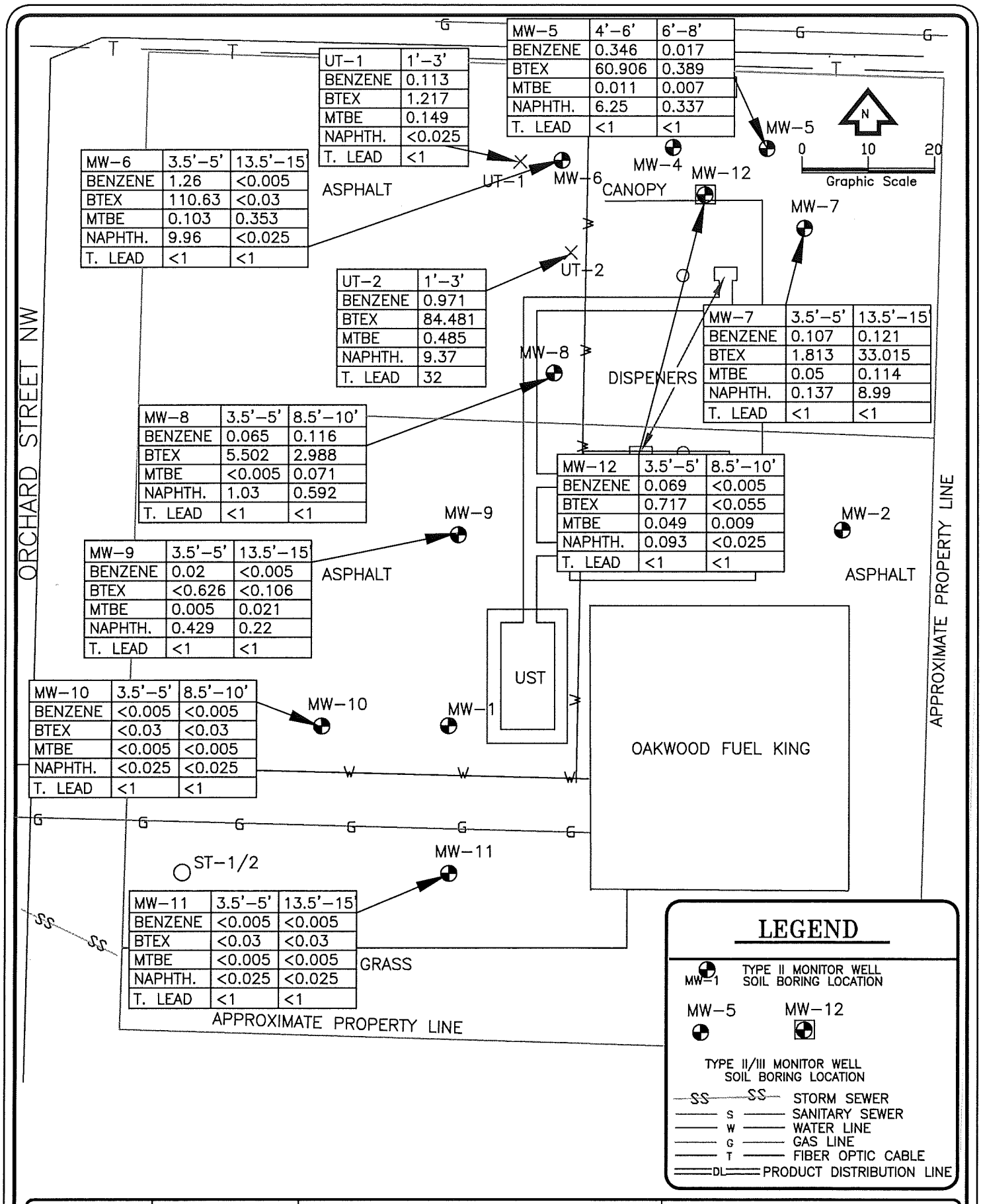
MW-1 TYPE II MONITOR WELL SOIL BORING LOCATION

SS STORM SEWER
S SANITARY SEWER
W WATER LINE
G GAS LINE
T FIBER OPTIC CABLE
DL PRODUCT DISTRIBUTION LINE

DRAWN BY: BES	DATE: 7/18/20
CHKED BY: WAS	DATE: 7/18/20
PIN: 12019-17	SCALE 1"=20'

PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205-942-6293, FAX NO. 205-942-1459

FIGURE 10
HYDROCARBONS IN SOIL (mg/kg)
SAMPLED ON JULY 2, 2020
AREZO/OAKWOOD FUEL KING
619 OAKWOOD AVENUE NW
HUNTSVILLE, MADISON CO., ALABAMA



MW-5	4'-6'	6'-8'
BENZENE	0.346	0.017
BTEX	60.906	0.389
MTBE	0.011	0.007
NAPHTH.	6.25	0.337
T. LEAD	<1	<1

UT-1	1'-3'
BENZENE	0.113
BTEX	1.217
MTBE	0.149
NAPHTH.	<0.025
T. LEAD	<1

MW-6	3.5'-5'	13.5'-15'
BENZENE	1.26	<0.005
BTEX	110.63	<0.03
MTBE	0.103	0.353
NAPHTH.	9.96	<0.025
T. LEAD	<1	<1

UT-2	1'-3'
BENZENE	0.971
BTEX	84.481
MTBE	0.485
NAPHTH.	9.37
T. LEAD	32

MW-7	3.5'-5'	13.5'-15'
BENZENE	0.107	0.121
BTEX	1.813	33.015
MTBE	0.05	0.114
NAPHTH.	0.137	8.99
T. LEAD	<1	<1

MW-8	3.5'-5'	8.5'-10'
BENZENE	0.065	0.116
BTEX	5.502	2.988
MTBE	<0.005	0.071
NAPHTH.	1.03	0.592
T. LEAD	<1	<1

MW-12	3.5'-5'	8.5'-10'
BENZENE	0.069	<0.005
BTEX	0.717	<0.055
MTBE	0.049	0.009
NAPHTH.	0.093	<0.025
T. LEAD	<1	<1

MW-9	3.5'-5'	13.5'-15'
BENZENE	0.02	<0.005
BTEX	<0.626	<0.106
MTBE	0.005	0.021
NAPHTH.	0.429	0.22
T. LEAD	<1	<1

MW-10	3.5'-5'	8.5'-10'
BENZENE	<0.005	<0.005
BTEX	<0.03	<0.03
MTBE	<0.005	<0.005
NAPHTH.	<0.025	<0.025
T. LEAD	<1	<1

MW-11	3.5'-5'	13.5'-15'
BENZENE	<0.005	<0.005
BTEX	<0.03	<0.03
MTBE	<0.005	<0.005
NAPHTH.	<0.025	<0.025
T. LEAD	<1	<1

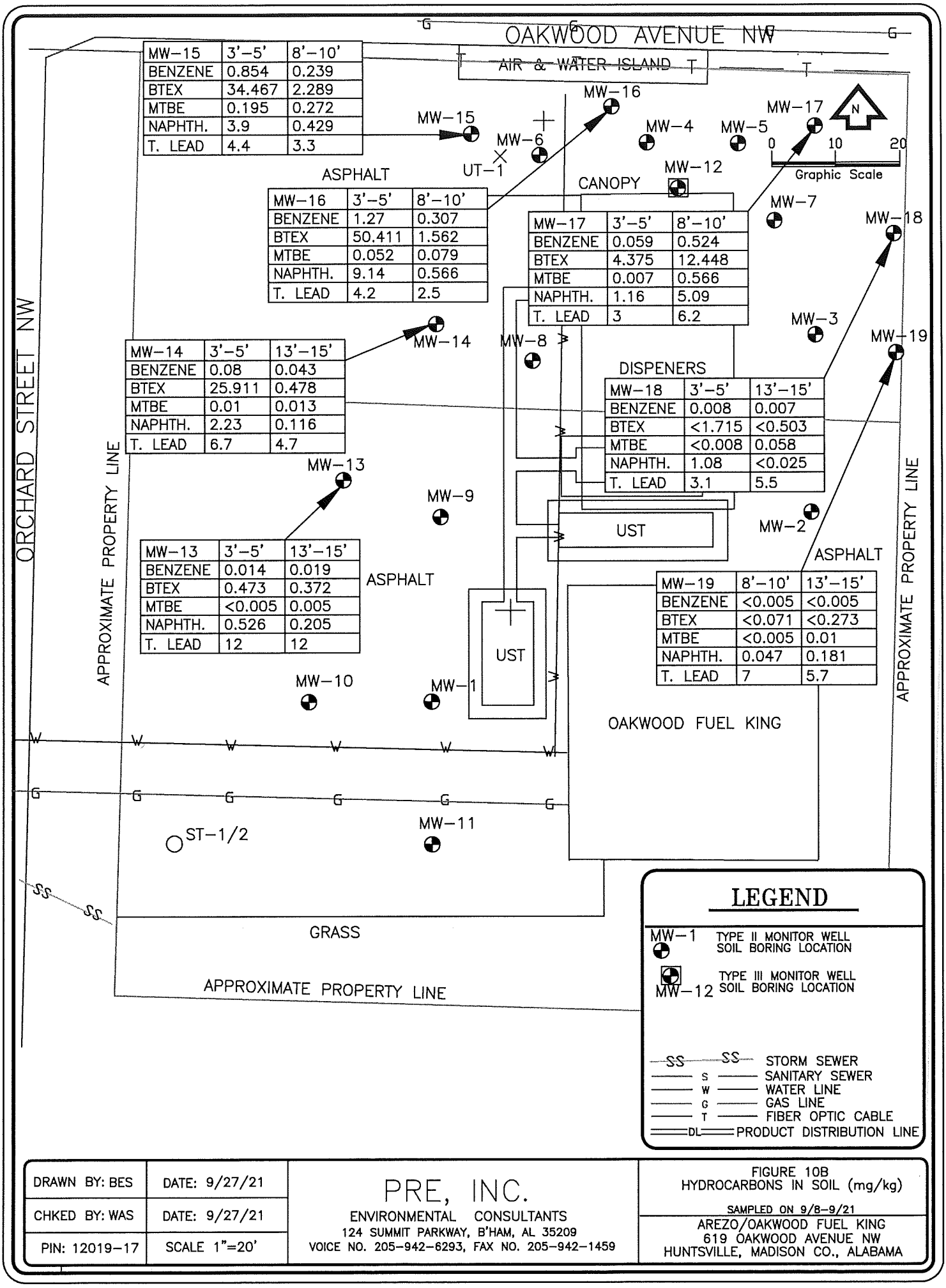
LEGEND

- MW-1 — TYPE II MONITOR WELL SOIL BORING LOCATION
- MW-5 MW-12 — TYPE II/III MONITOR WELL SOIL BORING LOCATION
- SS — STORM SEWER
- S — SANITARY SEWER
- W — WATER LINE
- G — GAS LINE
- T — FIBER OPTIC CABLE
- DL — PRODUCT DISTRIBUTION LINE

DRAWN BY: BES	DATE: 2/1/21
CHKED BY: WAS	DATE: 2/1/21
PIN: 12019-17	SCALE 1"=20'

PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205-942-6293, FAX NO. 205-942-1459

FIGURE 10A
HYDROCARBONS IN SOIL (mg/kg)
SAMPLED ON 1/5-14/21
AREZO/OAKWOOD FUEL KING
619 OAKWOOD AVENUE NW
HUNTSVILLE, MADISON CO., ALABAMA



MW-15	3'-5'	8'-10'
BENZENE	0.854	0.239
BTEX	34.467	2.289
MTBE	0.195	0.272
NAPHTH.	3.9	0.429
T. LEAD	4.4	3.3

MW-16	3'-5'	8'-10'
BENZENE	1.27	0.307
BTEX	50.411	1.562
MTBE	0.052	0.079
NAPHTH.	9.14	0.566
T. LEAD	4.2	2.5

MW-17	3'-5'	8'-10'
BENZENE	0.059	0.524
BTEX	4.375	12.448
MTBE	0.007	0.566
NAPHTH.	1.16	5.09
T. LEAD	3	6.2

MW-14	3'-5'	13'-15'
BENZENE	0.08	0.043
BTEX	25.911	0.478
MTBE	0.01	0.013
NAPHTH.	2.23	0.116
T. LEAD	6.7	4.7

MW-18	3'-5'	13'-15'
BENZENE	0.008	0.007
BTEX	<1.715	<0.503
MTBE	<0.008	0.058
NAPHTH.	1.08	<0.025
T. LEAD	3.1	5.5

MW-13	3'-5'	13'-15'
BENZENE	0.014	0.019
BTEX	0.473	0.372
MTBE	<0.005	0.005
NAPHTH.	0.526	0.205
T. LEAD	12	12

MW-19	8'-10'	13'-15'
BENZENE	<0.005	<0.005
BTEX	<0.071	<0.273
MTBE	<0.005	0.01
NAPHTH.	0.047	0.181
T. LEAD	7	5.7

LEGEND

MW-1 TYPE II MONITOR WELL SOIL BORING LOCATION

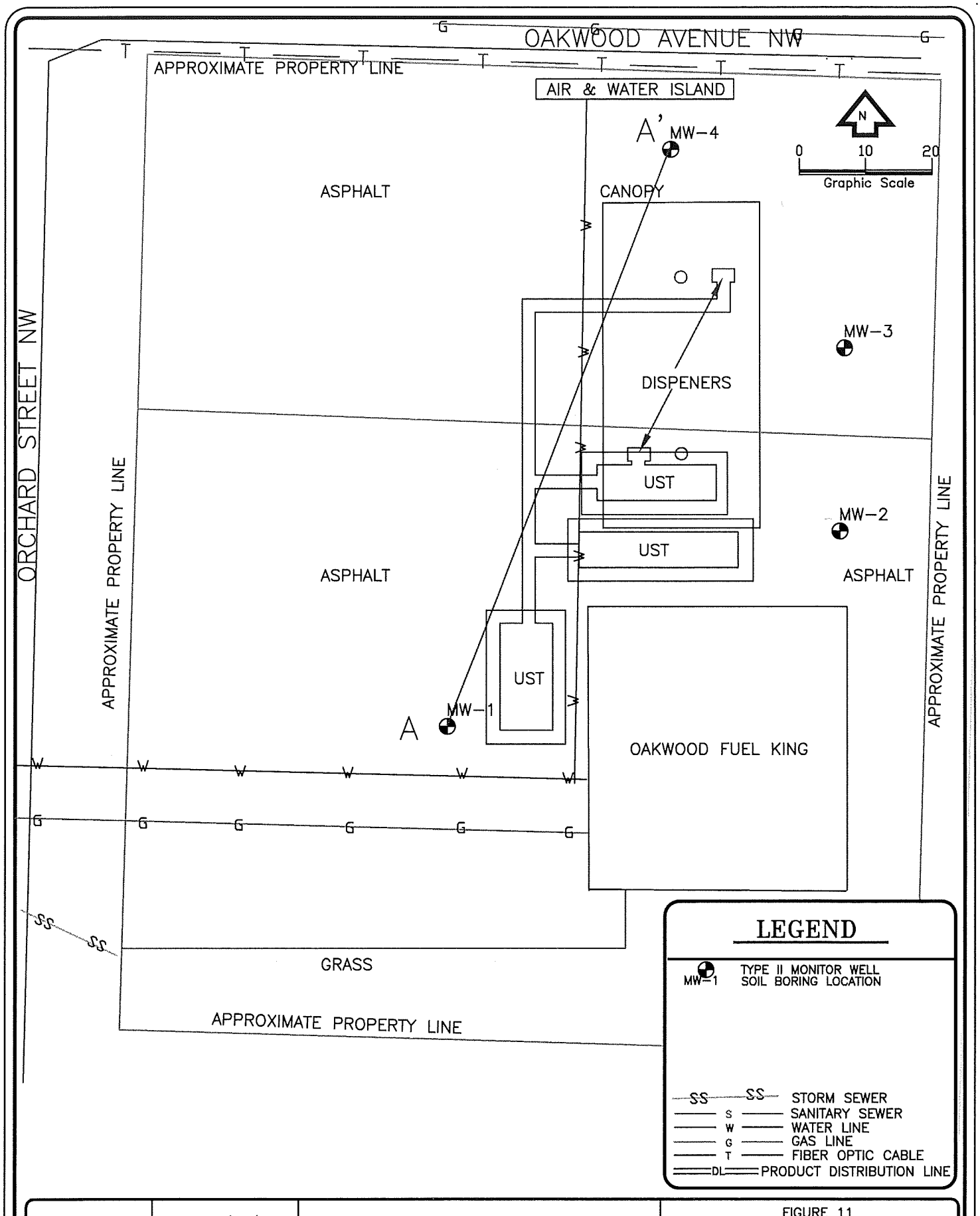
MW-12 TYPE III MONITOR WELL SOIL BORING LOCATION

SS SS STORM SEWER
S SANITARY SEWER
W WATER LINE
G GAS LINE
T FIBER OPTIC CABLE
DL PRODUCT DISTRIBUTION LINE

DRAWN BY: BES	DATE: 9/27/21
CHKED BY: WAS	DATE: 9/27/21
PIN: 12019-17	SCALE 1"=20'

PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205-942-6293, FAX NO. 205-942-1459

FIGURE 10B
HYDROCARBONS IN SOIL (mg/kg)
SAMPLED ON 9/8-9/21
AREZO/OAKWOOD FUEL KING
619 OAKWOOD AVENUE NW
HUNTSVILLE, MADISON CO., ALABAMA

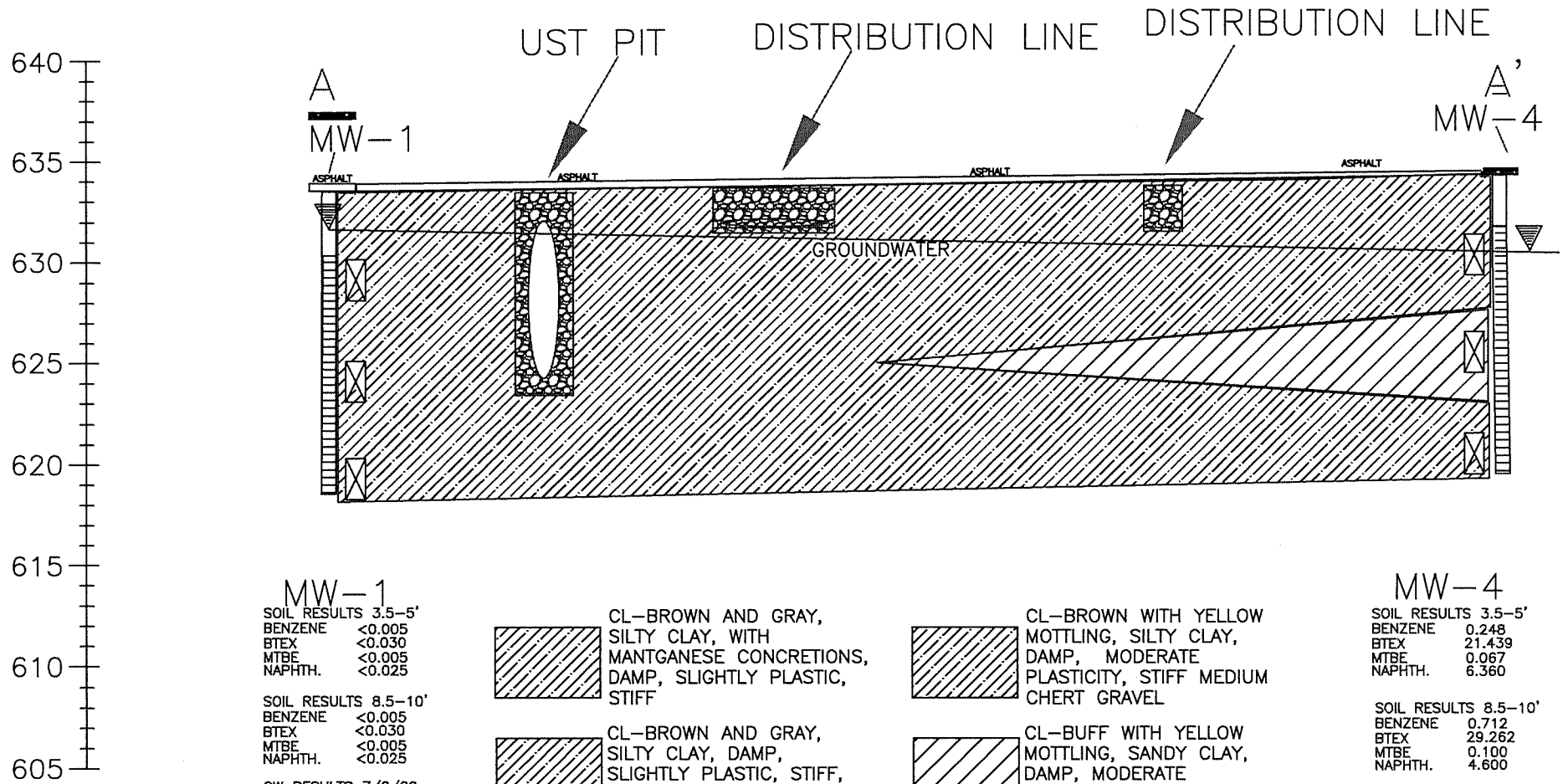


DRAWN BY: WAS	DATE: 6/30/20
CHKED BY: WAS	DATE: 6/30/20
PIN: 12019-17	SCALE 1"=20'

PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205-942-6293, FAX NO. 205-942-1459

FIGURE 11
CROSS-SECTION LOCATION MAP A-A'

AREZO/OAKWOOD FUEL KING
619 OAKWOOD AVENUE NW
HUNTSVILLE, MADISON CO., ALABAMA



MW-1

SOIL RESULTS 3.5–5'

BENZENE	<0.005
BTEX	<0.030
MTBE	<0.005
NAPHTH.	<0.025

SOIL RESULTS 8.5–10'

BENZENE	<0.005
BTEX	<0.030
MTBE	<0.005
NAPHTH.	<0.025

GW RESULTS 7/2/20

BENZENE	0.383
BTEX	1.835
MTBE	0.015
NAPHTH.	<0.005

CL–BROWN AND GRAY, SILTY CLAY, WITH MANTGANESE CONCRETIONS, DAMP, SLIGHTLY PLASTIC, STIFF

CL–BROWN AND GRAY, SILTY CLAY, DAMP, SLIGHTLY PLASTIC, STIFF, WITH LIMESTONE FRAGMENTS

CL–BROWN AND GRAY, SILTY CLAY, DAMP, SLIGHTLY PLASTIC, STIFF

CL–BROWN WITH YELLOW MOTTLING, SILTY CLAY, DAMP, MODERATE PLASTICITY, STIFF MEDIUM CHERT GRAVEL

CL–BUFF WITH YELLOW MOTTLING, SANDY CLAY, DAMP, MODERATE PLASTICITY, STIFF WITH MEDIUM CHERT GRAVEL

CL–BROWN WITH YELLOW MOTTLING, SILTY CLAY, DAMP, SLIGHTLY PLASTIC, STIFF

MW-4

SOIL RESULTS 3.5–5'

BENZENE	0.248
BTEX	21.439
MTBE	0.067
NAPHTH.	6.360

SOIL RESULTS 8.5–10'

BENZENE	0.712
BTEX	29.262
MTBE	0.100
NAPHTH.	4.600

GW RESULTS 7/2/20

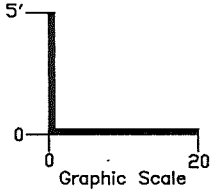
BENZENE	1.06
BTEX	10.745
MTBE	0.141
NAPHTH.	0.885

DRAWN BY: WAS	DATE: 7/6/20
CHKED BY: WAS	DATE: 7/6/20
PIN: 12019–17	SCALE SEE SCALE

PRE, INC.
ENVIRONMENTAL CONSULTANTS
124 SUMMIT PARKWAY, B'HAM, AL 35209
VOICE NO. 205–942–6293, FAX NO. 205–942–1459

FIGURE 12
CROSS–SECTION DRAWING (A–A')

OAKWOOD FUEL KING
619 OAKWOOD AVENUE
HUNTSVILLE, MADISON CO., ALABAMA



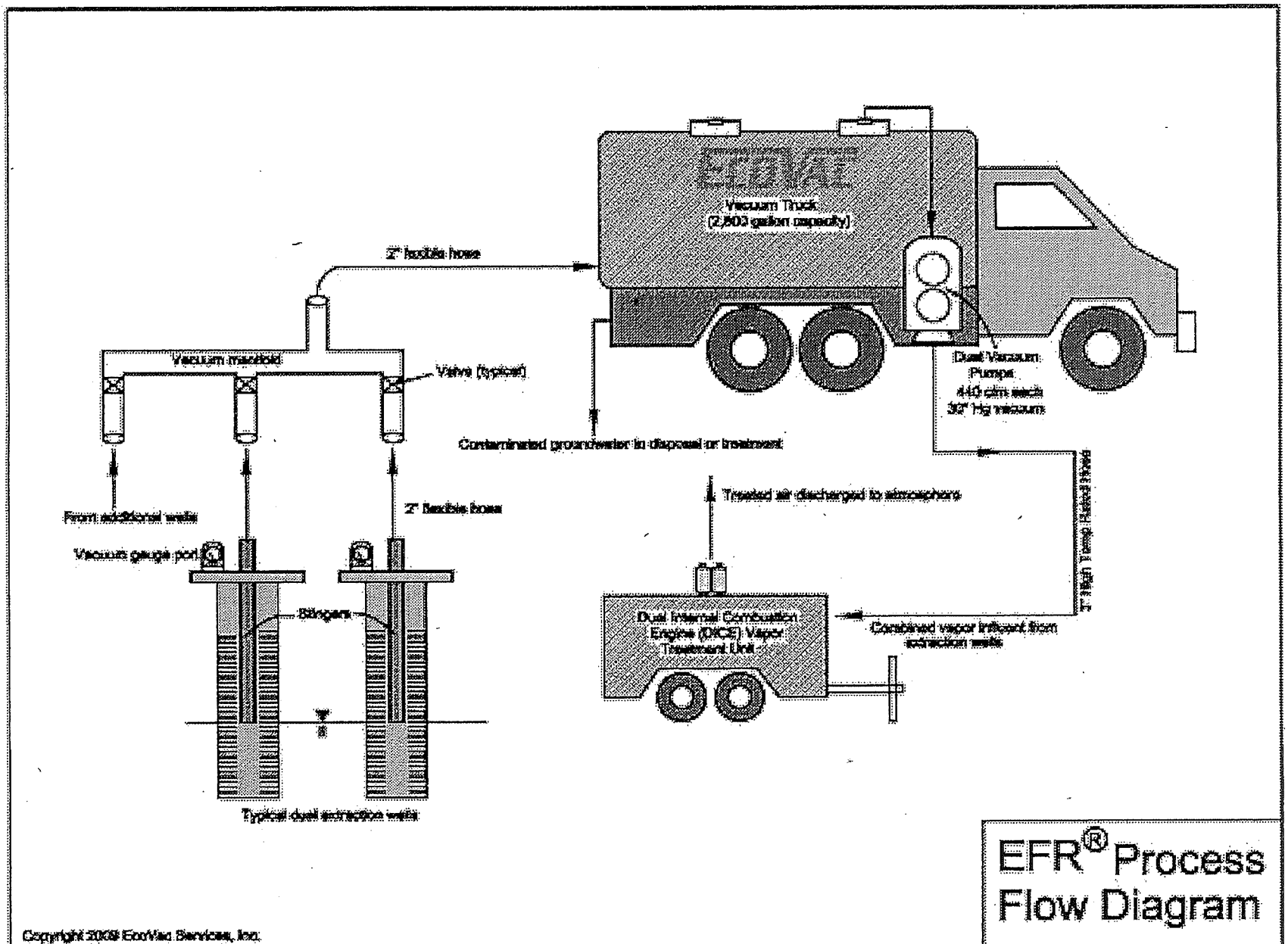

Vacuum Truck
(2,500 gallon capacity)
2" flexible hose
Vacuum manifold
Valve (typical)
Dual Vacuum
Pumps
440 cfm each
30" Hg vacuum
Contaminated groundwater to disposal or treatment
Treated air discharged to atmosphere
From additional wells
2" flexible hose
Vacuum gauge port
Slinger
Dual Internal Combustion
Engine (DICE) Vapor
Treatment Unit
Combined vapor influent from
extraction wells
Typical dual extraction wells
EFR® Process
Flow Diagram
Copyright 2008 EcoVac Services, Inc.

FIG 13

TABLES

Table 1: BTEX, MTBE, Naphthalene, Total Lead Soil Analytical Data (mg/kg)

Soil Sample ID / Depth	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	MTBE	Naphth.	Total Lead	Moisture Content by %
ADEM's ISL Commercial (ppm)		**0.00845**	**3.6**	**3.61**	**62.4**	**N/A**	**0.00862**	**0.579**	**4.43**	
MW-1 (3.5'-5')	6/29/2020	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	NS	20.1
MW-1 (8.5'-10')	6/29/2020	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	NS	28.7
MW-2 (3.5' 5')	6/29/2020	<0.005	<0.005	0.029	<0.015	<0.054	<0.005	0.116	NS	26.9
MW-2 (8.5'-10')	6/29/2020	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	NS	22.6
MW-3 (3.5'-5')	6/29/2020	**0.029**	0.025	**7.19**	11.1	18.344	<0.005	**4.63**	NS	21
MW-3 (8.5'-10')	6/29/2020	**0.045**	0.055	2.63	0.527	3.257	<0.005	**3.91**	NS	24.7
MW-4 (3.5'-5')	6/29/2020	**0.248**	0.511	**5.18**	15.5	21.439	**0.067**	**6.36**	NS	20
MW-4 (8.5'-10')	6/29/2020	**0.712**	1.05	**6.3**	21.2	29.262	**0.1**	**4.6**	NS	18.5
MW-5 (4'-6')	1/6/2021	**0.346**	1.26	**13.5**	45.8	60.906	**0.011**	**6.25**	<1	19
MW-5 (6'-8')	1/6/2021	**0.017**	0.007	0.439	0.389	0.389	0.007	0.337	<1	18.3
MW-6 (3.5' 5')	1/5/2021	**1.26**	**3.97**	**22.2**	**83.2**	110.63	**0.103**	**9.96**	<1	18.2
MW-6 (13.5'-15')	1/5/2021	<0.005	<0.005	<0.005	<0.015	<0.03	**0.353**	<0.025	<1	27.5
MW-7 (3.5' 5')	1/6/2021	**0.107**	0.167	0.499	1.04	1.813	**0.05**	0.137	<1	16.7
MW-7 (13.5'-15')	1/6/2021	**0.121**	0.184	**14.01**	18.7	33.015	**0.114**	**8.99**	<1	45.3
MW-8 (3.5' 5')	1/5/2021	**0.065**	0.027	1.58	3.83	5.502	<0.005	**1.03**	<1	16.5
MW-8 (8.5'-10')	1/5/2021	**0.116**	0.11	0.832	1.93	2.988	**0.071**	**0.592**	<1	20.8
MW-9 (3.5' 5')	1/5/2021	**0.02**	<0.005	0.557	0.044	<0.626	0.005	0.429	<1	19.1
MW-9 (13.5'-15')	1/5/2021	<0.005	<0.005	0.07	0.026	<0.106	**0.021**	0.22	<1	26
MW-10 (3.5'-5')	1/6/2021	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	<1	15.9
MW-10 (8.5'-10')	1/6/2021	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	<1	21
MW-11 (3.5'-5')	1/6/2021	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	<1	33.7
MW-11 (13.5'-15')	1/6/2021	<0.005	<0.005	<0.005	<0.015	<0.03	<0.005	<0.025	<1	18.6
MW-12 (3.5'-5')	1/5/2021	**0.069**	0.044	0.247	0.357	0.717	**0.049**	0.093	<1	18
MW-12 (8.5'-10')	1/5/2021	<0.005	<0.005	0.011	0.034	<0.055	**0.009**	<0.025	<1	19.7
UT-1 (1'-3')	1/6/2021	**0.113**	0.225	0.172	0.707	1.217	**0.149**	<0.025	<1	15.3
UT-2 (1'-3')	1/14/2021	**0.971**	1.51	**20**	62	84.481	**0.485**	**9.37**	**32**	26.1

Table 1: BTEX, MTBE, Naphthalene, Total Lead Soil Analytical Data (mg/kg) - continued

Soil Sample ID / Depth	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	MTBE	Naphth.	Total Lead	Moisture Content by %
ADEM's ISL Commercial (ppm)		**0.00845**	**3.6**	**3.61**	**62.4**	**N/A**	**0.00862**	**0.579**	**4.43**	
MW-13 (3'-5')	9/8/2021	**0.014**	0.007	0.434	0.018	0.473	<0.005	0.526	**12**	19.3
MW-13 (13'-15')	9/8/2021	**0.019**	0.008	0.314	0.031	0.372	0.005	0.205	**12**	20.2
MW-14 (3'-5')	9/8/2021	**0.08**	0.681	**5.35**	19.8	25.911	**0.01**	**2.23**	**6.7**	19.5
MW-14 (13'-15')	9/8/2021	**0.043**	0.014	0.123	0.298	0.478	**0.013**	0.116	**4.7**	27.9
MW-15 (3'-5')	9/8/2021	**0.854**	0.313	**8**	25.3	34.467	**0.195**	**3.9**	4.4	16.7
MW-15 (8'-10')	9/8/2021	**0.239**	0.07	0.75	1.23	2.289	**0.272**	0.429	3.3	20
MW-16 (3'-5')	9/8/2021	**1.27**	0.141	**17.8**	31.2	50.411	**0.052**	**9.14**	4.2	17.7
MW-16 (8'-10')	9/8/2021	**0.307**	0.054	0.92	0.281	1.562	**0.079**	0.566	2.5	15.2
MW-17 (3'-5')	9/8/2021	**0.059**	0.276	1.05	2.99	4.375	0.007	**1.16**	3	19.2
MW-17 (8'-10')	9/8/2021	**0.524**	0.094	**7.07**	4.76	12.448	**0.032**	**5.09**	**6.2**	16.2
MW-18 (3'-5')	9/8/2021	0.008	<0.005	0.864	0.838	<1.715	<0.008	**1.08**	3.1	8.9
MW-18 (13'-15')	9/8/2021	0.007	<0.005	0.231	0.26	<0.503	**0.058**	<0.025	**5.5**	23.3
MW-19 (8'-10')	9/8/2021	<0.005	<0.005	0.037	0.024	<0.071	<0.005	0.047	**7**	21.2
MW-19 (13'-15')	9/8/2021	<0.005	<0.005	0.174	0.089	<0.273	**0.01**	0.181	**5.7**	16.5

MW: Monitor well

All concentrations are in mg/Kg which is equivalent to parts per million

MTBE: Methyl Tert Butyl Ether

ISLs: ADEM's Initial Screening Levels

Note bold face type designates exceedance of ISL

*Due to elevated detection limit mandated by SW-846

Table 2: Monitor Well Construction Details & Groundwater Elevations

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-1	7/2/2020	633.63	1.75	631.88	ND	3.64-14.64	629.99	618.99	2"	Type II
	1/14/2021		3.40	630.23	ND					
	9/14/2021		Covered	Covered	Covered					
	11/30/2021		2.16	631.47	ND					
	1/31/2022		2.99	630.64	ND					
	4/12/2022		2.93	630.70	ND					
	7/19/2022		2.86	630.77	ND					
	12/21/2022		Covered	Covered	Covered					
	3/23/2023		2.42	631.21	ND					
	6/13/2023		3.39	630.24	ND					
	9/12/2023		3.06	630.57	ND					
	2/7/2024		2.75	630.88	ND					
MW-2	7/2/2020	633.71	1.84	631.87	ND	3.43-14.43	630.28	619.28	2"	Type II
	1/14/2021		3.08	630.63	ND					
	9/14/2021		2.26	631.45	ND					
	11/30/2021		2.38	631.33	ND					
	1/31/2022		2.73	630.98	ND					
	4/12/2022		2.61	631.10	ND					
	7/19/2022		2.83	630.88	ND					
	12/21/2022		2.46	631.25	ND					
	3/23/2023		2.28	631.43	ND					
	6/13/2023		2.40	631.31	ND					
	9/12/2023		2.93	630.78	ND					
	2/7/2024		2.51	631.20	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-3	7/2/2020	634.20	2.91	631.29	ND	3.31-14.43	630.89	619.77	2"	Type II
	1/14/2021		3.81	630.39	ND					
	9/14/2021		3.11	631.09	ND					
	11/30/2021		3.24	630.96	ND					
	1/31/2022		3.42	630.78	ND					
	4/12/2022		2.52	631.68	ND					
	7/19/2022		3.52	630.68	ND					
	12/21/2022		3.17	631.03	ND					
	3/23/2023		2.32	631.88	ND					
	6/13/2023		3.92	630.28	ND					
	9/12/2023		5.40	628.80	ND					
	2/7/2024		3.25	630.95	ND					
MW-4	7/2/2020	634.50	3.97	630.53	ND	3.21-14.21	631.29	620.29	2"	Type II
	1/14/2021		4.44	630.06	ND					
	9/14/2021		3.83	630.67	ND					
	11/30/2021		3.99	630.51	ND					
	1/31/2022		4.16	630.34	ND					
	4/12/2022		4.17	630.33	ND					
	7/19/2022		4.18	630.32	ND					
	12/21/2022		3.93	630.57	ND					
	3/23/2023		3.95	630.55	ND					
	6/13/2023		2.89	631.61	ND					
	9/12/2023		3.92	630.58	ND					
	2/7/2024		4.05	630.45	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-5	1/14/2021	634.30	4.17	630.13	ND	5.87-15.87	629	619	2"	Type II
	9/14/2021		3.49	630.81	ND					
	11/30/2021		3.57	630.73	ND					
	1/31/2022		3.92	630.38	ND					
	4/12/2022		3.95	630.35	ND					
	7/19/2022		4.02	630.28	ND					
	12/21/2022		3.73	630.57	ND					
	3/23/2023		3.77	630.53	ND					
	6/13/2023		2.76	631.54	ND					
	9/12/2023		3.76	630.54	ND					
	2/7/2024		3.82	630.48	ND					
MW-6	1/14/2021	634.19	4.37	629.82	ND	5.93-15.93	628.69	618.69	2"	Type II
	9/14/2021		Covered	Covered	Covered					
	11/30/2021		Covered	Covered	Covered					
	1/31/2022		Covered	Covered	Covered					
	4/12/2022		6.00	628.19	ND					
	7/19/2022		3.84	630.35	ND					
	12/21/2022		3.67	630.52	ND					
	3/23/2023		3.72	630.47	ND					
	6/13/2023		2.11	632.08	ND					
	9/12/2023		3.56	630.63	ND					
	2/7/2024		3.79	630.40	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-7	1/14/2021	634.27	4.03	630.24	ND	5.86-15.86	628.85	618.85	2"	Type II
	9/14/2021		3.27	631.00	ND					
	11/30/2021		3.34	630.93	ND					
	1/31/2022		3.75	630.52	ND					
	4/12/2022		3.44	630.83	ND					
	7/19/2022		3.83	630.44	ND					
	12/21/2022		3.55	630.72	ND					
	3/23/2023		3.54	630.73	ND					
	6/13/2023		2.61	631.66	ND					
	9/12/2023		3.63	630.64	ND					
	2/7/2024		3.63	630.64	ND					
MW-8	1/14/2021	634.26	4.30	629.96	ND	5.91-15.91	628.76	618.76	2"	Type II
	9/14/2021		3.04	631.22	ND					
	11/30/2021		3.09	631.17	ND					
	1/31/2022		3.70	630.56	ND					
	4/12/2022		3.55	630.71	ND					
	7/19/2022		3.46	630.80	ND					
	12/21/2022		3.40	630.86	ND					
	3/23/2023		3.45	630.81	ND					
	6/13/2023		2.60	631.66	ND					
	9/12/2023		3.43	630.83	ND					
	2/7/2024		3.53	630.73	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-9	1/14/2021	633.65	3.30	630.35	ND	5.88-15.88	628.15	618.15	2"	Type II
	9/14/2021		0.00	633.65	ND					
	11/30/2021		0.17	633.48	ND					
	1/31/2022		2.92	630.73	ND					
	4/12/2022		2.66	630.99	ND					
	7/19/2022		2.78	630.87	ND					
	12/21/2022		2.71	630.94	ND					
	3/23/2023		2.67	630.98	ND					
	6/13/2023		2.68	630.97	ND					
	9/12/2023		2.87	630.78	ND					
	2/7/2024		2.80	630.85	ND					
MW-10	1/14/2021	633.00	2.98	630.02	ND	5.93-15.93	627.5	617.5	2"	Type II
	9/14/2021		2.09	630.91	ND					
	11/30/2021		2.17	630.83	ND					
	1/31/2022		2.61	630.39	ND					
	4/12/2022		2.53	630.47	ND					
	7/19/2022		2.29	630.71	ND					
	12/21/2022		2.38	630.62	ND					
	3/23/2023		2.09	630.91	ND					
	6/13/2023		2.61	630.39	ND					
	9/12/2023		2.58	630.42	ND					
	2/7/2024		2.39	630.61	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-11	1/14/2021	633.41	3.00	630.41	ND	6.09-16.09	627.91	617.91	2"	Type II
	9/14/2021		2.58	630.83	ND					
	11/30/2021		2.65	630.76	ND					
	1/31/2022		2.31	631.10	ND					
	4/12/2022		1.86	631.55	ND					
	7/19/2022		2.53	630.88	ND					
	12/21/2022		2.31	631.10	ND					
	3/23/2023		1.88	631.53	ND					
	6/13/2023		3.13	630.28	ND					
	9/12/2023		2.50	630.91	ND					
	2/7/2024		2.42	630.99	ND					
MW-12	1/14/2021	634.26	5.35	628.91	ND	18.43-23.43	616.24	611.24	2"	Type III
	9/14/2021		5.28	628.98	ND					
	11/30/2021		5.31	628.95	ND					
	1/31/2022		4.39	629.87	ND					
	4/12/2022		2.91	631.35	ND					
	7/19/2022		4.70	629.56	ND					
	12/21/2022		2.71	631.55	ND					
	3/23/2023		1.15	633.11	ND					
	6/13/2023		5.25	629.01	ND					
	9/12/2023		3.51	630.75	ND					
	2/7/2024		2.22	632.04	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-13	9/14/2021	633.51	3.47	630.04	ND	5.62-15.62	628.17	618.17	2"	Type II
	11/30/2021		3.59	629.92	ND					
	1/31/2022		3.14	630.37	ND					
	4/12/2022		3.11	630.40	ND					
	7/19/2022		3.03	630.48	ND					
	12/21/2022		2.91	630.60	ND					
	3/23/2023		2.78	630.73	ND					
	6/13/2023		3.40	630.11	ND					
	9/12/2023		2.99	630.52	ND					
	2/7/2024		2.96	630.55	ND					
MW-14	9/14/2021	633.80	3.19	630.61	ND	5.33-15.33	628.78	618.78	2"	Type II
	11/30/2021		3.30	630.50	ND					
	1/31/2022		3.47	630.33	ND					
	4/12/2022		3.36	630.44	ND					
	7/19/2022		3.27	630.53	ND					
	12/21/2022		3.21	630.59	ND					
	3/23/2023		3.30	630.50	ND					
	6/13/2023		2.46	631.34	ND					
	9/12/2023		3.18	630.62	ND					
	2/7/2024		3.28	630.52	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-15	9/14/2021	634.05	3.95	630.10	ND	5.34-15.34	629.06	619.06	2"	Type II
	11/30/2021		3.75	630.30	ND					
	1/31/2022		3.76	630.29	ND					
	4/12/2022		4.12	629.93	ND					
	7/19/2022		3.57	630.48	ND					
	12/21/2022		3.63	630.42	ND					
	3/23/2023		3.62	630.43	ND					
	6/13/2023		4.06	629.99	ND					
	9/12/2023		3.19	630.86	ND					
	2/7/2024		3.54	630.51	ND					
MW-16	9/14/2021	634.13	3.74	630.39	ND	5.70-15.70	629.05	619.05	2"	Type II
	11/30/2021		3.89	630.24	ND					
	1/31/2022		3.82	630.31	ND					
	4/12/2022		3.83	630.30	ND					
	7/19/2022		3.75	630.38	ND					
	12/21/2022		3.52	630.61	ND					
	3/23/2023		3.54	630.59	ND					
	6/13/2023		3.81	630.32	ND					
	9/12/2023		3.36	630.77	ND					
	2/7/2024		3.55	630.58	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-17	9/14/2021	634.53	4.27	630.26	ND	5.46-15.46	929.43	619.43	2"	Type II
	11/30/2021		4.37	630.16	ND					
	1/31/2022		4.30	630.23	ND					
	4/12/2022		4.09	630.44	ND					
	7/19/2022		3.48	631.05	ND					
	12/21/2022		3.54	630.99	ND					
	3/23/2023		2.90	631.63	ND					
	6/13/2023		4.43	630.10	ND					
	9/12/2023		3.21	631.32	ND					
	2/7/2024		4.12	630.41	ND					
MW-18	9/14/2021	634.14	3.96	630.18	ND	5.33-15.33	629.15	619.15	2"	Type II
	11/30/2021		4.02	630.12	ND					
	1/31/2022		3.63	630.51	ND					
	4/12/2022		3.61	630.53	ND					
	7/19/2022		2.33	631.81	ND					
	12/21/2022		3.35	630.79	ND					
	3/23/2023		3.24	630.90	ND					
	6/13/2023		3.73	630.41	ND					
	9/12/2023		2.58	631.56	ND					
	2/7/2024		3.44	630.70	ND					

Table 2: Monitor Well Construction Details & Groundwater Elevations - continued

MW ID	Date	TOC	DTW	GWE	FP Thickness	SI	TOSE	BOSE	Diam.	MW Type
MW-19	9/14/2021	634.02	3.62	630.40	ND	5.30-15.30	628.92	618.92	2"	Type II
	11/30/2021		3.79	630.23	ND					
	1/31/2022		3.74	630.28	ND					
	4/12/2022		3.05	630.97	ND					
	7/19/2022		3.37	630.65	ND					
	12/21/2022		3.04	630.98	ND					
	3/23/2023		2.93	631.09	ND					
	6/13/2023		3.41	630.61	ND					
	9/12/2023		3.14	630.88	ND					
	2/7/2024		3.08	630.94	ND					

MW: Monitor well

TOC: Top of the well casing elevation (feet above mean sea level)

GWE: Groundwater elevation (feet above mean sea level) corrected for FP

DTW: Depth to groundwater table in feet

DTP: Depth to Product

SI: Screen interval (feet below the top of casing)

TOSE: Top of the screen elevation (feet above mean sea level)

BOSE: Bottom of the screen elevation (feet above mean sea level)

NM: Not Measured

Diam.: Monitor well diameter in inches

Table 3: Bioremediation Testing Indicators

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-1	7/2/2020	At Equilibrium	0.15	29.5	6.9	304	31
	1/14/2021	At Equilibrium	0.41	14.0	7.3	215	200
	9/14/2021	At Equilibrium	Covered	Covered	Covered	Covered	Covered
	11/30/2021	At Equilibrium	0.09	28.3	6.5	205	57
	1/31/2022	At Equilibrium	3.81	16.3	7.8	324	45
	4/12/2022	At Equilibrium	1.23	21.7	6.6	395	-36
	7/19/2022	At Equilibrium	1.48	27.8	7.1	330	93
	12/21/2022	Not Sampled	Covered	Covered	Covered	Covered	Covered
	3/23/2023	At Equilibrium	5.14	18.5	6.6	350	161
	6/13/2023	At Equilibrium	3.92	21.9	8.5	325	61
	9/12/2023	At Equilibrium	3.70	25.8	8.3	310	62
	2/7/2024	At Equilibrium	2.84	15.0	6.6	201	72
MW-2	7/2/2020	At Equilibrium	0.36	26.7	7.2	197	63
	1/14/2021	At Equilibrium	0.30	13.9	7.4	174	197
	9/14/2021	At Equilibrium	1.23	29.9	7.0	416	-126
	11/30/2021	At Equilibrium	1.19	26.8	6.9	356	162
	1/31/2022	At Equilibrium	3.75	13.1	7.8	319	-18
	4/12/2022	At Equilibrium	4.03	18.6	6.9	326	108
	7/19/2022	At Equilibrium	1.24	27.2	6.8	259	94
	12/21/2022	At Equilibrium	4.11	15.2	7.0	299	-6
	3/23/2023	At Equilibrium	4.29	17.4	7.0	265	92
	6/13/2023	At Equilibrium	2.89	25.4	8.4	243	-5
	9/12/2023	At Equilibrium	2.26	28.7	8.2	210	9
	2/7/2024	At Equilibrium	2.06	12.9	6.6	166	67

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-3	7/2/2020	At Equilibrium	0.33	27.0	7.5	191	64
	1/14/2021	At Equilibrium	0.26	16.1	7.2	181	204
	9/14/2021	At Equilibrium	0.68	38.2	6.4	419	-62
	11/30/2021	At Equilibrium	0.56	34.5	6.6	202	112
	1/31/2022	At Equilibrium	3.15	16.9	7.6	266	-38
	4/12/2022	At Equilibrium	4.32	18.7	6.7	221	36
	7/19/2022	At Equilibrium	4.38	26.9	7.0	249	39
	12/21/2022	At Equilibrium	4.13	18.7	6.9	217	-45
	3/23/2023	At Equilibrium	3.54	18.3	7.2	213	-52
	6/13/2023	At Equilibrium	2.76	23.5	8.2	181	20
	9/12/2023	At Equilibrium	2.18	27.0	8.2	178	-58
	2/7/2024	At Equilibrium	1.58	15.4	6.7	124	-58
MW-4	7/2/2020	At Equilibrium	0.83	28.7	8.1	222	131
	1/14/2021	At Equilibrium	0.22	15.8	6.9	163	147
	9/14/2021	At Equilibrium	1.12	33.1	6.1	482	-62
	11/30/2021	At Equilibrium	0.45	30.1	6.5	242	95
	1/31/2022	At Equilibrium	3.55	16.3	7.4	348	4
	4/12/2022	At Equilibrium	4.02	18.1	6.8	382	17
	7/19/2022	At Equilibrium	3.17	26.9	6.9	346	-11
	12/21/2022	At Equilibrium	4.06	18.5	6.8	280	-41
	3/23/2023	At Equilibrium	3.03	17.7	7.2	293	-71
	6/13/2023	At Equilibrium	2.11	23.0	8.3	264	-42
	9/12/2023	At Equilibrium	2.16	26.9	8.3	231	-51
	2/7/2024	At Equilibrium	1.58	15.5	6.7	155	-95

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-5	1/14/2021	At Equilibrium	0.36	18.2	6.7	128	87
	9/14/2021	At Equilibrium	0.87	35.7	6.4	253	-78
	11/30/2021	At Equilibrium	0.60	31.9	6.4	183	-12
	1/31/2022	At Equilibrium	4.18	16.7	7.4	198	11
	4/12/2022	At Equilibrium	4.67	18.6	6.6	205	27
	7/19/2022	At Equilibrium	3.77	26.6	6.7	214	-44
	12/21/2022	At Equilibrium	4.37	19.2	6.6	226	-40
	3/23/2023	At Equilibrium	3.57	18.2	7.1	207	-69
	6/13/2023	At Equilibrium	2.11	23.0	8.3	264	-42
	9/12/2023	At Equilibrium	2.38	26.8	8.1	180	-61
	2/7/2024	At Equilibrium	1.51	16.1	6.5	131	101
MW-6	1/14/2021	At Equilibrium	0.33	17.6	7.0	149	92
	9/14/2021	At Equilibrium	Covered	Covered	Covered	Covered	Covered
	11/30/2021	At Equilibrium	Covered	Covered	Covered	Covered	Covered
	1/31/2022	At Equilibrium	Covered	Covered	Covered	Covered	Covered
	4/12/2022	At Equilibrium	4.81	19.3	6.8	264	19
	7/19/2022	At Equilibrium	3.68	27.7	6.8	256	-21
	12/21/2022	At Equilibrium	4.24	19.6	6.6	257	-25
	3/23/2023	At Equilibrium	4.28	16.5	7.1	189	147
	6/13/2023	At Equilibrium	2.60	22.7	8.3	184	-60
	9/12/2023	At Equilibrium	2.55	26.3	8.2	188	-9
	2/7/2024	At Equilibrium	1.46	16.7	6.6	109	107

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-7	1/14/2021	At Equilibrium	0.34	17.5	6.9	144	137
	9/14/2021	At Equilibrium	3.18	42.6	6.4	347	-131
	11/30/2021	At Equilibrium	0.78	38.2	6.5	225	-50
	1/31/2022	At Equilibrium	4.40	17.1	7.5	251	-2
	4/12/2022	At Equilibrium	4.17	19.0	6.5	253	-7
	7/19/2022	At Equilibrium	3.28	27.1	6.7	242	-53
	12/21/2022	At Equilibrium	3.58	19.2	6.6	237	-38
	3/23/2023	At Equilibrium	4.78	16.3	7.3	215	77
	6/13/2023	At Equilibrium	2.68	23.2	8.3	195	-56
	9/12/2023	At Equilibrium	2.15	27.2	8.1	174	-55
	2/7/2024	At Equilibrium	1.58	16.2	6.5	129	108
MW-8	1/14/2021	At Equilibrium	0.33	16.8	7.0	224	86
	9/14/2021	At Equilibrium	1.75	31.1	6.2	456	-64
	11/30/2021	At Equilibrium	1.12	29.9	6.4	324	14
	1/31/2022	At Equilibrium	2.51	17.6	7.6	258	-40
	4/12/2022	At Equilibrium	4.23	19.1	6.8	217	-8
	7/19/2022	At Equilibrium	3.47	26.4	6.9	290	-60
	12/21/2022	At Equilibrium	3.86	19.5	6.6	316	-49
	3/23/2023	At Equilibrium	3.67	18.8	7.3	252	-25
	6/13/2023	At Equilibrium	3.39	22.4	7.9	233	64
	9/12/2023	At Equilibrium	2.71	25.7	8.4	232	56
	2/7/2024	At Equilibrium	5.51	15.3	6.5	114	122

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-9	1/14/2021	At Equilibrium	0.33	17.3	7.4	166	68
	9/14/2021	At Equilibrium	1.49	34.2	6.7	412	-89
	11/30/2021	At Equilibrium	1.02	32.0	6.5	334	26
	1/31/2022	At Equilibrium	3.14	17.5	7.9	349	-6
	4/12/2022	At Equilibrium	3.86	20.4	6.8	413	13
	7/19/2022	At Equilibrium	2.63	28.1	6.8	303	-67
	12/21/2022	At Equilibrium	4.44	17.9	6.4	282	34
	3/23/2023	At Equilibrium	3.85	19.0	7.1	199	-51
	6/13/2023	At Equilibrium	2.61	23.4	8.3	229	25
	9/12/2023	At Equilibrium	2.54	26.2	7.9	205	-6
	2/7/2024	At Equilibrium	2.53	16.1	6.4	100	82
MW-10	1/14/2021	At Equilibrium	0.27	16.6	6.9	95	53
	9/14/2021	At Equilibrium	0.97	39.1	6.7	269	-49
	11/30/2021	At Equilibrium	1.00	36.8	6.5	100	11
	1/31/2022	At Equilibrium	4.07	16.5	8.2	121	168
	4/12/2022	At Equilibrium	4.71	20.5	6.8	137	65
	7/19/2022	At Equilibrium	4.39	29.3	6.9	147	184
	12/21/2022	At Equilibrium	4.81	17.9	6.3	125	72
	3/23/2023	At Equilibrium	4.75	18.6	7.1	108	-11
	6/13/2023	At Equilibrium	3.13	23.0	8.5	107	-22
	9/12/2023	At Equilibrium	2.57	25.8	7.5	132	-33
	2/7/2024	At Equilibrium	3.72	16.0	6.1	62	57

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-11	1/14/2021	At Equilibrium	0.12	15.3	7.1	200	9
	9/14/2021	At Equilibrium	1.13	32.3	6.8	671	334
	11/30/2021	At Equilibrium	0.90	29.2	6.6	332	159
	1/31/2022	At Equilibrium	4.34	12.6	8.4	368	177
	4/12/2022	At Equilibrium	2.35	20.1	7.1	405	68
	7/19/2022	At Equilibrium	1.82	27.1	7.4	302	78
	12/21/2022	At Equilibrium	4.56	17.5	6.2	406	65
	3/23/2023	At Equilibrium	4.50	18.1	6.7	276	50
	6/13/2023	At Equilibrium	2.82	21.3	8.5	284	21
	9/12/2023	At Equilibrium	2.70	24.5	7.6	220	-33
	2/7/2024	At Equilibrium	2.40	16.2	6.1	114	100
MW-12	1/14/2021	At Equilibrium	0.16	18.5	7.6	192	-28
	9/14/2021	At Equilibrium	2.32	38.4	6.3	349	-112
	11/30/2021	At Equilibrium	1.30	35.5	6.4	216	-3
	1/31/2022	At Equilibrium	4.19	18.1	7.5	129	-3
	4/12/2022	At Equilibrium	4.37	20.0	6.6	195	73
	7/19/2022	At Equilibrium	4.25	25.2	7.0	198	-32
	12/21/2022	At Equilibrium	5.13	18.3	6.3	186	49
	3/23/2023	At Equilibrium	5.49	17.4	7.8	173	155
	6/13/2023	At Equilibrium	2.78	22.6	7.9	189	-54
	9/12/2023	At Equilibrium	2.73	24.1	7.8	144	-52
	2/7/2024	At Equilibrium	2.88	16.1	6.4	99	36

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-13	9/14/2021	At Equilibrium	1.42	31.7	6.6	275	-14
	11/30/2021	At Equilibrium	0.90	29.4	6.5	320	-2
	1/31/2022	At Equilibrium	3.81	17.4	8.0	223	44
	4/12/2022	At Equilibrium	4.13	20.7	6.6	229	62
	7/19/2022	At Equilibrium	3.65	28.7	6.8	21	56
	12/21/2022	At Equilibrium	4.16	17.9	6.2	217	55
	3/23/2023	At Equilibrium	4.57	18.5	7.8	186	186
	6/13/2023	At Equilibrium	3.87	24.8	8.0	170	132
	9/12/2023	At Equilibrium	2.29	36.7	7.5	161	-15
	2/7/2024	At Equilibrium	2.30	16.0	6.3	106	36
MW-14	9/14/2021	At Equilibrium	1.14	31.4	6.3	507	-70
	11/30/2021	At Equilibrium	0.84	28.8	6.4	456	-18
	1/31/2022	At Equilibrium	0.61	17.8	7.8	299	-33
	4/12/2022	At Equilibrium	2.62	21.6	6.7	328	-14
	7/19/2022	At Equilibrium	2.73	28.2	6.7	279	-27
	12/21/2022	At Equilibrium	4.39	18.3	6.2	133	-5
	3/23/2023	At Equilibrium	4.37	18.4	7.8	230	64
	6/13/2023	At Equilibrium	2.40	23.2	8.1	238	-36
	9/12/2023	At Equilibrium	1.89	28.2	7.3	177	-38
	2/7/2024	At Equilibrium	2.32	15.1	6.5	120	40

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-15	9/14/2021	At Equilibrium	1.51	32.6	6.5	493	-31
	11/30/2021	At Equilibrium	1.22	30.1	6.5	557	-22
	1/31/2022	At Equilibrium	3.31	16.9	7.6	414	-7
	4/12/2022	At Equilibrium	4.09	20.5	6.7	399	22
	7/19/2022	At Equilibrium	3.32	28.1	6.9	336	-85
	12/21/2022	At Equilibrium	4.78	19.4	6.3	304	78
	3/23/2023	At Equilibrium	4.33	18.4	7.8	242	-30
	6/13/2023	At Equilibrium	2.68	24.1	8.9	244	8
	9/12/2023	At Equilibrium	2.63	25.8	8.0	233	71
	2/7/2024	At Equilibrium	2.34	15.9	6.4	100	-37
MW-16	9/14/2021	At Equilibrium	2.01	32.4	6.3	327	-60
	11/30/2021	At Equilibrium	1.96	30.0	6.4	352	-50
	1/31/2022	At Equilibrium	4.43	15.6	7.8	346	-8
	4/12/2022	At Equilibrium	4.10	19.2	7.0	336	-16
	7/19/2022	At Equilibrium	3.45	27.4	7.1	303	-59
	12/21/2022	At Equilibrium	4.47	17.7	6.4	309	-4
	3/23/2023	At Equilibrium	3.51	17.4	7.8	277	-43
	6/13/2023	At Equilibrium	2.26	24.8	7.8	234	39
	9/12/2023	At Equilibrium	2.25	26.7	7.6	197	-11
	2/7/2024	At Equilibrium	3.02	13.9	6.4	149	54

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-17	9/14/2021	At Equilibrium	0.78	37.9	6.6	367	17
	11/30/2021	At Equilibrium	1.42	34.6	6.5	293	-15
	1/31/2022	At Equilibrium	3.77	17.8	7.8	290	-20
	4/12/2022	At Equilibrium	4.13	20.6	6.9	267	40
	7/19/2022	At Equilibrium	3.54	28.2	7.1	263	28
	12/21/2022	At Equilibrium	4.69	19.2	6.6	240	37
	3/23/2023	At Equilibrium	4.17	18.7	7.8	193	9
	6/13/2023	At Equilibrium	2.68	24.1	8.0	182	-13
	9/12/2023	At Equilibrium	2.26	25.9	7.6	159	-48
	2/7/2024	At Equilibrium	2.23	16.1	7.0	141	102
MW-18	9/14/2021	At Equilibrium	1.35	38.4	6.6	309	-26
	11/30/2021	At Equilibrium	1.11	35.5	6.4	145	8
	1/31/2022	At Equilibrium	3.80	17.4	8.0	285	32
	4/12/2022	At Equilibrium	5.34	17.8	7.4	264	44
	7/19/2022	At Equilibrium	3.55	27.5	6.7	242	-31
	12/21/2022	At Equilibrium	4.64	18.3	6.3	233	14
	3/23/2023	At Equilibrium	4.41	17.8	7.8	202	16
	6/13/2023	At Equilibrium	2.38	24.0	8.3	192	16
	9/12/2023	At Equilibrium	2.42	25.7	7.5	162	-41
	2/7/2024	At Equilibrium	2.49	15.5	7.0	117	70

Table 3: Bioremediation Testing Indicators - continued

MW ID	Date	Sample Interval	D.O.	Temp.	pH	Conductivity	ORP
MW-19	9/14/2021	At Equilibrium	1.56	40.9	6.8	301	-20
	11/30/2021	At Equilibrium	1.05	38.0	6.6	200	-46
	1/31/2022	At Equilibrium	4.03	16.5	8.1	238	98
	4/12/2022	At Equilibrium	4.26	18.2	7.1	215	25
	7/19/2022	At Equilibrium	3.93	26.5	7.0	208	12
	12/21/2022	At Equilibrium	4.29	18.2	6.7	211	12
	3/23/2023	At Equilibrium	4.23	17.1	7.8	191	11
	6/13/2023	At Equilibrium	2.66	22.8	7.9	778	26
	9/12/2023	At Equilibrium	2.39	25.0	7.4	154	-39
	2/7/2024	At Equilibrium	2.51	15.5	7.0	109	44

MW- Monitor Well

Temperature is expressed in °C

Conductivity is expressed in micro siemens

pH is expressed in standard units

ORP is expressed in milli volts

FP – Free Product

NM – Not Measured

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm)

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-1	7/2/2020	**0.383**	**1.23**	0.03	0.192	1.835	0.015	<0.005	NS
	1/14/2021	**0.064**	<0.001	<0.001	0.005	<0.071	0.005	<0.005	<0.002
	9/14/2021	Covered	Covered	Covered	Covered	Covered	Covered	Covered	Covered
	11/30/2021	*0.02*	*<0.001*	*<0.001*	*<0.003*	*<0.025*	*0.013*	*<0.005*	*NS*
	1/31/2022	*0.031*	*<0.001*	*<0.001*	*<0.003*	*<0.036*	*0.008*	*<0.005*	*NS*
	4/12/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.008*	*<0.005*	*NS*
	7/19/2022	*0.007*	*<0.001*	*<0.001*	*<0.003*	*<0.012*	*0.003*	*<0.005*	*NS*
	12/21/2022	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*
	3/23/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.006*	*<0.005*	*NS*
	6/13/2023	*0.007*	*<0.001*	*<0.001*	*<0.003*	*<0.012*	*0.005*	*<0.005*	*NS*
	9/12/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.005*	*<0.005*	*NS*
	2/7/2024	*0.006*	*<0.001*	*<0.001*	*<0.003*	*<0.011*	*0.003*	*<0.005*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0671***	***1.07***	***2.76***	***175***	***N/A***	***1.22***	***1.22***	***0.0171***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-2	7/2/2020	**0.017**	0.009	0.159	0.02	0.205	0.002	**0.272**	NS
	1/14/2021	**0.018**	0.004	0.036	0.008	0.066	0.004	**0.103**	<0.002
	9/14/2021	**0.073**	0.008	0.02	0.004	0.105	0.004	**0.062**	<0.002
	11/30/2021	***0.11***	*0.012*	*0.037*	*0.015*	*0.174*	*0.005*	*0.12*	*<0.002*
	1/31/2022	***0.063***	*0.009*	*0.024*	*0.009*	*0.105*	*0.003*	*0.099*	*NS*
	4/12/2022	*0.03*	*0.004*	*<0.001*	*0.01*	*<0.045*	*<0.001*	*0.075*	*NS*
	7/19/2022	***0.073***	*0.01*	*0.053*	*0.012*	*0.148*	*0.002*	*0.163*	*NS*
	12/21/2022	***0.061***	*0.009*	*0.032*	*0.011*	*0.113*	*0.002*	*0.08*	*NS*
	3/23/2023	*0.039*	*0.007*	*0.028*	*0.01*	*0.084*	*0.001*	*0.127*	*NS*
	6/13/2023	***0.079***	*0.008*	*0.036*	*0.016*	*0.139*	*<0.001*	*0.138*	*NS*
	9/12/2023	***0.072***	*0.008*	*0.021*	*0.012*	*0.113*	*0.003*	*0.074*	*NS*
	2/7/2024	***0.049***	*0.006*	*0.022*	*0.010*	*0.087*	*0.001*	*0.051*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0459***	***0.731***	***1.89***	***175***	***N/A***	***1.22***	***1.22***	***0.0117***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-3	7/2/2020	**0.017**	0.01	**0.935**	1.1	2.062	0.015	**0.278**	NS
	1/14/2021	**0.012**	0.002	0.194	0.102	0.31	**0.03**	**0.152**	0.0035
	9/14/2021	0.003	<0.001	0.005	<0.003	<0.012	**0.052**	<0.005	<0.002
	11/30/2021	*0.005*	*<0.001*	*0.133*	*0.018*	*<0.157*	*0.009*	*0.049*	*<0.002*
	1/31/2022	*0.003*	*<0.001*	*0.101*	*0.015*	*<0.12*	*0.016*	*0.043*	*NS*
	4/12/2022	*0.005*	*<0.001*	*0.126*	*0.033*	*<0.165*	*0.006*	*0.045*	*NS*
	7/19/2022	*0.002*	*<0.001*	*0.032*	*<0.003*	*<0.038*	*0.007*	*<0.005*	*NS*
	12/21/2022	*0.003*	*<0.001*	*0.089*	*0.012*	*<0.105*	*0.007*	*0.015*	*NS*
	3/23/2023	*0.002*	*<0.001*	*0.038*	*0.004*	*<0.045*	*0.007*	*0.015*	*NS*
	6/13/2023	*0.003*	*<0.001*	*0.044*	*<0.003*	*<0.051*	*0.003*	*0.010*	*NS*
	9/12/2023	*0.004*	*<0.001*	*0.029*	*<0.003*	*<0.037*	*0.005*	*0.006*	*NS*
	2/7/2024	*0.013*	*0.026*	*0.065*	*0.250*	*0.354*	*0.006*	*0.033*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0309***	***0.491***	***1.27***	***175***	***N/A***	***1.21***	***1.21***	***0.00785***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-4	7/2/2020	**1.06**	0.675	**3.16**	5.85	10.745	**0.141**	**0.885**	NS
	1/14/2021	**0.656**	0.168	**1.57**	2.15	4.544	**0.196**	**0.578**	<0.002
	9/14/2021	**0.475**	0.059	0.556	0.576	1.666	**0.324**	**0.225**	<0.002
	11/30/2021	***0.585***	*0.184*	***1.33***	*1.75*	*3.849*	*0.16*	*0.74*	*<0.002*
	1/31/2022	***0.44***	*0.106*	***1.18***	*1.48*	*3.206*	*0.125*	*0.584*	*NS*
	4/12/2022	***0.624***	*0.155*	***1.61***	*1.92*	*4.309*	*0.085*	*0.702*	*NS*
	7/19/2022	***0.66***	*0.074*	*1.33*	*1.27*	*3.334*	*0.072*	*0.632*	*NS*
	12/21/2022	***0.35***	*0.073*	*0.768*	*0.877*	*2.068*	*0.065*	*0.31*	*NS*
	3/23/2023	***0.454***	*0.106*	*0.925*	*1*	*2.485*	*0.064*	*0.77*	*NS*
	6/13/2023	***0.363***	*0.072*	*0.938*	*1.000*	*2.373*	*0.059*	*0.592*	*NS*
	9/12/2023	***0.463***	*0.054*	*0.900*	*0.846*	*2.263*	*0.017*	*0.510*	*NS*
	2/7/2024	***0.194***	*0.034*	*0.457*	*0.458*	*1.143*	*0.036*	*0.198*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0276***	***0.44***	***1.14***	***175***	***N/A***	***1.21***	***1.21***	***0.00704***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-5	1/14/2021	**0.154**	0.042	0.685	0.444	1.325	**0.208**	**0.29**	<0.002
	9/14/2021	**0.239**	0.007	0.372	0.234	0.852	**0.285**	**0.185**	<0.002
	11/30/2021	***0.147***	*0.009*	*0.27*	*0.089*	*0.515*	*0.266*	*0.238*	*<0.002*
	1/31/2022	***0.127***	*0.027*	*0.479*	*0.288*	*0.921*	*0.189*	*0.29*	*NS*
	4/12/2022	***0.1***	*0.025*	*0.379*	*0.255*	*0.759*	*0.184*	*0.234*	*NS*
	7/19/2022	***0.184***	*0.019*	*0.464*	*0.167*	*0.834*	*0.103*	*0.398*	*NS*
	12/21/2022	***0.107***	*0.02*	*0.438*	*0.202*	*0.767*	*0.107*	*0.235*	*NS*
	3/23/2023	***0.066***	*0.012*	*0.21*	*0.115*	*0.403*	*0.135*	*0.294*	*NS*
	6/13/2023	*0.022*	*0.001*	*0.058*	*0.006*	*0.087*	*0.258*	*0.038*	*NS*
	9/12/2023	***0.107***	*0.009*	*0.234*	*0.051*	*0.401*	*0.142*	*0.175*	*NS*
	2/7/2024	***0.083***	*0.013*	*0.305*	*0.170*	*0.571*	*0.077*	*0.179*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0256***	***0.407***	***1.05***	***175***	***N/A***	***1.22***	***1.22***	***0.00651***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-6	1/14/2021	**0.615**	0.178	**0.802**	1.6	3.195	**0.229**	**0.168**	<0.002
	9/14/2021	Covered	Covered	Covered	Covered	Covered	Covered	Covered	Covered
	11/30/2021	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*
	1/31/2022	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*	*Covered*
	4/12/2022	***0.47***	*0.045*	*0.311*	*0.458*	*1.284*	*0.282*	*0.094*	*NS*
	7/19/2022	***0.558***	*0.043*	*0.479*	*0.602*	*1.682*	*0.125*	*0.174*	*NS*
	12/21/2022	***0.387***	*0.055*	*0.441*	*0.636*	*1.519*	*0.167*	*0.159*	*NS*
	3/23/2023	***0.466***	*0.047*	*0.356*	*0.485*	*1.354*	*0.161*	*0.169*	*NS*
	6/13/2023	***0.035***	*0.002*	*0.014*	*0.013*	*0.064*	*0.098*	*0.011*	*NS*
	9/12/2023	***0.392***	*0.044*	*0.660*	*0.800*	*1.896*	*0.137*	*0.198*	*NS*
	2/7/2024	***0.345***	*0.025*	*0.302*	*0.382*	*1.054*	*0.076*	*0.068*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0277***	***0.44***	***1.14***	***175***	***N/A***	***1.22***	***1.22***	***0.00704***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-7	1/14/2021	**0.288**	0.191	**2.4**	3.33	6.209	**0.032**	**0.95**	<0.002
	9/14/2021	**0.345**	0.05	**1.71**	0.876	2.981	**0.09**	**0.752**	<0.002
	11/30/2021	***0.333***	*0.11*	***1.69***	*1.45*	*3.583*	*0.039*	*0.959*	*<0.002*
	1/31/2022	***0.288***	*0.123*	***1.8***	*1.65*	*3.861*	*0.028*	*1.02*	*NS*
	4/12/2022	***0.27***	*0.155*	***1.77***	*1.74*	*3.935*	*0.023*	*0.938*	*NS*
	7/19/2022	***0.344***	*0.092*	***1.43***	*1.15*	*3.016*	*0.028*	*0.996*	*NS*
	12/21/2022	***0.207***	*0.069*	***1.18***	*0.752*	*2.208*	*0.027*	*0.541*	*NS*
	3/23/2023	***0.202***	*0.095*	***1.32***	*0.997*	*2.614*	*0.02*	*1.04*	*NS*
	6/13/2023	***0.256***	*0.094*	***1.500***	*1.240*	*3.090*	*0.023*	*0.605*	*NS*
	9/12/2023	***0.268***	*0.053*	***1.400***	*0.984*	*2.705*	*0.028*	*0.572*	*NS*
	2/7/2024	***0.193***	*0.050*	*0.990*	*0.648*	*1.881*	*0.018*	*0.497*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0277***	***0.441***	***1.14***	*175*	*N/A*	***1.22***	***1.22***	***0.00705***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-8	1/14/2021	**0.497**	0.099	0.453	1	2.049	**0.234**	**0.15**	<0.002
	9/14/2021	**0.94**	0.003	0.095	0.019	1.057	**0.096**	**0.112**	<0.002
	11/30/2021	***0.95***	*0.017*	*0.28*	*0.56*	*1.807*	*0.14*	*0.198*	*<0.002*
	1/31/2022	***0.835***	*0.057*	*0.441*	*0.746*	*2.079*	*0.082*	*0.136*	*NS*
	4/12/2022	***0.753***	*0.037*	*0.296*	*0.381*	*1.467*	*0.081*	*0.126*	*NS*
	7/19/2022	***0.865***	*0.016*	*0.198*	*0.151*	*1.23*	*0.042*	*0.096*	*NS*
	12/21/2022	***0.995***	*0.035*	*0.43*	*0.544*	*2.004*	*0.085*	*0.144*	*NS*
	3/23/2023	***0.921***	*0.025*	*0.263*	*0.511*	*1.72*	*0.089*	*0.311*	*NS*
	6/13/2023	***1.060***	*0.023*	*0.341*	*0.292*	*1.716*	*0.043*	*0.149*	*NS*
	9/12/2023	***1.300***	*0.083*	*1.100*	*1.650*	*4.133*	*0.020*	*0.786*	*NS*
	2/7/2024	***1.150***	*0.053*	*0.750*	*0.861*	*2.814*	*0.033*	*0.296*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0338***	***0.537***	***1.39***	*175*	*N/A*	***1.22***	***1.22***	***0.00859***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-9	1/14/2021	**0.305**	0.012	0.265	0.072	0.654	**0.05**	**0.159**	0.0023
	9/14/2021	**0.555**	0.005	0.054	<0.003	<0.617	**0.039**	**0.189**	<0.002
	11/30/2021	***0.96***	*0.02*	*0.253*	*0.049*	*1.282*	*0.044*	*0.346*	*<0.002*
	1/31/2022	***0.54***	*0.013*	*0.143*	*0.028*	*0.724*	*0.029*	*0.22*	*NS*
	4/12/2022	***0.745***	*0.021*	*0.328*	*0.076*	*1.17*	*0.029*	*0.371*	*NS*
	7/19/2022	***1.17***	*0.02*	*0.256*	*0.055*	*1.501*	*0.028*	*0.355*	*NS*
	12/21/2022	***0.794***	*0.046*	*0.783*	*0.049*	*1.672*	*0.034*	*0.244*	*NS*
	3/23/2023	***0.363***	*0.022*	*0.122*	*0.043*	*0.55*	*0.024*	*0.363*	*NS*
	6/13/2023	***0.487***	*0.018*	*0.045*	*0.025*	*0.575*	*0.025*	*0.105*	*NS*
	9/12/2023	***1.38***	*0.044*	*0.27*	*0.135*	*1.829*	*0.037*	*0.27*	*NS*
	2/7/2024	***0.762***	*0.488*	*0.196*	*0.377*	*1.823*	*0.028*	*0.114*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0471***	***0.75***	***1.94***	***175***	***N/A***	***1.22***	***1.22***	***0.012***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-10	1/14/2021	<0.001	<0.001	<0.001	<0.003	<0.006	0.005	<0.005	<0.002
	9/14/2021	<0.001	<0.001	<0.001	<0.003	<0.006	0.004	<0.005	0.0025
	11/30/2021	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.006*	*<0.005*	*<0.002*
	1/31/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.004*	*<0.005*	*NS*
	4/12/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.004*	*<0.005*	*NS*
	7/19/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.004*	*<0.005*	*NS*
	12/21/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.003*	*<0.005*	*NS*
	3/23/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.003*	*<0.005*	*NS*
	6/13/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.004*	*<0.005*	*NS*
	9/12/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.004*	*<0.005*	*NS*
	2/7/2024	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.002*	*<0.005*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0678***	***1.08***	***2.79***	***175***	***N/A***	***1.15***	***1.15***	***0.0173***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-11	1/14/2021	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	0.002
	9/14/2021	**0.009**	<0.001	<0.001	<0.003	<0.014	0.013	<0.005	<0.002
	11/30/2021	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.001*	*<0.005*	*<0.002*
	1/31/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
	4/12/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.002*	*<0.005*	*NS*
	7/19/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
	12/21/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
	3/23/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
	6/13/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
	9/12/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
	2/7/2024	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*<0.001*	*<0.005*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0849***	***1.35***	***3.49***	***175***	***N/A***	***1.06***	***1.06***	***0.0216***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-12	1/14/2021	**0.039**	0.006	0.088	0.088	0.221	**0.186**	**0.058**	<0.002
	9/14/2021	**0.033**	0.001	0.029	0.016	0.079	**0.422**	0.009	<0.002
	11/30/2021	*0.007*	*<0.001*	*0.007*	*0.005*	*<0.02*	*<0.001*	*0.011*	*<0.002*
	1/31/2022	*0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.394*	*<0.005*	*NS*
	4/12/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.222*	*<0.005*	*NS*
	7/19/2022	*0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.004*	*<0.005*	*NS*
	12/21/2022	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.134*	*<0.005*	*NS*
	3/23/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.114*	*<0.005*	*NS*
	6/13/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.082*	*<0.005*	*NS*
	9/12/2023	*<0.001*	*<0.001*	*<0.001*	*<0.003*	*<0.006*	*0.075*	*<0.005*	*NS*
	2/7/2024	*<0.001*	*0.006*	*0.002*	*0.018*	*<0.027*	*0.022*	*<0.005*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0221***	***0.352***	***0.91***	***175***	***N/A***	***1.22***	***1.22***	***0.00563***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-13	9/14/2021	**0.021**	0.002	0.045	0.004	0.072	**0.05**	0.012	<0.002
	11/30/2021	***0.051***	*0.002*	*0.045*	*0.003*	*0.101*	*0.048*	*0.058*	*<0.002*
	1/31/2022	***0.057***	*0.002*	*0.032*	*<0.003*	*<0.094*	*0.046*	*0.036*	*NS*
	4/12/2022	***0.033***	*0.001*	*0.021*	*<0.003*	*<0.058*	*0.053*	*0.018*	*NS*
	7/19/2022	***0.051***	*0.002*	*0.021*	*<0.003*	*<0.077*	*0.026*	*0.028*	*NS*
	12/21/2022	***0.052***	*0.002*	*0.016*	*<0.003*	*<0.073*	*0.037*	*0.015*	*NS*
	3/23/2023	***0.029***	*0.001*	*0.025*	*<0.003*	*<0.058*	*0.051*	*0.029*	*NS*
	6/13/2023	***0.037***	*0.002*	*0.015*	*<0.003*	*<0.057*	*0.051*	*0.024*	*NS*
	9/12/2023	***0.024***	*0.001*	*0.007*	*<0.003*	*<0.035*	*0.003*	*0.019*	*NS*
	2/7/2024	***0.370***	*0.003*	*0.020*	*0.004*	*0.397*	*0.031*	*0.025*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0276***	***0.439***	***1.14***	***175***	***N/A***	***1.21***	***1.21***	***0.00703***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-14	9/14/2021	**0.584**	0.219	**1.89**	4.66	7.353	**0.1**	**0.536**	0.0041
	11/30/2021	***0.69***	*0.109*	***2.08***	*3.42*	*6.299*	*0.066*	*0.656*	*<0.002*
	1/31/2022	***0.804***	*0.16*	***2.65***	*5.42*	*9.034*	*0.058*	*0.908*	*NS*
	4/12/2022	***0.98***	*0.134*	***2.45***	*4.32*	*7.884*	*0.071*	*0.748*	*NS*
	7/19/2022	***0.876***	*0.134*	***2.4***	*3.77*	*7.18*	*0.053*	*0.88*	*NS*
	12/21/2022	***0.898***	*0.12*	***1.85***	*3.26*	*6.128*	*0.062*	*0.588*	*NS*
	3/23/2023	***0.868***	*0.111*	***1.68***	*2.44*	*5.099*	*0.072*	*1.03*	*NS*
	6/13/2023	***0.948***	*0.081*	***1.960***	*2.640*	*5.629*	*0.047*	*1.030*	*NS*
	9/12/2023	***1.200***	*0.350*	***3.060***	*5.080*	*9.690*	*0.294*	*0.972*	*NS*
	2/7/2024	***1.060***	*0.134*	***2.220***	*3.430*	*6.844*	*0.104*	*0.680*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0313***	***0.498***	***1.29***	***175***	***N/A***	***1.22***	***1.22***	***0.00797***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-15	9/14/2021	**0.42**	0.096	0.528	1.23	2.274	**0.439**	**0.084**	<0.002
	11/30/2021	***0.423***	*0.01*	*0.232*	*0.486*	*1.151*	*0.284*	*0.215*	*<0.002*
	1/31/2022	***0.505***	*0.039*	*0.411*	*0.77*	*1.725*	*0.417*	*0.23*	*NS*
	4/12/2022	***0.601***	*0.066*	*0.596*	*1.1*	*2.363*	*0.315*	*0.235*	*NS*
	7/19/2022	***0.28***	*0.012*	*0.237*	*0.218*	*0.747*	*0.169*	*0.138*	*NS*
	12/21/2022	***0.317***	*0.029*	*0.31*	*0.448*	*1.104*	*0.272*	*0.118*	*NS*
	3/23/2023	***0.249***	*0.019*	*0.189*	*0.292*	*0.749*	*0.229*	*0.148*	*NS*
	6/13/2023	***0.246***	*0.015*	*0.367*	*0.371*	*0.999*	*0.146*	*0.140*	*NS*
	9/12/2023	***0.141***	*0.011*	*0.195*	*0.133*	*0.480*	*0.175*	*0.055*	*NS*
	2/7/2024	***0.104***	*0.006*	*0.124*	*0.129*	*0.363*	*0.081*	*0.024*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0276***	***0.439***	***1.14***	***1.75***	***N/A***	***1.21***	***1.21***	***0.00702***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-16	9/14/2021	**0.88**	0.075	**0.846**	1.23	3.031	**0.292**	**0.274**	<0.002
	11/30/2021	***0.35***	*0.006*	*0.198*	*0.129*	*0.683*	*0.366*	*0.291*	*0.0075*
	1/31/2022	***0.656***	*0.066*	*0.672*	*0.681*	*2.075*	*0.223*	*0.251*	*NS*
	4/12/2022	***0.624***	*0.059*	*0.586*	*0.544*	*1.813*	*0.209*	*0.272*	*NS*
	7/19/2022	***0.611***	*0.066*	*0.72*	*0.778*	*2.175*	*0.101*	*0.378*	*NS*
	12/21/2022	***0.595***	*0.13*	*0.82*	*1.08*	*2.625*	*0.129*	*0.312*	*NS*
	3/23/2023	***0.365***	*0.044*	*0.388*	*0.379*	*1.176*	*0.127*	*0.348*	*NS*
	6/13/2023	***0.466***	*0.027*	*0.399*	*0.223*	*1.115*	*0.141*	*0.218*	*NS*
	9/12/2023	***0.391***	*0.025*	*0.455*	*0.159*	*1.03*	*0.111*	*0.327*	*NS*
	2/7/2024	***0.191***	*0.013*	*0.179*	*0.132*	*0.515*	*0.054*	*0.104*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0269***	***0.429***	***1.11***	***175***	***N/A***	***1.2***	***1.2***	***0.00686***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-17	9/14/2021	**0.198**	0.065	0.657	0.585	1.505	**0.112**	**0.195**	<0.002
	11/30/2021	***0.125***	*0.002*	*0.366*	*0.221*	*0.714*	*0.167*	*0.319*	*<0.002*
	1/31/2022	***0.115***	*0.036*	*0.417*	*0.647*	*1.215*	*0.124*	*0.244*	*NS*
	4/12/2022	***0.069***	*0.021*	*0.145*	*0.266*	*0.501*	*0.123*	*0.089*	*NS*
	7/19/2022	***0.093***	*0.003*	*0.23*	*0.081*	*0.407*	*0.077*	*0.284*	*NS*
	12/21/2022	***0.046***	*0.014*	*0.239*	*0.235*	*0.534*	*0.148*	*0.101*	*NS*
	3/23/2023	***0.05***	*0.012*	*0.239*	*0.215*	*0.516*	*0.14*	*0.145*	*NS*
	6/13/2023	***0.045***	*0.009*	*0.315*	*0.263*	*0.632*	*0.105*	*0.153*	*NS*
	9/12/2023	*0.004*	*<0.001*	*0.077*	*0.006*	*<0.088*	*0.123*	*0.014*	*NS*
	2/7/2024	*0.027*	*0.003*	*0.129*	*0.087*	*0.246*	*0.080*	*0.041*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0271***	***0.431***	***1.12***	***175***	***N/A***	***1.21***	***1.21***	***0.0069***

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		0.005	1	0.7	10	N/A	0.02	0.02	0.015
MW-18	9/14/2021	**0.026**	0.007	0.397	0.379	0.809	**0.043**	**0.092**	<0.002
	11/30/2021	*0.023*	*<0.001*	*0.021*	*0.331*	*<0.376*	*0.054*	*0.15*	*<0.002*
	1/31/2022	*0.018*	*0.002*	*0.359*	*0.21*	*0.589*	*0.047*	*0.226*	*NS*
	4/12/2022	*0.022*	*0.005*	*0.377*	*0.359*	*0.763*	*0.037*	*0.246*	*NS*
	7/19/2022	***0.028***	*0.001*	*0.227*	*0.039*	*0.295*	*0.025*	*0.315*	*NS*
	12/21/2022	*0.015*	*0.002*	*0.216*	*0.083*	*0.316*	*0.03*	*0.159*	*NS*
	3/23/2023	*0.013*	*0.003*	*0.284*	*0.157*	*0.457*	*0.024*	*0.326*	*NS*
	6/13/2023	*0.013*	*0.003*	*0.362*	*0.212*	*0.590*	*0.011*	*0.239*	*NS*
	9/12/2023	*0.015*	*0.002*	*0.221*	*0.096*	*0.334*	*0.012*	*0.201*	*NS*
	2/7/2024	*0.010*	*0.002*	*0.270*	*0.138*	*0.420*	*0.016*	*0.135*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.024***	***0.382***	***0.988***	***175***	***N/A***	***1.19***	***1.19***	***0.00611***

Table 4: BTEX, MTBE, Naphthalene, and Total Lead Groundwater Analytical Data (ppm) - continued

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylene	Total BTEX	MTBE	Naphthalene	Total Lead
ADEM ISLs (ppm) Commercial		**0.005**	**1**	**0.7**	**10**	**N/A**	**0.02**	**0.02**	**0.015**
MW-19	9/14/2021	**0.007**	0.002	0.27	0.044	0.809	**0.026**	**0.167**	<0.002
	11/30/2021	*0.004*	*<0.001*	*0.003*	*0.025*	*<0.033*	*0.033*	*0.097*	*<0.002*
	1/31/2022	*0.006*	*0.002*	*0.235*	*0.094*	*0.337*	*0.018*	*0.199*	*NS*
	4/12/2022	*0.009*	*0.003*	*0.361*	*0.206*	*0.579*	*0.009*	*0.255*	*NS*
	7/19/2022	*0.013*	*0.002*	*0.258*	*0.1*	*0.373*	*0.007*	*0.226*	*NS*
	12/21/2022	*0.009*	*0.002*	*0.216*	*0.083*	*0.31*	*0.016*	*0.131*	*NS*
	3/23/2023	*0.007*	*0.002*	*0.178*	*0.06*	*0.247*	*0.014*	*0.189*	*NS*
	6/13/2023	*0.010*	*0.002*	*0.309*	*0.123*	*0.444*	*0.006*	*0.217*	*NS*
	9/12/2023	*0.010*	*0.002*	*0.229*	*0.074*	*0.315*	*0.005*	*0.163*	*NS*
	2/7/2024	*0.005*	*0.001*	*0.203*	*0.073*	*0.282*	*0.008*	*0.095*	*NS*
ADEM SSTLs (ppm) GRP & SP		***0.0318***	***0.506***	***1.31***	***175***	***N/A***	***1.18***	***1.18***	***0.00809***

MW: Monitor well

All concentrations are in parts per million (ppm)

MTBE: Methyl Tert Butyl Ether

*Due to elevated detection limit mandated by SW-846

Table 4A: PAH Groundwater Analytical Data (ppm)

Sample ID/Analyte	ADEM ISL's Commercial	MW-1	MW-2	MW-3	MW-4
Sampling Date		7/2/2020	7/2/2020	7/2/2020	7/2/2020
Semi-Volatiles (ppm)					
Naphthalene	0.02	<0.001	**0.161**	<0.001	**0.431**
Acenaphthylene	N/A	<0.001	<0.001	<0.001	<0.001
Acenaphthene	N/A	<0.001	<0.001	<0.001	<0.001
Fluorene	1.46	<0.001	<0.001	<0.001	<0.001
Phenanthrene	1	<0.001	<0.001	<0.001	<0.001
Anthracene	0.0434	<0.001	<0.001	<0.001	<0.001
Fluoranthene	0.206	<0.001	<0.001	<0.001	<0.001
Pyrene	0.135	<0.001	<0.001	<0.001	<0.001
Benzo(a)anthracene	0.00117	<0.001	<0.001	<0.001	<0.001
Chrysene	0.0016	<0.0005	<0.0005	<0.0005	<0.0005
Benzo(b)fluoranthene	0.007	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(k)fluoranthene	0.0008	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)pyrene	0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-cd)pyrene	N/A	<0.001	<0.001	<0.001	<0.001
Dibenzo(a,h)anthracene	N/A	<0.001	<0.001	<0.001	<0.001
Benzo(g,h,i)perylene	0.0007	<0.0005	<0.0005	<0.0005	<0.0005

ppm: parts per million

FP: Free Product

*Effective solubility of COC in Diesel

Table 5: Surface Water Analytical Data (ppm)

MW ID	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	MTBE	Naphthalene	Total Lead
Tier I RBSLs for Surface Water Protection		**0.011**	**0.175**	**0.453**	**N/A**	**N/A**	**N/A**	**0.62**	**0.0028**
SW-1	9/8/2021	NS	NS	NS	NS	NS	NS	NS	NS
	4/12/2022	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS
	7/19/2022	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	3/23/2023	NS	NS	NS	NS	NS	NS	NS	NS
	6/13/2023	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	9/12/2023	NS	NS	NS	NS	NS	NS	NS	NS
	2/15/2024	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS
SW-2	9/8/2021	NS	NS	NS	NS	NS	NS	NS	NS
	4/12/2022	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS
	7/19/2022	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	3/23/2023	NS	NS	NS	NS	NS	NS	NS	NS
	6/13/2023	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	9/12/2023	NS	NS	NS	NS	NS	NS	NS	NS
	2/15/2024	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS
SW-3	9/8/2021	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS
	4/12/2022	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS
	7/19/2022	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	3/23/2023	NS	NS	NS	NS	NS	NS	NS	NS
	9/12/2023	NS	NS	NS	NS	NS	NS	NS	NS
	2/15/2024	<0.001	<0.001	<0.001	<0.003	<0.006	<0.001	<0.005	NS

All concentrations are in parts per million (ppm)

MTBE: Methyl Tert Butyl Ether

Table 7: Site Specific Target Levels for Groundwater and Stream Protection

MW ID	Well Type	COC	SSTL Inhalation of vapors from GW indoors	SSTL Inhalation of vapors from GW outdoors	SSTL GW Resource Protection	SSTL Stream Protection	SSTL for Target Well
MW-1	GWR POC/ Stream Source	Benzene			0.304	0.0671	**0.0671**
		Toluene			60.8	1.07	**1.07**
		Ethylbenzene			42.5	2.76	**2.76**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	3.78	**1.22**
		Lead			0.912	0.0171	**0.0171**
MW-2	GWR POC/ Stream Source	Benzene			0.304	0.0459	**0.0459**
		Toluene			60.8	0.731	**0.731**
		Ethylbenzene			42.6	1.89	**1.89**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	2.59	**1.22**
		Lead			0.913	0.0117	**0.0117**
MW-3	GWR POC/ Stream Source	Benzene			0.303	0.0309	**0.0309**
		Toluene			60.7	0.491	**0.491**
		Ethylbenzene			42.5	1.27	**1.27**
		Xylene			175	N/A	**175**
		MTBE			1.21	N/A	**1.21**
		Naphthalene			1.21	1.74	**1.21**
		Lead			0.910	0.00785	**0.00785**
MW-4	GWR POC / Stream POC	Benzene			0.304	0.0276	**0.0276**
		Toluene			60.7	0.440	**0.440**
		Ethylbenzene			42.5	1.14	**1.14**
		Xylene			175	N/A	**175**
		MTBE			1.21	N/A	**1.21**
		Naphthalene			1.21	1.56	**1.21**
		Lead			0.911	0.00704	**0.00704**
MW-5	GWR POC/ Stream POC	Benzene			0.304	0.0256	**0.0256**
		Toluene			60.8	0.407	**0.407**
		Ethylbenzene			42.6	1.05	**1.05**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	1.44	**1.22**
		Lead			0.913	0.00651	**0.00651**
MW-6	GWR POC/ Stream POC	Benzene			0.304	0.0277	**0.0277**
		Toluene			60.8	0.440	**0.440**
		Ethylbenzene			42.6	1.14	**1.14**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	1.56	**1.22**
		Lead			0.912	0.00704	**0.00704**

Table 7: Site Specific Target Levels for Groundwater and Stream Protection – cont'd

MW ID	Well Type	COC	SSTL Inhalation of vapors from GW indoors	SSTL Inhalation of vapors from GW outdoors	SSTL GW Resource Protection	SSTL Stream Protection	SSTL for Target Well
MW-7	GWR POC/ Stream POC	Benzene			0.304	0.0277	**0.0277**
		Toluene			60.8	0.441	**0.441**
		Ethylbenzene			42.6	1.14	**1.14**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	1.56	**1.22**
		Lead			0.913	0.00705	**0.00705**
MW-8	GWR Source/ Stream Source	Benzene			0.304	0.0338	**0.0338**
		Toluene			60.8	0.537	**0.537**
		Ethylbenzene			42.6	1.39	**1.39**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	1.90	**1.22**
		Lead			0.913	0.00859	**0.00859**
MW-9	GWR POC/ Stream Source	Benzene			0.304	0.0471	**0.0471**
		Toluene			60.8	0.750	**0.750**
		Ethylbenzene			42.6	1.94	**1.94**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	2.66	**1.22**
		Lead			0.913	0.0120	**0.0120**
MW-10	GWR POC/ Stream Source	Benzene			0.288	0.0678	**0.0678**
		Toluene			57.5	1.08	**1.08**
		Ethylbenzene			40.3	2.79	**2.79**
		Xylene			175	N/A	**175**
		MTBE			1.15	N/A	**1.15**
		Naphthalene			1.15	3.82	**1.15**
		Lead			0.863	0.0173	**0.0173**
MW-11	GWR POC/ Stream Source	Benzene			0.266	0.0849	**0.0849**
		Toluene			53.2	1.35	**1.35**
		Ethylbenzene			37.2	3.49	**3.49**
		Xylene			175	N/A	**175**
		MTBE			1.06	N/A	**1.06**
		Naphthalene			1.06	4.78	**1.06**
		Lead			0.798	0.0216	**0.0216**
MW12	GWR POC/ Stream POC	Benzene			0.304	0.0221	**0.0221**
		Toluene			60.8	0.352	**0.352**
		Ethylbenzene			42.6	0.910	**0.910**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	1.25	**1.22**
		Lead			0.913	0.00563	**0.00563**

Table 7: Site Specific Target Levels for Groundwater and Stream Protection – cont'd

MW ID	Well Type	COC	SSTL Inhalation of vapors from GW indoors	SSTL Inhalation of vapors from GW outdoors	SSTL GW Resource Protection	SSTL Stream Protection	SSTL for Target Well
MW-13	GWR POC/ Stream POC	Benzene			0.302	0.0276	**0.0276**
		Toluene			60.5	0.439	**0.439**
		Ethylbenzene			42.3	1.14	**1.14**
		Xylene			175	N/A	**175**
		MTBE			1.21	N/A	**1.21**
		Naphthalene			1.21	1.56	**1.21**
		Lead			0.907	0.00703	**0.00703**
MW-14	GWR POC/ Stream Source	Benzene			0.304	0.0313	**0.0313**
		Toluene			60.8	0.498	**0.498**
		Ethylbenzene			42.6	1.29	**1.29**
		Xylene			175	N/A	**175**
		MTBE			1.22	N/A	**1.22**
		Naphthalene			1.22	1.77	**1.22**
		Lead			0.913	0.00797	**0.00797**
MW-15	GWR POC/ Stream POC	Benzene			0.303	0.0276	**0.0276**
		Toluene			60.6	0.439	**0.439**
		Ethylbenzene			42.4	1.14	**1.14**
		Xylene			175	N/A	**1.75**
		MTBE			1.21	N/A	**1.21**
		Naphthalene			1.21	1.55	**1.21**
		Lead			0.909	0.00702	**0.00702**
MW-16	GWR POC/ Stream POC	Benzene			0.301	0.0269	**0.0269**
		Toluene			60.1	0.429	**0.429**
		Ethylbenzene			42.1	1.11	**1.11**
		Xylene			175	N/A	**175**
		MTBE			1.20	N/A	**1.20**
		Naphthalene			1.20	1.52	**1.20**
		Lead			0.902	0.00686	**0.00686**
MW-17	GWR POC/ Stream POC	Benzene			0.302	0.0271	**0.0271**
		Toluene			60.5	0.431	**0.431**
		Ethylbenzene			42.3	1.12	**1.12**
		Xylene			175	N/A	**175**
		MTBE			1.21	N/A	**1.21**
		Naphthalene			1.21	1.53	**1.21**
		Lead			0.907	0.00690	**0.00690**
MW-18	GWR POC/ Stream Source	Benzene			0.298	0.0240	**0.0240**
		Toluene			0.597	0.382	**0.382**
		Ethylbenzene			41.8	0.988	**0.988**
		Xylene			175	N/A	**175**
		MTBE			1.19	N/A	**1.19**
		Naphthalene			1.19	1.35	**1.19**
		Lead			0.895	0.00611	**0.00611**

Table 7: Site Specific Target Levels for Groundwater and Stream Protection – cont'd

MW ID	Well Type	COC	SSTL Inhalation of vapors from GW indoors	SSTL Inhalation of vapors from GW outdoors	SSTL GW Resource Protection	SSTL Stream Protection	SSTL for Target Well
MW-19	GWR POC/ Stream Source	Benzene			0.295	0.0318	**0.0318**
		Toluene			59.1	0.506	**0.506**
		Ethylbenzene			41.4	1.31	**1.31**
		Xylene			175	N/A	**175**
		MTBE			1.18	N/A	**1.18**
		Naphthalene			1.18	1.79	**1.18**
		Lead			0.886	0.00809	**0.00809**

Remedial Technology Screening Matrix – Table 8

Remedial Technology	Application				Comments on Technology
	Adsorbed	Dissolved	FP	Vapor	
Groundwater/FP Recovery (including surfactants)	No	Yes	Yes	No	Provides containment of petroleum hydrocarbons and control of dissolved plume. Does not remediate to SSTLs. Surfactant technology will not reduce contaminants to SSTLs. Not retained for further consideration.
In situ Soil Vapor Extraction (includes bioventing)	Yes (above water table only)	No	Yes	Yes	Provides effective removal of FP and adsorbed petroleum hydrocarbons above the water table; soil vapor extraction alone will not adequately address dissolved petroleum hydrocarbons or absorbed petroleum hydrocarbons below the water table. May require off-gas treatment. Not retained for further consideration.
Groundwater/Free Product Extraction	Yes (below water table only)	Yes	Yes	Yes	Provides containment and removal of all petroleum hydrocarbon phases. May require off-gas treatment. Inadequate site permeability. Surfactant technology will not reduce contaminants to SSTLs. Treated effluent disposal will need to be addressed. Will not remediate saturated zone quickly. Not retained for further consideration.
Air Sparging with/without Soil Vapor Extraction	Yes (only with SVE)	Yes	No	Yes	Effectively works to eliminate all petroleum hydrocarbon phases (but not free product). No free product present. Will not work in fine grained or stratified soils onsite. Not retained for further consideration.
Excavation (including biopiles, landfarming, and low temperature thermal desorption)	Yes	No	No	No	For isolated source locations at excavation depth and location. Required depth of excavation and close proximity of buildings, roads and utilities would require shoring of a large area. Requires sufficient site area to stage materials for extended periods. Would be necessary to excavate under existing obstructions. Not recommended due to high cost and impact.
Dual-Phase Vacuum Extraction (Treatment System)	Yes (above water table only)	Yes	Yes	Yes	Vacuum increases groundwater recovery and speeds drawdown in soils. Vapor removal volatilizes adsorbed petroleum hydrocarbons and FP above the water table. Long time frame for DPVE to mitigate significant impacts in the saturated zone as well as unidentified source. MEME is one form of DPVE. Faster for treatment system. Retained for further consideration.
In situ Bioremediation (including biosparging and enhanced aerobic bioremediation)	Yes (below water table only)	Yes	No	No	Gasoline and other petroleum products can be treated by in situ bioremediation below the water table. Naturally occurring bacteria are stimulated to consume petroleum hydrocarbons by the introduction of inorganic nutrients (NPK) and oxygen into the groundwater. The process treats both dissolved and adsorbed petroleum hydrocarbons. The process can be carried out with or without hydraulic control, depending on state requirements. Finer grained soils or changes in vertical permeability limits effectiveness. Long timeframes with larger sources. Not retained for further consideration.
Monitored Natural Attenuation or Remediation by Natural Attenuation	Yes (below water table only)	Yes	No	No	Relies on natural attenuation processes, within a carefully controlled and monitored site cleanup approach to achieve site specific remedial objectives within a time frame that is consistent with historical approaches at other sites. The determination of this process is site specific. Too high concentrations. Not retained for further consideration.
Chemical Oxidation (ISCO)	Yes (below water table only)	Yes	No	No	Chemical oxidants are placed in contact with subsurface contaminants. Typically for only saturated and capillary zone with very small source zones, low amounts of mass, and very small plumes. Will not treat source vadose zone source soils. Soils at this site provide difficultly for oxidants to reach contaminants. Can cause clogging of the aquifer. Unable to achieve low concentrations. Rebound can occur. Plumes can be expanded without use of hydraulic control. Very long timeframes and potentially higher costs results from these facts. Not retained for further consideration.
Carbon	No	No	No	No	Experimental technology without a track record of success. Fractures soils and cannot be injected into the pore spaces of soil. No control of fractures. Surfacing common. Mounding areas on pavement common. Utilities can be impacted. Not retained for further consideration.

REFERENCES

American Society for Testing and Materials (1998), Standard Guide for Remediation of Ground Water by Natural Attenuation at Petroleum Release Sites, ASTM E-1943-98. pp. 875-916.

EPA Bulletin #EPA 510-B-95-007 (May, 1995) How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites – A Guide for Corrective Action Plan Reviewers p. II-9 (Exhibit II-6).

EPA Office of Solid Waste and Emergency Response (OSWER) Directive 9200.4-17P Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (April, 1999) p. 3.

ECOVAC SERVICES
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June 20, 2023

Mr. Bill Simmons
PRE, Inc.
124 Summit Parkway
Birmingham, Alabama 35209
was@preincorporated.com

Subject: **Enhanced Fluid Recovery (EFR®) Results**
Event No. 1
Oakwood Fuel King
619 Oakwood Ave NW
Huntsville, Alabama

Dear Mr. Simmons:

Please find attached the data summary for the initial EFR® event completed at the subject site on June 15, 2023. The following summarizes the results of EFR® at this site.

SUMMARY OF RESULTS

Separate-phase hydrocarbons (SPH) were not detected in any of the gauged monitor wells prior to, or upon completion of, this EFR® event. This event was conducted for eight hours at two extraction points, consisting of MW-8 and MW-14.

A calculated total of 427 pounds of petroleum hydrocarbons (approximately 71 equivalent gallons of gasoline) were recovered during this event. The hydrocarbon removal rate ranged from 32 to 77 pounds per hour during the event.

A dual internal combustion engine (DICE) unit was utilized throughout the event to treat effluent vapor generated during extraction. Pretreatment vapor concentrations ranged from 38,000 to 100,000 parts per million by volume (PPM_V). The vapor flow rate ranged from 62 to 72 actual cubic feet per minute (ACFM). A calculated total of 0.14 pound of hydrocarbons was released to the atmosphere, a destruction efficiency of 99.97%.

In-well vacuum data collected at the extraction wellheads during this EFR® event are detailed in the EFR® Field Data Sheet and summarized below:

Extraction Well	In-Well Vacuum
MW-8	10 inches of mercury

MW-14 12 inches of mercury

Differential pressure and groundwater drawdown were monitored at adjacent monitor wells during this event to assess vacuum influence generated during extraction. These data detailed in the attached Differential Pressure and Groundwater Drawdown Data Tables.

Approximately 252 gallons of liquid were removed during this EFR® event and transported to Valicor (Huntsville, Alabama) for disposal. SPH were not detected in the vacuum truck tank upon completion of the event.

Thank you for the continued opportunity to team with PRE, Inc. in serving the environmental needs of your clients. We look forward to working with you again in the future to provide innovative and cost-effective environmental solutions at this and other sites.

Sincerely,

EcoVac Services

David M. Goodrich

David M. Goodrich, P.G.

EFR® FIELD DATA SHEET

Client: PRE, Inc.	Facility Name: Oakwood Fuel King	Event #: 1
Facility Address: 619 Oakwood Ave NW; Huntsville, AL	Technician: Winkler	Date: 6/15/23

Extraction Well(s)	Time hh:mm	Extraction Well-head Vacuum (in. Hg)								DICE Inlet				DICE Exhaust		
Start Time:	6:00	Inlet	MW-8	MW-14						Concen-tration PPM	Flow Rate ACFM	Removal Rate LBS/HR	Interval Removal LBS	Concen-tration PPM	Emissions Rate LBS/HR	Interval Emissions LBS
MW-8,14	6:15	23	10	12						100,000	62	74	18	21	0.015	0.004
"	6:30	23	10	12						100,000	65	77	19	19	0.015	0.004
"	6:45	23	10	12						94,000	68	76	19	17	0.014	0.003
"	7:00	23	10	12						90,000	69	74	18	21	0.017	0.004
"	7:30	23	10	12						86,000	70	71	36	20	0.017	0.008
"	8:00	23	10	12						82,000	70	68	34	19	0.016	0.008
"	9:00	23	10	12						72,000	72	62	62	22	0.019	0.019
"	10:00	23	10	12						68,000	70	57	57	21	0.017	0.017
"	11:00	23	10	12						62,000	70	52	52	18	0.015	0.015
"	12:00	23	10	12						54,000	71	46	46	20	0.017	0.017
"	13:00	23	10	12						42,000	70	35	35	22	0.018	0.018
"	14:00	23	10	12						38,000	72	32	32	21	0.018	0.018

Well Gauging Data:			Before EFR® Event			After EFR® Event			Corr. DTW	Breather	Stinger
Well No.	Diam.	TD (ft)	DTS (ft)	DTW (ft)	SPH (ft)	DTS (ft)	DTW (ft)	SPH (ft)	Change (ft)	Port (ACFM)	Depth (ft)
MW-6	2"		-	2.39	0.00	-	2.45	0.00	-0.06		
MW-8	2"		-	3.82	0.00	-	7.05	0.00	-3.23	0	7
MW-9	2"		-	4.38	0.00	-	4.57	0.00	-0.19		
MW-14	2"		-	4.73	0.00	-	7.00	0.00	-2.27	0	7
MW-15	2"		-	2.56	0.00		2.72	2.72	-0.16		

Vacuum Truck Information	
Subcontractor:	-
Truck Operator:	Curtis
Truck No.:	152
Vacuum Pumps:	Becker
Pump Type:	Twin LC-44s
Tank Capacity (gal.):	2,894

Recovery/Disposal Information		
Hydrocarbons Removed (vapor):	427	pounds
Hydrocarbons Removed (liquid):	0	gallons
Total Hydrocarbons Removed:	71	equiv. gal.
Molecular Weight Used:	75	g/mole
Disposal Facility:	Vallcor	
Total Liquids Removed:	252	gallons

ECOVAC SERVICES ENVIRONMENTAL REMEDIATION

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770-539-1001

Groundwater Recovery		
Total Recovery:	252	gallons
Average Flow Rate:	32	gallons/hr

Offgas Treatment Information		
Atmospheric Exhaust:	0.14	pound
Destruction Efficiency:	99.97%	percent

Supplemental Fuel	
Type:	Propane
Gallons Used:	17

Vacuum Pump Use	Notes:
Time: 6:00 to 14:00	
# Pumps: 2	
RPM: 900	

Differential Pressure and Groundwater Drawdown Data Recorded During EFR®

Event No.: 1 Date: June 15, 2023

Facility Name: Oakwood Fuel King

Facility Address: 619 Oakwood Ave NW; Huntsville, AL

DIFFERENTIAL PRESSURE DATA

		Well Designation:	
		MW-9	MW-15
Nearest Extraction Well:		MW-8	MW-14
Approximate Distance:		22 feet	25 feet
Time	Elapsed Time	Differential Pressures (inches of water):	
7:00	1.0 hr.	0.00	-2.02
8:00	2.0 hrs.	0.00	-3.17
9:00	3.0 hrs.	0.00	-3.41
10:00	4.0 hrs.	0.00	-4.07
11:00	5.0 hrs.	0.00	-3.87
12:00	6.0 hrs.	0.00	-3.17
Maximum Change:		0.00	-4.07

* added to extraction array

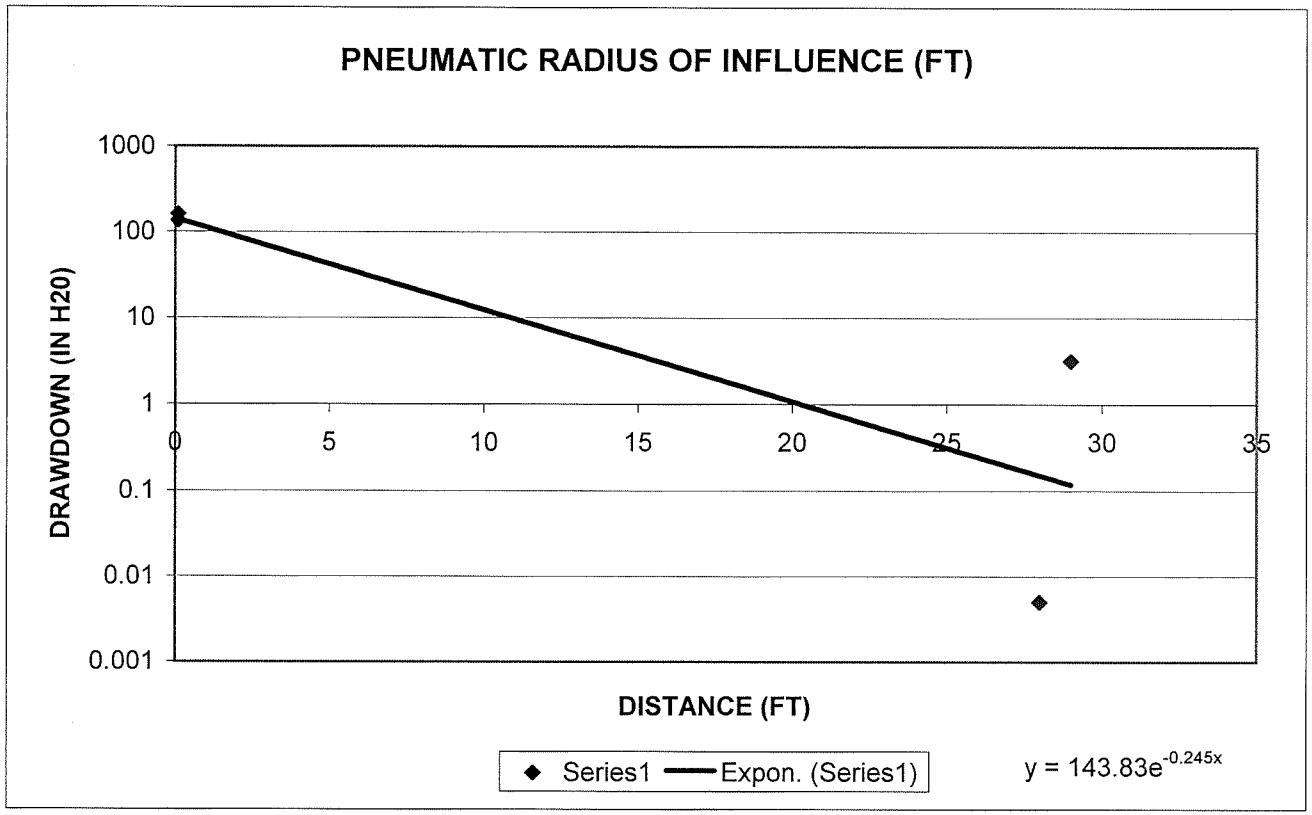
GROUNDWATER DRAWDOWN DATA

		Well Designation:	
		MW-9	MW-15
Nearest Extraction Well:		MW-8	MW-14
Approximate Distance:		22 feet	25 feet
Time	Elapsed Time	Depth to Liquid (feet below top of casing):	
Prior to EFR*		4.38	2.56
13:00	7.0 hrs.	4.57	2.72
Maximum Change:		-0.19	-0.16

Pneumatic Radius of Influence

Well	Distance	Drawdown
MW-14	0.1	163.08
MW-15	29	3.17
MW-8	0.1	135.9
MW-9	28	0.005

ROI = 30 FEET



SITE SAFETY PLAN

Prepared For:
Oakwood Fuel King
619 Oakwood Avenue NW
Huntsville, Madison County, Alabama
Facility I.D. No. 23044-089-012805
UST Incident No. UST20-03-03
PRE Project No. 12019-17

ATTF CP-17

April 12, 2024

_____
Project Manager

_____
Health & Safety Representative

SITE EMERGENCY FORM

Contaminants of Concern: Gasoline
Minimum Level of Protection: Level D

Do not endanger your life. Survey the situation before taking any action.

PRE, Inc. Office Telephone: (205) 942-6293

Site Location Address: Oakwood Fuel King
619 Oakwood Avenue NW
Huntsville, AL 35811

Site Telephone: N/A

EMERGENCY PHONE NUMBERS

Ambulance: 911

Fire: 911

Operator:

Police: 911

PRE, Inc. (205) 942-6293

Poison Control: 1-800-222-1222

Alabama Line Locate: 1-800-292-8525

Project Manager: Doris M. Reel

Health & Safety Rep: Bill Simmons

Supervisor: Bill Simmons

PRE Contact: Ms. Doris Reel (205) 942-6293

Bill Simmons (205) 942-6293

State Agency: ADEM (334) 271-7700

Water: Huntsville Utilities (256) 535-1317

Gas: Huntsville Utilities (256) 535-1317

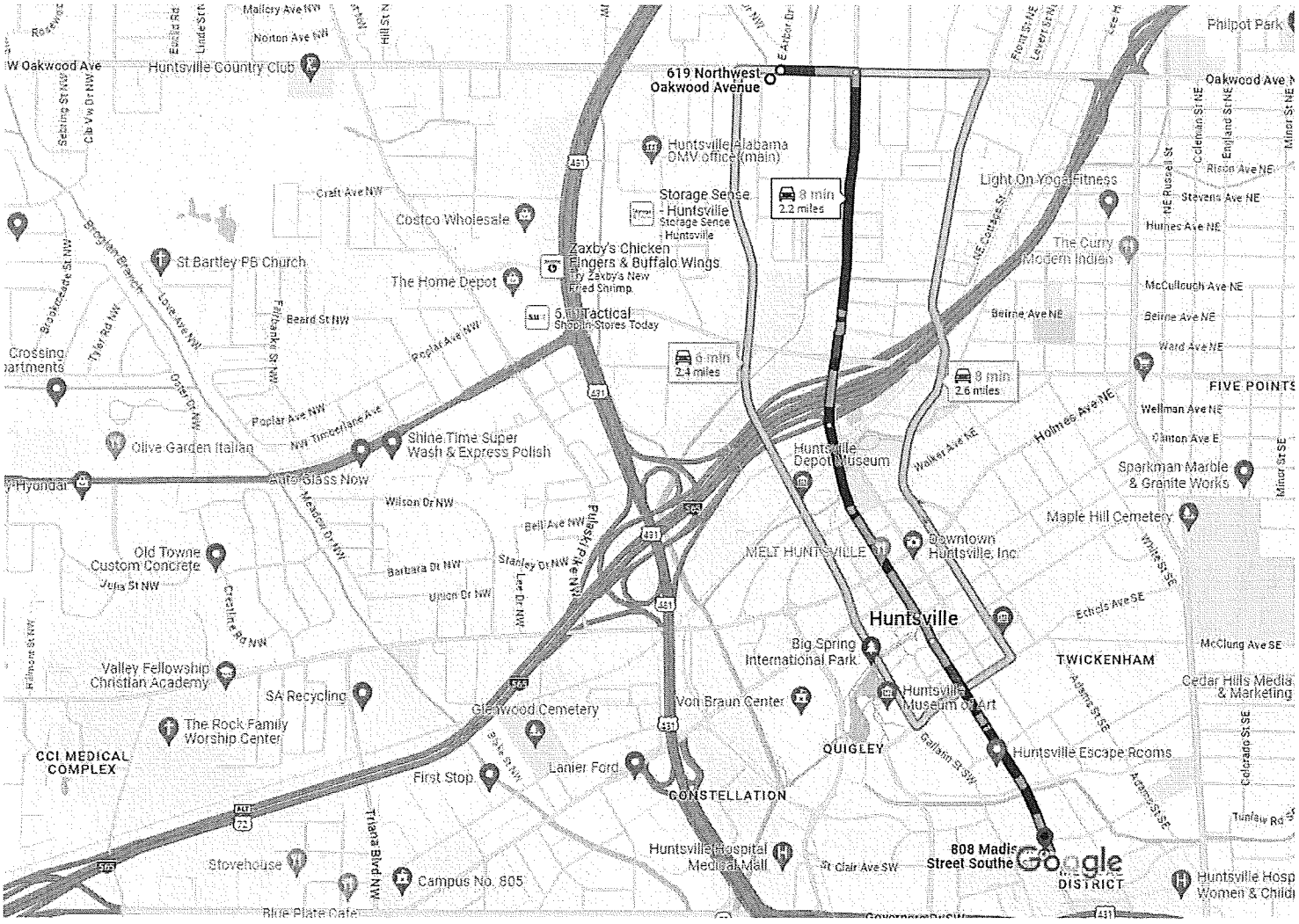
Electric: Huntsville Utilities (256) 535-1317

Telephone: N/A

Hospital Name: Huntsville Hospital ER; 808 Madison St SE; Huntsville, AL 35801
Hospital Phone: (256) 265-1000
Directions to Hospital:

1) Depart site toward Oakwood Avenue NW – 100 ft
2) Turn right onto Oakwood Avenue NW – 0.2 mi
3) Turn right onto Washington St NW – 0.9 mi
4) Continue onto Jefferson St N – 0.5 mi
5) Continue onto West Side Square – 367 ft
6) Continue straight onto Madison St SE– 0.6 mi
7) Turn right at Huntsville Hospital ER – 62 ft

Google Maps 619 NW Oakwood Ave, Huntsville, AL 35811 to 808 Madison St SE Drive 2.2 miles, 8 min



Map data ©2024 Google 1000 ft

619 NW Oakwood Ave
Huntsville, AL 35811

1. Head south on E Arbor Dr NW — 0.0 mi
2. Turn left onto NW Oakwood Ave — 0.2 mi
3. Turn right onto Washington St NW — 0.9 mi
4. Continue onto Jefferson St N — 0.5 mi
5. Continue onto West Side Square — 367 ft
6. Continue straight onto Madison St SE
   Pass by Regions Bank (on the right in 0.2 mi) — 0.6 mi

FIRST AID FOR PETROLEUM HYDROCARBON EMERGENCIES

Ingestion:	DO NOT INDUCE VOMITING. Call Poison Control; follow instructions. Administer CPR, if necessary. Seek medical attention.
Inhalation:	Remove person from contaminated environment. DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND A STANDBY PERSON IS PRESENT. Administer CPR if necessary. Seek medical attention.
Skin Contact:	Brush off dry material, remove wet or contaminated clothing. Flush skin thoroughly with water. Seek medical attention if irritation persists.
Eye Contact:	Flush eyes with water for 15 minutes. Seek medical attention.
Exposure Symptoms:	Headache, dizziness, nausea, drowsiness, irritation of eyes, nose, throat, breathing difficulties.
Contingency Plan:	Report incident to Project Manager after emergency procedures have been implemented.

EMERGENCY FIRST AID

1. Survey the situation. Do not endanger your own life. DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND A STANDBY PERSON IS PRESENT.

2. Call 911 (if available) or the fire department IMMEDIATELY. Explain the physical injury, chemical exposure, fire, or release.

3. Decontaminate the victim without delaying life-saving procedures.

4. If the victim's condition appears to be noncritical, but seems to be more severe than minor cuts, he/she should be transported to the nearest hospital by trained Emergency Medical Services (EMS) personnel: Let the doctor assume the responsibility for determining the severity of the injury. If the condition is obviously serious, EMS must transport the victim.

5. Notify the Project Manager. Complete the Accident/Incident (near miss) Form within 24 hours.

EMERGENCY FIRST AID PROCEDURES

To Stop Bleeding

1. Give medical statement.
2. Assure airway, breathing, circulation
3. Use DIRECT PRESSURE over the wound with clean dressing or your hand (use nonpermeable gloves). Direct pressure will control most bleeding.
4. Bleeding from an artery or several injury sites may require DIRECT PRESSURE ON A PRESSURE POINT. Use pressure points for 30 to 60 seconds to help control severe bleeding.
5. Continue primary care and seek medical aid as needed.

Cardiopulmonary Resuscitation (CPR)

1. Give medical statement
2. Arousal: Check for consciousness.
3. Open airway with chin-lift.
4. Look, listen, and feel for breathing.
5. If breathing is absent, give 2 slow, full rescue breaths.
6. Check the pulse for 5 to 10 seconds
7. If pulse is present, continue rescue breathing: 1 breath every 5 seconds

TABLE OF CONTENTS

1.0 INTRODUCTION

This site safety plan was prepared to perform environmental services at the referenced site.

The Site Safety Plan (SSP) is written to ensure the well-being of all field personnel and the community surrounding the site. Accordingly, project staff and approved PRE, Include subcontractors must follow the policies and procedures established in the SSP. All personnel assigned to this project must sign the Agreement and Acknowledgment Sheet (Appendix A-2) to confirm that they understand and agree to abide by the provisions of the plan.

All work will comply with the OSHA Standard, "Hazardous Waste Operations and Emergency Response", (29 CFR 1910.120) and other federal, state, and local procedures that require the development and implementation of a Site Safety Plan.

This plan addresses the safety issues associated with retail petroleum station operations typically involving the following site tasks:

- Field Survey/Walkover
- Drilling/Boring/Soil Sampling
- Well Installation
- Well Monitoring and Maintenance
- Soil Gas Survey
- Aquifer Pump Test
- Tank Removal
- Excavation/Trenching
- Confined Space Entry
- Groundwater Sampling

All activities of this project will be carried out under Modified Level D or Level C Personal Protective Equipment (PPE). This SSP must be modified or amended when circumstances or conditions develop that are beyond the scope of routine gas station operations. Such conditions include:

- Presence of Chlorinated Solvents
- Presence of Pesticides
- Level B Work
- Air Stripper Cleaning
- Troubleshooting Energized Equipment
- Presence of nonhydrocarbon Materials

Any changes in project work scope and/or site conditions as described must be amended in writing by the Health and Safety Representative (HSR) on the Site Safety Plan Amendment Sheet (Appendix A-1)

Table 1-1 presents an overview of PRE, Inc.'s health and safety program in which all field personnel are required to participate. These include the medical surveillance and comprehensive training programs in accordance with OSHA Hazardous Waste Operations and Emergency Response regulation 29 CFR 1910.120.

TABLE 1-1

HEALTH AND SAFETY PROGRAMS

Activity	Description	Action
Medical Surveillance	The program tracks the physical condition of the Company's employees in compliance with DOT and OSHA regulations, and other customer requirements. Specific components of the medical surveillance program are described in PRE, Inc.'s Health and Safety Procedure Manual.	Medical examinations and consultations are completed for all employees prior to assignment, annually, upon termination, and in the event of injury and/or illness resulting from exposure at the work site.
Training	Training requirements and programs comply with the OSHA Hazardous Waste Operations and Emergency Response regulation, 29 CFR 1910.120.	Field personnel must complete a minimum of 40 hours of hazardous waste activity instruction Field personnel must complete a minimum of three days supervised field instruction. Field personnel assigned to the site will also receive eight hours of refresher training each year. On-site managers and supervisors directly responsible for employees engaged in hazardous waste operations receive an additional eight hours of supervisory training.

2.0 HAZARD IDENTIFICATION AND CONTROL

TABLE 2-1

POTENTIAL HAZARDS AND CONTROL

Potential Hazard	Control
Precautions must be taken to prevent injuries and exposures to the following potential hazards.	
Exposure to Petroleum Products (see Appendix B-1 MSDS Definitions and B-2: MSDS)	1. Stand up-wind of petroleum products whenever possible. 2. Minimize contact and contact time with petroleum products. 3. Avoid walking through discolored areas, puddles, leaning on drums, or contacting anything that is likely to be contaminated. 4. Do not eat, drink, smoke, and/or apply cosmetics in the hot or warm zones. 5. Wear gloves when in contact with contaminated surfaces. 6. Safety glasses must be worn at a minimum. 7. Splash goggles must be worn when working with liquids. 8. >75 ppm organic vapors in breathing zone requires upgrade from Level C to Level B. 9. >750 ppm organic vapors in breathing zone requires upgrade from Level C to Level B. 10. If unknown materials are encountered, call the HSR.
Vehicular Traffic	1. Wear traffic safety vest when vehicle hazard exists. 2. Use cones, flags, barricades, and caution tape to define work area. 3. Use vehicle to block work area. 4. Engage police detail for high-traffic situations.
Vault Entry	1. Follow confined space entry procedures. 2. Obtain confined space entry permit. Post sign. 3. Remove vault cover using proper lifting techniques. 4. Promote natural ventilation by opening the space to fresh air. 5. Conduct remote air monitoring prior to entry. 6. Have standby attendant if necessary. 7. Enter if safe; conduct continuous air monitoring.
Inclement Weather	1. Stop outdoor work during electrical storms and other extreme weather conditions such as extreme heat or cold temperatures. 2. Take cover indoors or in a vehicle. 3. Listen to local forecasts for warnings about specific weather hazards such as tornadoes, hurricanes, and flash floods.
Noise	1. Wear hearing protection when equipment such as a drill rig, jackhammer, cut saw, air compressor, blower, or other heavy equipment is operating on the site. 2. Wear hearing protection whenever you need to raise your voice above normal conversational speech due to a loud noise source; this much noise indicates the need for protection.

TABLE 2-1

POTENTIAL HAZARDS AND CONTROL

Potential Hazard	Control
Electric Shock	1. Maintain appropriate distance from overhead utilities; 20 foot minimum clearance from power lines required; 10 foot minimum clearance from shielded power lines. 2. Use ground-fault circuit interrupters (GFCI) as required. 3. Perform lockout/tagout procedures (Appendix c-1). 4. Use three-pronged plugs and extension cords. 5. Contact your local underground utility-locating service. 6. Follow code requirements for electrical installations in hazardous locations.
Physical Injury	1. Wear hard hats and safety glasses when on site. 2. Maintain visual contact with the equipment operator and wear orange safety vest when heavy equipment is used on site. 3. Avoid loose-fitting clothing (driller and driller's helper). 4. Prevent slips, trips and falls; keep work area uncluttered. 5. Keep your hands away from moving parts (i.e. augers). 6. Test the emergency shutoff switch on the drill rig daily.
Back Injury	1. Use a mechanical lifting device or a lifting aid where appropriate. 2. If you must lift, plan the lift before doing it. 3. Check your route for clearance. 4. Bend at the knees and use leg muscles when lifting. 5. Use the buddy system when lifting heavy or awkward objects. 6. Do not twist your body while lifting.
Heat Stress	1. Increase water intake while working. 2. Increase number of rest breaks and /or rotate workers in shorter work shifts. 3. Watch for signs and symptoms of heat exhaustion and fatigue. 4. Plan work for early morning or evening during hot months. 5. Use ice vests when necessary. 6. Rest in cool dry areas. 7. In the event of heat stroke, bring the victim to a cool environment and initial first aid procedures.
Cold Stress	1. Take breaks in heated shelters when working in extremely cold temperatures. 2. Remove the outer layer of clothing and loosen other layers to promote evaporation of perspiration, upon entering the shelter. 3. Drink warm liquids to reduce the susceptibility to cold stress.
High Crime Areas	1. Be aware of surroundings. 2. Use the buddy system. 3. Request police detail when appropriate.

TABLE 2-1
POTENTIAL HAZARDS AND CONTROL

Potential Hazard	Control
Insects	1. Tuck pants into socks. 2. Wear long sleeves. 3. Use insect repellent.
Poisonous Plants (such as poison ivy, or sumac	1. Don't enter areas infested with poisonous plants. 2. Immediately wash any areas that come into contact with poisonous oak, plants.
Ladders	1. Make sure ladder rungs are sturdy and free of cracks. 2. Use ladders with secure safety feet. 3. Pitch ladders at a 4:1 ratio. 4. Secure ladders a the top when possible. 5. Do not use ladders for access to air stripper towers. 6. Use non-conductive ladders near electrical wires.
Fire Control	1. Smoke only in designated areas. 2. Keep flammable liquids in closed containers. 3. Keep site clean; avoid accumulating combustible debris such as paper. 4. Follow Hot Work Safety Procedures when welding or performing other activities requiring an open flame. 5. Isolate flammable and combustible materials from ignition sources. 6. Ensure fire safety integrity of equipment installations according to Hazard Classification Diagram (Appendix D).

3.0 AIR MONITORING AND CONFINED SPACE ENTRY

3.1 Air Monitoring

Air monitoring must be performed on all sites in accordance with PRE, Inc. practices. Organic vapor concentrations are monitored in the field with a flame ionization detector (FID) or photoionization detector (PID). All readings are taken in the worker's breathing zone to determine whether and action level has been met and/or exceeded. Air monitoring results must be documented on the Vapor Monitoring Form (Appendix B-3).

Air monitoring action levels (Table 3-1) have been developed by PRE, Inc. to indicate the chemical concentrations in the breathing zone that require and upgrade in level of personal protective equipment (PPE). The action levels apply to all tasks performed on this site. Guidelines for frequency of air monitoring are presented in Table 3-2.

TABLE 3-1

AIR MONITORING ACTION LEVELS

Instrument *	Function	Measurement	Action
Photoionization Detector (PID) and/or Flame ionization Detector (FID)	Measures total organic vapors	0-75 ppm 76-750 ppm >750 ppm	Level D PPE required. Upgrade to Level C PPE Stop work. Contact PM and HSR for guidance.
Oxygen/Combustimeter (oxygen/LEL)	Measures oxygen level and lower explosive	19.5-22% Oxygen	Acceptable conditions. Continue normal activity.
		<19.5 % Oxygen	Ventilate the space. Notify PM or HSR if unable to achieve acceptable conditions.
		>22% Oxygen	Leave area immediately; this atmosphere is extremely flammable
		<10% LEL	Acceptable conditions. Continue normal activity.
		>10% LEL	Leave area immediately. Contact PM or HSR for guidance on venting and other safety measures.

* Note: Instruments must be calibrated according to manufacturer's recommendations.

TABLE 3-2
AIR MONITORING FREQUENCY GUIDELINES

Conduct periodic monitoring when: (1) It is possible that an IDLH condition or a flammable atmosphere has developed or (2) there is an indication that exposures may have risen over permissible exposure limits or published exposure levels since the last monitoring. Look for a possible rise in exposures associated with these situations.

- Change in Site Area - work begins on a different section of site
- Change in Contaminants - handling contaminants other than those first identified
- Change in On-Site Activity - one operation ends and another begins
- Handling Leaking Drums or Containers
- Working with Obvious Liquid Contamination (e.g. a spill or lagoon)

Conduct air monitoring when the possibility of volatilization exists (such as with a new monitoring well or a well containing known product).

Conduct air monitoring on a well at a site known to have a little contamination (documented by experience or laboratory data), only if an odor emanates from well.

3.2 Confined Space Entry Procedures and Permit

Site work may require personnel to enter confined spaces. No PRE, INC. employee or subcontractor shall enter an area identified as a confined space without using the confined space entry procedures described in Table 3-3 and the site specific entry procedures presented in table 3-4. The purpose of the confined space entry procedure is to protect employees from potentially hazardous environments and to facilitate immediate rescue in an emergency situation. A Confined Space Entry Permit must be posted at the entrance to each confined space.

TABLE 3-3

CONFINED SPACES

Definition: Pits or open-topped tanks that are more than four feet (1.2M) deep, or any other enclosed space that is not designed for continuous employee occupancy.

Examples: Excavation pits, trenches, storage tanks, subsurface vaults, basements, silos, manholes, and sewers.

Characteristics:
- Limited access and egress
- Limited natural ventilation
- Not designed for human occupancy

Protocol for Confined Space Entry:
- Perform the appropriate air monitoring activity at various depths in the space prior to entry. Monitor for: oxygen level, (2) flammable vapors, and (3) toxic vapors.
- Ventilate the atmosphere in the space so that entry may be made safely without respiratory protection. If this is not feasible, appropriate respiratory protection must be worn by authorized entrants and attendants.
- Wear respiratory protection when ventilation alone can not achieve acceptable atmospheric levels of oxygen or flammable or toxic vapors.

TABLE 3-4

SITE SPECIFIC CONFINED SPACES

Location	Permit Required (Y or No)	Buddy Required (Y or No)	Specific Entry Procedures

4.0 CHEMICAL HAZARD CONTROL

4.1 Chemical Handling Procedures

Personnel must practice the chemical-specific handling procedures outlined below.

TABLE 4-1

CHEMICAL HANDLING PROCEDURES

Chemical	Description	Procedures
Acids and bases	Extremely corrosive materials with a variety of uses.	Wear gloves and eye-splash protection while Using acid dispensed from a small dropper during water sampling.
Acids: including hydrochloric, nitric and sulfuric acids		Wear a full-face, air purifying respirator with combination cartridge (organic vapor/ gas) as well as Tyvek coveralls and nitrile and/or NBR gloves for large volume applications. Have an eye wash bottle or portable eye wash station on site. Cap all drums after dispensing chemicals. Do not all anything into a virgin chemical drum, including unused product. Avoid mixing strong acids and bases. Consult HSR for task-specific evaluation. If mixing is absolutely necessary, do it slowly. Avoid vapors or fumes that are generated. When diluting acids, add the acid to water in small quantities and mix cautiously. When diluting bases, add water to the base in small quantities and mix cautiously.
Activated Carbon	Granular adsorbent medium used to remove residual hydrocarbons from water and /or air.	Use respiratory protection when activated carbon creates a dusty environment. Contact HSR for task-specific evaluation.

4.2 Personal Protective Equipment (PPE)

Modified Level D is the minimum acceptable level for sites where petroleum hydrocarbons are the contaminants of concern.

TABLE 4-2

PERSONAL PROTECTIVE EQUIPMENT

LEVEL	REQUIREMENTS
Modified Level D	Work uniform Steel-toes boots Approved safety glasses or goggles Hard hat Fluorescent vest, when vehicular traffic is on adjacent to the site Nitrile gloves for water sampling handling P E- Coated Tyvek suit NBR outer and nitrile inner gloves, if skin contact with contaminants is possible.
Level C	NIOSH-approved full-face respirator with organic vapor/acid gas cartridges Work uniform Steel-toed boots Hard hat PE- coated Tyvek suit, NBR outer and nitrile inner gloves, skin contact with contaminants is possible

4.3 Site Control: Work Zones

Work zones will be established in order to : (1) delineate high-traffic locations, (2) identify hazardous locations and (3) contain contamination with the smallest area possible. Employees entering the work zone must wear the proper personal protective equipment for that area. Work and support areas will be established based on ambient air data, necessary security measures, and site-specific conditions.

4.4 Decontamination Procedures

Operations at this site have the potential to contaminate field equipment and personal protective equipment. To prevent the transfer of contamination to vehicles, administrative offices and personnel, the procedures presented in table 4-3 must be followed.

TABLE 4-3

DECONTAMINATION PROCEDURES

Item	Examples	Procedures
Field Equipment	Bailers, interface probes, hand tools, drill augers and miscellaneous sampling equipment	Decontaminate with a solution of detergent and water; rinse with water prior to leaving the site. Protect from exposure by covering with disposable covers such as plastic to minimize required decontamination activities.
Disposable PPE	Tyvek suits, inner latex gloves, respirator cartridges	Dispose of according to the requirements of the client and state and federal agencies.
Nondisposable PPE	Respirators	Wipe out respirator with disinfecting pad prior to donning. Decontaminate on sit at the close of each day with a solution of an approved sanitizing powder and water.

5.0 CONTINGENCY PLANS

Table 5-1 (Sections 5.1 - 5.4) presents contingency plans for potential emergency situations.

TABLE 5-1

CONTINGENCY PLANS FOR SITE EMERGENCIES

5.1 Situation - Evacuation

Action- 1. Immediately notify all on site personnel of an emergency requiring evacuation. 2. Leave the dangerous area and report to a designated rally point, 3. Notify Emergency Services, as appropriate. 4. Account for all personnel. 5. Contact the PM and the HSR as soon as possible. 6. Maintain site security and control measures for community safety until emergency responders arrive.

5.2 Medical Emergency

Actions:

1. Survey the Situation: Do not enter an area that may jeopardize your safety. Establish the patient's level of consciousness. Call for help. Contact Emergency Medical Services and inform them of patient's condition.
2. Primary Assessment (patient unconscious) Arousal, Airway, Breathing, Circulation. (Only trained personnel should perform CPR or First Aid).
3. Secondary Assessment (Patient Conscious) Check for bleeding: Control with direct pressure. Do not move patient(unless location is not secure). Monitor vital signs. Provide First Aid to the level of your training. Contact the PM and HSR as soon as possible. Document the incident on Accident /Incident form.

5.3 Fire Emergency

1. Evacuate the area. 2. Notify the Emergency Services. 3. Extinguish small fires with an all-purpose extinguisher. 4. Contact the PM and HSR. 5. Document the incident using the Accident/Incident form.

5.4 Spill/Release

Prevent problems by documenting the location of underground lines (e.g. product, sewer, telephone) before starting site work. If you drill though a line or tank or another leak occurs, document the spill/release in writing. Include dates, times, actions taken, agreements reached and names of people involved. In the event of a spill/release, follow this plan:

1. Wear appropriate PPE; stay upwind of the spill/release.
2. Turn off equipment and other sources of ignition.
3. Turn off pumps and shut valves to stop the flow/leak.
4. Plug the leak or collect drippings in a bucket, when possible.
5. Place sorbent pads to collect product, if possible.
6. Call Fire Department immediately if fire emergency develops.
7. Inform PRE, Inc. PM about the situation.

8. Determine if the client wants PRE, Inc. to repair the damage or if the client will use an emergency repair contractor.

9. Based on agreements, contact emergency spill contractor for containment of free product.

10. Advise the client of spill discharge notification requirements and determine who will complete and submit forms. Do not submit or report to agencies without the client's consent. Document each interaction with the client and regulators and decisions, and commitments to actions.

11. Do not transport or approve transportation of contaminated soils or product until proper manifests have been completed and approved. Be aware that soils/product may meet criteria for hazardous waste.

12. Do not sign manifests as generator of waste; contact the project manager to discuss waste transportation.

Notifications

The project manager must contact the client or generator. The generator is under obligation to report to the proper government agencies. If the spill extends into waterways, the Coast Guard and the National Guard Response Center (1-800-424-8802) must be notified immediately by the client or with his permission.

APPENDIX A-1: AMENDMENT SHEET

Project Name: _____

Project Number: _____

Project Manager: _____

Location: _____

Changes in field activities or hazards:

Approved by: _____ _____
Health and Safety Representative Date

APPENDIX A-2: AGREEMENT AND ACKNOWLEDGMENT SHEET

PRE, Inc. personnel have the authority to stop field activities at this site if any activity is not performed in accordance with the requirements of the Site Safety Plan. All PRE, Inc. project personnel, subcontractor personnel and visitors are required to sign the Agreement and Acknowledgment Sheet prior to conducting field activities at this site.

1. I have read and fully understand the SSP and my responsibilities.
2. I agree to abide by the provisions of the SSP.

Name_____ Signature_____
Company_____ Date_____

Name_____ Signature_____
Company_____ Date_____

Name_____ Signature_____
Company_____ Date_____

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Name_____ Signature_____
Company_____ Date_____

APPENDIX A-3: VISITOR/TRAINEE GUIDELINES

PRE, Inc. is committed to providing a safe environment on all work sites for visitors, trainees, employees , and/or passersby. In order to accomplish this, the following guidelines must be followed.

1. VISITORS

Any person not actively participating in the work at the site is regarded as a "visitor" and must follow PRE, Inc. visitor/trainee guidelines. Visitors must be accompanied by a representative while on site.

Sites must be marked with sign, placards, and/or barricades to designate hazardous boundaries. Visitors will not be allowed on any site that is not adequately marked.

2. TRAINEES

Trainees are employees of PRE, Inc. who have not yet completed PRE, Inc.'s required safety training program. New hires and in-house company transfers will be considered trainees until safety training requirements are met:

- Trainees are supervised at all times while observing on site.
- Trainees do no perform work functions of any type while on site.
- Trainees do not handle any equipment, tools, and /or supplies while on site.
- Trainees do not enter any hazardous or hot zone or confined space areas while on site.

Supervisors will be responsible for informing trainees of the above conditions and for ensuring that the conditions are met. Supervisors will also ensure that trainees will not be asked to violate the conditions listed above.

A Trainee/Observer Agreement Form must be signed by both the trainee and the supervisor and placed on file.

Infractions of the above agreement will be viewed as extremely serious and will be subject to discipline up to and including termination for either the trainee and/or supervisor.

TRAINEE/OBSERVER AGREEMENT FORM

In addition, PRE, Inc. is committed to providing a safe working environment for all employees. In addition, PRE, Inc. employees will comply with OSHA requirements for employee safety training prior to working on any hazardous site.

The following section is to be filled out by trainee.

Agreement

_____ _____

Name(print/type) SS#

Because we have your safety in mind, you will be considered a trainee until all training criteria are met. This means you must complete all training requirements prior to performing work activities o site. As a requirement of the training program, you will be asked to visit PRE, Inc. sites as an observer. You must be supervised on all these site visits.

As an on-site observer trainee, your signature below indicates your agreement to these restrictions..

You may not:

1. Perform work functions of any type.
2. Handle any equipment/tools and/or supplies of any type.
3. Enter any hazardous or hot zone areas.

I agree to adhere to the above conditions in all instances while on site as a trainee/observer.

_____ _____

Signature Date

This section is to be filled out by supervisor.

As supervisor to the above trainee, I agree to the above restrictions and agree not to request him/her to perform activities contrary to those restrictions.

_____ _____

Signature Date

APPENDIX A-4: ACCIDENT/INCIDENT (NEAR MISS) REPORT FORM

Employee's Name:_____ D.O.B._____
Address:_____ D.O.H._____
_____ SS#:_____
Job Title:_____ Supervisor's Name:_____
Location at Time of Incident:_____
Date/Time of Incident:_____
Project Name:_____
Project Number:_____ Project Manager: _____

Describe clearly how the accident occurred:_____
_____
_____
Was incident: Physical_____ Chemical_____
Parts of body affected _____ Right_____ Left_____
Exposure: Dermal_____ Inhalation:_____ Ingestion:_____
Parts of body affected:_____
Witnesses: 1)_____ 2)_____
Conditions/acts contributing to this incident:_____
_____
_____

Managers must complete this section.

Explain specifically the corrective action you have taken to prevent a recurrence:_____
_____
_____
Did injured go to doctor:_____ Where:_____
_____ When:_____
Did injured go to hospital:_____ Where:_____
_____ When:_____

Signatures:

_____	_____	_____
Employee Representative	Reporting Manager	Health & Safety Rep.
_____	_____	_____
Date	Date	Date

Accidents must be reported immediately; this form must be completed, signed, and returned to the Health and Safety Representative with 24 hours.

APPENDIX B-1: MSDS DEFINITIONS

(TLV-TWA) *Threshold Limit Value - Time Weighted Average.* The time-weighted average concentration for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed without adverse effect.

(PEL) *Permissible Exposure Limit* - Time-weighted average concentrations similar to (and in many cases derived from(the Threshold Limit Values.

(REL) *Recommended Exposure Limit* as defined by NIOSH similar to the Threshold Limit Values.

(IDLH) *Immediately dangerous to life or health* - Any atmospheric condition that poses an immediate threat to life, or which is likely to result in acute or immediate severed health effects. Oxygen deficiency is IDLH.

(LEL) *Lower Explosive Limit* - The minimum concentration of vapor in air below which propagation of a flame will not occur in the presence of an ignition source.

(UEL) *Upper Explosive Limit* - The maximum concentration of vapor in air above which propagation of a flame will not occur in the presence of an ignition source.

F.P. *Flash Point* - The lowest temperature at which the vapor of a combustible liquid can be made to ignite momentarily in air.

V.P. *Vapor Pressure* - The pressure characteristic at any given temperature of a vapor in equilibrium with its liquid or solid form, often expressed in millimeters of mercury (mm Hg).

Odor Threshold A property displayed by a particular compound. Low detection indicates a physiological sensation due to molecular contact with the olfactory nervous system (based on 50% of the population).

I. P. *Ionization Potential* - The amount of ionization characteristic a particular chemical compound displays.

CONTAMINANTS PROFILE

Chemical	Exposure Route	Symptoms of Overexposure	Incompatibilities
Gasoline	Inhalation	Intense burning of mucous membranes, throat, and respiratory tract, flushing of face, staggering gait, slurred speech mental confusion.	Oxidizing agents such as hydrogen peroxide, nitric acid.
	Ingestion	Inebriation, drowsiness, blurred vision dizziness, confusion, vomiting, cyanosis.	
	Skin Contact	Prolonged skin contact may cause dermatitis.	
Diesel Fuel Jet Fuel Fuel Oils	Inhalation and/or Ingestion	Irritation to respiratory passages, headache, dizziness, and nausea, vomiting, loss of coordination Chemical pneumonitis (when oil is aspirated in the lungs).	Oxidizing agents such as hydrogen peroxide, nitric acid.
	Skin Contact	Irritation, rash of acne pimples and spots.	

APPENDIX B-3

VAPOR MONITORING FORM

Project Name:

Project Number:

Contaminants:

Date	Time	Ionization Detector Reading PID	Ionization Detector Reading FID	Explosimeter Reading %LEL	Explosimeter Reading %Oxy	Radiation Monitor Reading mR/hr	Location	Purpose	Initials

APPENDIX C-1: SITE SPECIFIC LOCKOUT/TAGOUT PROCEDURES

Equipment	Operation	Lockout Method/Location

APPENDIX C-2: EXCAVATION/ TRENCHING

EXCAVATION/TRENCHING PROCEDURES

Egress: Excavation areas four feet or more deep

- Ladders must be spaced no more that 25 feet apart so that a person in the trench is always within 25 feet of a ladder for egress.

Shoring: Excavations must be sloped or shored if personnel will be entering the excavation.

- excavations must be sloped or shored if personnel will be entering the excavation.
- Soil classification may be done only by a competent person using both a visual and manual test.

WARNING:

One soil classification may not be enough. Outside disturbances during excavation may change even the best classification.
Inspect the soil after and condition change.

Storage: All excavations.

- spoils and heavy equipment must be stored a minimum of two feet from the edge of the excavation.
- Store spoils on the downhill side.

APPROXIMATE ANGLE OF REPOSE FOR SLOPING OF SIDES OF EXCAVATIONS

• Solid Rock, shale or cemented sand and gravels	NA	90 degrees
• Compacted angular gravels	1/2:1	26 to 53 degrees
• Average Soils	1:1	45 degrees
• Compacted sharp sand	1-1/2:1	33 to 41 degrees
• Well rounded loose sand	2:1	26 to 34 degrees

SITE WORK

NAME	CATEGORY	SOW (GWM,DRILLING,ETC)	GAUGE	SOIL/GWM SAMPLE	LOG HOLE	DATE(S)
	PROJECT MGR					
	PROJECT MGR					
	PG					
	PG					
	PG					
	PE					
	GEOLOGIST					
	GEOLOGIST					
	ENGINEER					
	ENGINEER					
	TECHNICIAN					
	TECHNICIAN					
	TECHNICIAN					
	TECHNICIAN					

PLAN

NAME	CATEGORY	NO DATE(S) REQUIRED
Simmons	PROJECT MGR	
Reel	PROJECT MGR	
	PG	
	PG	
	PG	
	PE	
	GEOLOGIST	
	GEOLOGIST	
	GEOLOGIST	
	ENGINEER	
Stephens	ENVIRONMENTAL SCIENTIST	
Stephens	DRAFTSPERSON	
	DRAFTSPERSON	

REPORT TABLES

NAME	CATEGORY	NO DATE(S) REQUIRED
	PROJECT MGR	
	PROJECT MGR	
	PG	
	PG	
	PG	
	PE	
	GEOLOGIST	
	GEOLOGIST	
	GEOLOGIST	
	ENGINEER	
	ENVIRONMENTAL SCIENTIST	

REPORT FIGURES

NAME	CATEGORY	NO DATE(S) REQUIRED
	PROJECT MGR	
	PROJECT MGR	
	PG	
	PG	
	PG	
	PE	
	GEOLOGIST	
	GEOLOGIST	
	ENGINEER	
	DRAFTSPERSON	
	DRAFTSPERSON	

REPORT DATA INTERPRETATION

NAME	CATEGORY	NO DATE(S) REQUIRED
	PROJECT MGR	
	PROJECT MGR	
	PG	
	PG	
	PG	
	PE	
	GEOLOGIST	
	GEOLOGIST	
	GEOLOGIST	
	ENGINEER	
	ENVIRONMENTAL SCIENTIST	

REPORT WRITING

NAME	CATEGORY	NO DATE(S) REQUIRED
	PROJECT MGR	
	PROJECT MGR	
	PG	
	PG	
	PG	
	PE	
	GEOLOGIST	
	GEOLOGIST	
	GEOLOGIST	
	ENGINEER	
	ENVIRONMENTAL SCIENTIST	