



QWIK-SAK VULCAN

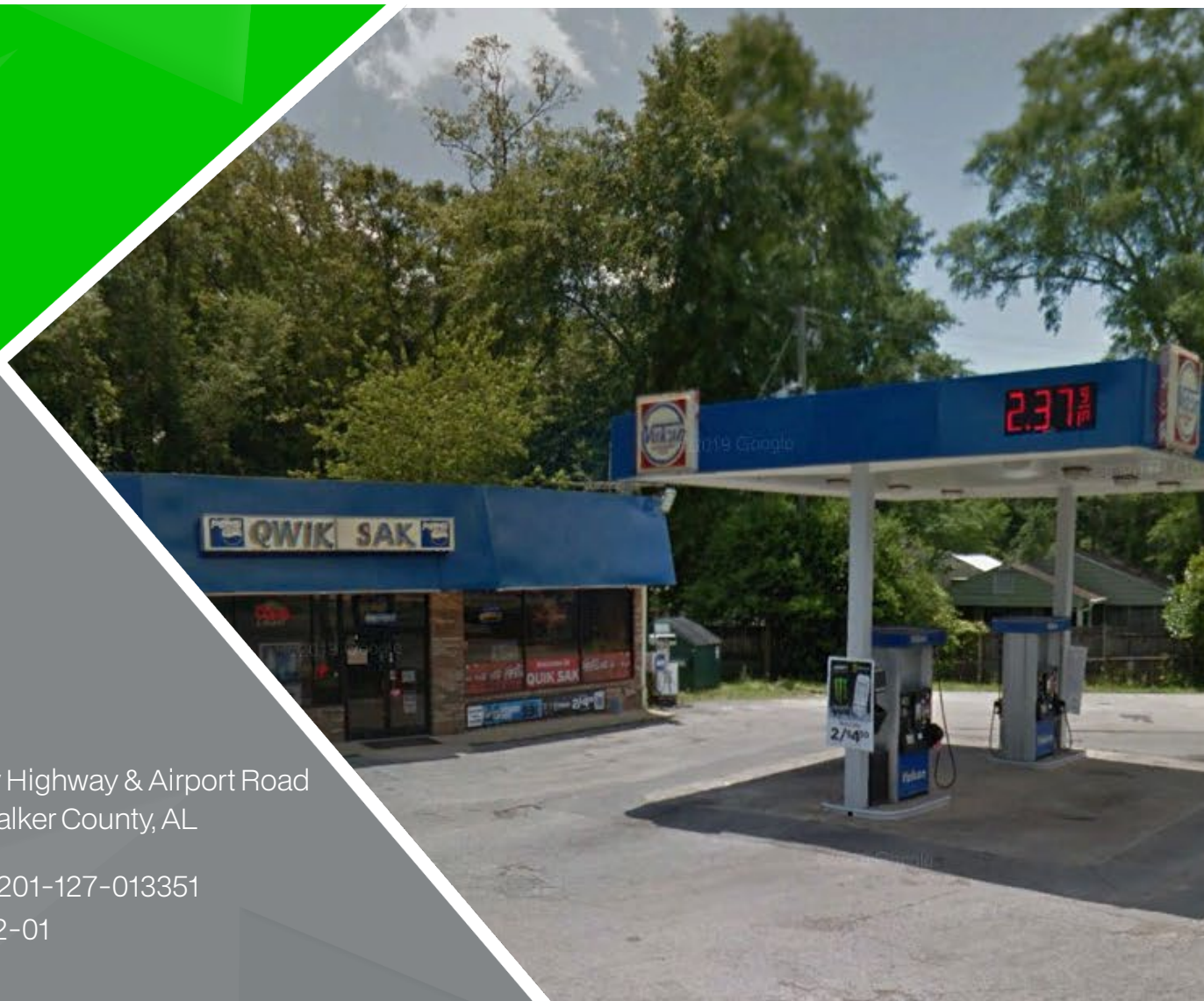
CAP EVALUATION/DEVELOPMENT REPORT

(JUNE 2025)
ATTF CP-09

JUNE 30, 2025

1170 Curry Highway & Airport Road
Jasper, Walker County, AL

FAC ID 15201-127-013351
UST 23-12-01



PREPARED FOR

Vulcan Oil Company, Inc.
P.O. Box 100
Shannon, AL 35142

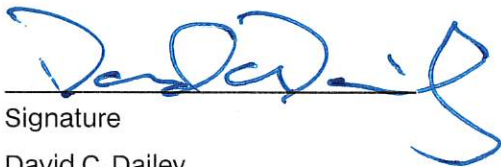
PREPARED BY

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CERTIFICATION PAGE

"I hereby certify that, in my professional judgment, the components of this document and associated work satisfy the applicable requirements set forth in Chapter 335-6 of the ADEM Administrative Code and are consistent with generally accepted professional consulting principles and practices. The information submitted herein, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information."

This document has been prepared based on historical site assessment data and has been prepared to address soil and groundwater contamination at the Qwik-Sak Vulcan site (Facility Identification Number 15201-127-013351) in Jasper, Walker County, Alabama. The recommended action should not be construed to apply to any other site.



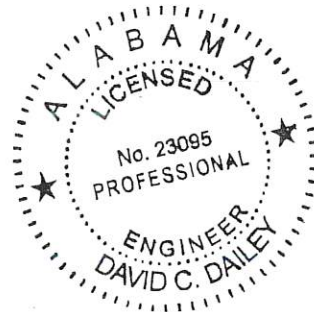
Signature

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Registered Professional Engineer in the State of Alabama

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6/30/2025
Date



INTRODUCTION

The Qwik-Sak Vulcan facility is located at 1170 Curry Highway & Airport Road in Jasper, Walker County, Alabama. The site is a commercial property that currently operates as a gasoline station and convenience store. The site has one 2,000-gallon, two 6,000-gallon, and one 8,000-gallon underground storage tanks (USTs). Vulcan Oil Company, Inc. is the Alabama Tank Trust Fund (ATTF) responsible party for the Qwik-Sak Vulcan site.

A line closure assessment was conducted at the site in January 2022. The results of the closure assessment revealed that petroleum impacted soil was present at the facility. As a result of the Closure Report, the Alabama Department of Environmental Management (ADEM) sent the responsible party, Vulcan Oil Company, Inc., a Notification of Requirement (NOR) to conduct Investigative and Corrective Actions letter dated January 10, 2023. In a second letter dated January 12, 2023, ADEM issued a Notice of Alabama Tank Trust Fund Eligibility. In a third letter dated January 13, 2023, ADEM issued the Pre-Approved Cost Proposal (CP-01) for conducting Preliminary Investigation activities. Vulcan Oil Company, Inc. contracted Three Notch Group, Inc. (Three Notch) as the ATTF contractor.

To date, Preliminary Investigation, Secondary Investigation, Additional Well Installation, Alabama Risk Based Corrective Action (ARBCA) Evaluation, and groundwater monitoring activities have been completed at the site. Currently, there are a total of twelve Type II monitoring wells and one Type III vertical delineation well at the site.

In order to address the on-site dissolved hydrocarbon plume, ADEM requested that a Corrective Action Plan (CAP) Evaluation be prepared for the site. The following report details the CAP Evaluation and Development as approved under CP-09.

SUMMARY OF PREVIOUSLY CONDUCTED CORRECTIVE ACTIONS

To date, six groundwater monitoring events have been conducted at the site between July 2023 and February 2025.

REMEDIAL OBJECTIVES AND SITE CHARACTERIZATION

General Remedial Objectives

The general objectives of the corrective action activities for the facility are as follows:

- Ensure that the health and safety of all project personnel is maintained during remediation activities.
- Prevent hydrocarbon contaminant migration to sensitive receptors.
- Remove free product from the site subsurface if present.
- Reduce adsorbed phase petroleum hydrocarbons from soils within the vadose and saturated zone, to below approved Site-Specific Target Levels (SSTLs).
- Reduce dissolved petroleum hydrocarbons from groundwater to below proposed SSTLs.
- Accomplish these objectives in a timely and cost-effective manner.

Vadose Zone Soil Characterization

Soil borings previously conducted during the Preliminary and Secondary Investigations were reviewed to determine the subsurface soil conditions and the feasibility of the various remediation options for the site. The chemicals of concern (COCs) for the release at the site include benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary-butyl ether (MTBE), and naphthalene. Figures located in Appendix B show the soil boring and sample locations and the distribution of soil COC concentrations across the site. The vadose zone soils are predominantly comprised of silty clays with an average porosity of 33.1%. The average volumetric moisture content within the vadose zone was calculated to be a value of 11% based on the approved ARBCA data.

Aquifer Characterization

The analytical results of the groundwater samples collected during the site characterization activities are summarized in the tables located in Appendix A. The average historical depth to groundwater beneath the site is approximately 8.12 feet below land surface (ft-bls). Based on the most recent groundwater level measurements collected during the February 27, 2025 sampling event, a potentiometric surface map was constructed for the site. As shown in the figures located in Appendix B, the general groundwater flow direction beneath the site is generally to the south. The hydraulic gradient (i) was approximately 0.0178 cm/cm based on data from the approved ARBCA.

Slug testing conducted during the Secondary Investigation activities indicated that the average hydraulic conductivity (K) of the site soils was approximately 0.02182 ft/day. Based on these values, the anticipated Darcy velocity (Ki) of groundwater flow beneath the site would be approximately 0.142 ft/yr. No free phase product has been historically observed during the assessment activities

at the site. Using the analytical data from the February 27, 2025 groundwater sampling event, a groundwater analytical and benzene contour map was constructed to represent the approximate extent of the current dissolved phase hydrocarbon plume. All site figures are included in Appendix B.

Exposure Assessment

An exposure assessment was conducted by Three Notch during the ARBCA evaluation. The current land use site conceptual exposure model indicates that complete exposure pathways exist on-site for indoor and outdoor vapor inhalation from soil and groundwater for commercial workers. Future land use conceptual models indicate complete exposure pathways for indoor and outdoor inhalation from soil and groundwater for both commercial and construction workers and for dermal contact with affected soil by construction workers. Complete exposure pathways exist for current and future exposure for indoor and outdoor vapor inhalation for soil and groundwater and for ingestion of groundwater for off-site residents. Complete exposure pathways exist under future conditions for exposure to indoor and outdoor vapor inhalation for commercial workers and construction workers. Future land use of the site and the surrounding area is expected to remain the same.

Site-Specific Target Levels

To assess the risk to human health and the environment of the dissolved hydrocarbon plume associated with the Qwik-Sak Vulcan site, an ARBCA Tier I/Tier II Evaluation was performed in January 2025. Based on the ARBCA Tier II Evaluation, SSTLs for site remediation were calculated for the various media (soil and groundwater) at the site. The SSTLs developed during this process, which have been approved by ADEM, would not pose a significant risk to any recognized actual or potential receptors. The SSTLs for soil and groundwater are summarized in the following table.

Chemicals of Concern	Soil (mg/Kg)				Groundwater (mg/L)	
	Dermal Contact	On-Site Indoor Inhalation	Off-Site Indoor Inhalation	Groundwater Resource Protection	On-Site Indoor Inhalation	Off-Site Indoor Inhalation
Benzene	231	0.0887	0.0135	0.0211	25.6	3.91
Toluene	101	11.6	1.08	4.21	526	240
Ethylbenzene	41.2	37.8	3.52	2.95	169	169
Xylenes	47.1	14	1.3	42.1	175	175

Chemicals of Concern	Soil (mg/Kg)				Groundwater (mg/L)	
	Dermal Contact	On-Site Indoor Inhalation	Off-Site Indoor Inhalation	Groundwater Resource Protection	On-Site Indoor Inhalation	Off-Site Indoor Inhalation
MTBE	378	348	32.4	0.0843	44,400	4130
Naphthalene	27.8	8.96	8.96	0.0843	31	652

A more detailed presentation of these values is provided in the January 2025 ARBCA Evaluation Report. The individual Groundwater Resource Protection (GRP) SSTLs generated for the site monitoring wells are presented on the attached Monitoring Point Data Summary Tables located in Appendix A.

SUMMARY OF SITE CHARACTERIZATION

Soil Characterization Summary

The results of the geotechnical analyses indicate the following physical properties for the soils at the Qwik-Sak Vulcan site:

- The vadose zone soils are comprised of silty clay.
- Soil has a porosity of 33.1%.
- Volumetric moisture content within the vadose zone was calculated to be 11%.

Aquifer Characterization Summary

The results of the aquifer characterization at the site indicate the following physical properties for the unconfined groundwater zone beneath the site:

- The average depth to groundwater is 8.12 ft-bls.
- The average hydraulic conductivity within the saturated zone is 0.02182 ft/day.
- The general groundwater flow beneath the site is to the south.
- The average hydraulic gradient across the site is 0.0178 cm/cm.
- The calculated Darcy velocity for groundwater flow is 0.0142 ft/yr.
- No measurable accumulations of free phase product have been detected at the site.

Exposure/Risk Assessment Summary

Based upon current constituent concentrations and the risk assessment results, SSTLs were calculated for the site using the ARBCA process. There are complete exposure pathways for vapor inhalation from both soil and groundwater on and off-site. The Point of Exposure (POE) used during the ARBCA was a domestic supply well located downgradient from the edge of the source area at a distance of 59 feet.

The BTEX/MTBE/Naphthalene analyses for the February 27, 2025 groundwater monitoring event indicate that benzene and/or naphthalene concentrations were present at the site at levels above SSTLs for GRP in three (MW-1, MW-4, and MW-8) of the twelve sampled monitoring wells. The presence of dissolved hydrocarbon concentrations above the SSTLs will require remediation.

REMEDIAL RATIONALE AND APPROACH

Based upon current constituent concentrations and the risk assessment results, there are exceedances in the GRP SSTLs at the site.

Full-scale technologies addressing both soil and groundwater were reviewed for applicability to the Qwik-Sak Vulcan site. The discussion is divided into media (soil and groundwater) and in-situ/ex-situ technologies.

Soil: Ex-Situ Methods

The most direct methods of remediation would be the excavation and removal of source soils. Based on soil screening and analytical data, impacted soils appear to exist at the site in the vicinity of monitoring wells MW-1, MW-3, and MW-4 to a depth of approximately 15 ft-bls and groundwater has been present in this area at 2.51-17.40 ft-bls. Any excavation would require extensive de-watering in order to complete the source soil removal. Due to the required de-watering and the proximity of the target area to the store and tank pit, excavation of the impacted soils at the site would not be a feasible remediation option.

Soil: In-Situ Methods

Bioremediation

Remediation of soil contamination using in-situ bioremediation involves injecting oxygen or oxygen releasing compounds directly into the source zone. The oxygen is then used to accelerate the rate

of naturally occurring aerobic contaminant biodegradation in saturated soils. Volatile organic compounds in high concentrations are toxic to bacteria (EPA, 1992). Because of the moderate concentrations of dissolved phase hydrocarbons present in the source area, bioremediation is a viable remediation alternative.

Soil Vapor Extraction

Soil vapor extraction (SVE) reduces concentrations of volatile constituents in petroleum products adsorbed to soils in the unsaturated (vadose) zone. Data collected to date indicates the vadose zone soils have an effective porosity of 15.8% and low intrinsic permeability that would inhibit the effective recovery of volatile product vapors. If the moisture content of vadose zone soils was to be lowered by prolonged operation of an SVE system, the intrinsic permeability will likely increase and therefore the radius of influence (ROI) would also increase. Low permeability in the soils encountered would require a soil-vapor extraction well network with a well-to-well spacing of less than 30 feet to be effective. However, without having completed pilot testing at the site, the ROI can only be estimated based on site characteristics observed during the investigation activities. Based on the available data, SVE is a viable remediation method for the soil source-area contamination at the site.

Groundwater: Ex-Situ Methods

Pump and Treat

Generally, for pump and treat systems to be effective, a significant capture zone must be developed. An adequate capture zone would be able to contain a dissolved phase contaminant plume, halting migration. While pump and treat methods are effective in reducing groundwater constituent concentrations and limiting off-site migrations, they do not adequately address vapor phase and absorbed phase hydrocarbon contamination at the source. Because of the presence of elevated dissolved hydrocarbon concentrations in the groundwater beneath the site, some form of groundwater treatment is recommended.

Multi-Phase Extraction

Multi-Phase Extraction (MPE) involves applying vacuum to remove liquid and vapor phase contaminants from permeable, heterogeneous soils. MPE typically provides a more efficient remedial approach as opposed to conventional pump and treat technology. The application of a vacuum to a well increases the hydraulic driving force that enables groundwater to flow into a well,

while conventional pumping relies mainly on a difference in elevation head. In addition, conventional pump and treat methodology is not successful in addressing vapor phase and absorbed phase hydrocarbon contamination. The need for vapor phase and absorbed phase hydrocarbon contaminant removal in the soil source area and for dissolved-phase hydrocarbon contaminant removal in the groundwater plume could be efficiently performed with the use of a dual phase extraction system. However, the capital costs of system installation and system operation and maintenance may not be justified based on the magnitude and limited extent of the dissolved hydrocarbon plume.

Groundwater: In-Situ Methods

In-situ treatment of groundwater includes the following biological enhancement technologies: oxygen enhancement (peroxide injection, oxygen sparging), the addition of nitrates, methanotrophic degradation, and natural attenuation (EPA, 1995). Chemical oxidation is another form of in-situ groundwater treatment technology.

Bioremediation

Biologic degradation of petroleum organics does not occur in proximity to gasoline free product or areas of high concentrations of volatile organic compounds (EPA, 1992). Given the absence of free phase hydrocarbons in the target area and the moderate concentration levels, bioremediation could be considered as a viable remediation alternative for the site at this time.

Air Sparging

Air sparging technology involves the injection of air into saturated zones in effect creating a subsurface air stripper, which removes contaminants through volatilization. Air sparging technologies are designed to operate at high airflow rates to effect volatilization. Air sparging systems are typically operated in tandem with SVE systems in order to capture contaminants stripped from the saturated zone. Contaminant migration can be induced if a net positive subsurface pressure is created (EPA, 1995). Channeling of airflow can occur in heterogeneous formations, potentially off-gassing in undesirable locations such as on-site buildings and utility conveyances. These potential negative effects can be minimized by proper design.

Chemical Oxidation

Chemical oxidation uses reagents to transform, degrade, or immobilize organic wastes. In-Situ Chemical Oxidation (ISCO) relies on the destructive capacity of oxidants to chemically destroy the bonds of the hydrocarbons. Complete chemical oxidation of gasoline would produce carbon dioxide and water. Chemical oxidants work by producing free radicals, such as the hydroxyl radical, which oxidize the petroleum hydrocarbons. Several commonly used chemical oxidants have been used for in-situ applications on petroleum hydrocarbons and MTBE, including hydrogen peroxide, Fenton's Reagent (hydrogen peroxide with an iron catalyst, frequently performed at a low pH), sodium persulfate, and ozone.

ISCO is most often utilized at sites with elevated COC concentrations in the source area. Chemical oxidation of high concentration areas is often part of a multi-step remediation approach that paves the way for more biologically mediated such as accelerated bioremediation or monitored natural attenuation.

Based on the limited size and location of the contaminant plume in relation to the convenience store and underground utilities within the target area, the application of ISCO in sufficient quantities to address the current contaminant concentrations is a viable treatment option at the Qwik-Sak Vulcan site.

Natural Attenuation

Natural attenuation is the process by which dilution, volatilization, biodegradation, adsorption, and chemical reactivity are allowed to reduce contaminant concentrations to acceptable levels. Natural attenuation is applicable in low-risk cases where active remediation is technically impracticable or deemed unnecessary due to contaminant concentrations at or below levels where natural processes can prevent plume migration. Extensive site-specific data collection is required to effectively model natural attenuation. A form of active remediation to help initiate the reduction of contaminant concentrations is preferred to act in conjunction with natural attenuation monitoring. Natural attenuation could be considered as the sole method for future remediation once dissolved hydrocarbon concentrations have dropped to levels where natural processes can effectively attenuate the residual hydrocarbon constituents.

REMEDATION RECOMMENDATION PLAN

After consideration of the methods discussed above and based on data collected during previous site characterization studies, the application of periodic MEME events in conjunction with natural attenuation monitoring is recommended as the remediation method to address the release at the Qwik-Sak Vulcan site.

The MEME unit operates with continuously monitored off-gas treatment (thermal destruction). Recovered groundwater (and free product) will be pumped to a temporary storage tank for later disposal by the MEME operator at an approved facility according to ADEM requirements. Prior to recovery activities, static water levels in all extraction wells will be recorded. A drop-tube will be inserted into the extraction wells and lowered as necessary to maximize recovery. Applied vacuums in the extraction wells and casing vacuums in surrounding monitoring wells will be recorded periodically during operations. Water level measurements will also be obtained periodically from surrounding wells to determine the radius of influence. Measurements of flow and hydrocarbon concentrations will also be obtained periodically. Field measurements will be obtained using a calibrated FID instrument. Hydrocarbon removal rates will be calculated and plotted. Cumulative fluid recovery volumes will be measured and recorded to determine removal rates.

Recovery Well Installation

To provide an effective capture zone within the target area on the site, Three Notch recommends that two 4-inch diameter recovery wells be installed at the site adjacent to MW-1 and MW-4. The wells will be drilled to a depth of approximately 19 ft-bls using a track-mounted hollow-stem auger drilling rig or a track-mounted sonic drilling rig using hollow core barrels. The wells will be constructed with 4 feet of 4-inch diameter schedule 40 PVC casing and 15 feet of 0.020" slotted PVC screen with an attached silt trap. The annular space of each borehole will be filled with coarse graded 6/10 filter sand from the bottom of the borehole to a level of approximately two feet above the top of the screened interval. A two-foot granular bentonite seal will be placed above the sand pack and hydrated for at least two hours. The wells will then be grouted to a level just below the ground surface. Each recovery well will be completed at the surface with a metal manway with bolt-down steel covers secured by a concrete pad. A Typical Recovery Well Construction Detail is included in Appendix B.

Soil samples will be collected during installation of the two proposed recovery wells (RW-1 and RW-2). As the soil borings are advanced, soil core samples will be collected using either a 5-foot continuous core-barrel sampler advanced along with the hollow-stem augers or by 10-foot continuous core-barrel sampler advanced along with the outer core barrel. Samples will be selected based on the Photo Ionization Detector (PID) field screening method. During soil boring advancement, representative portions of the soil from each sample interval will be retained for further analysis. One portion will be placed in a cooler on ice, for possible submission to the laboratory for analysis. The other portion will be allowed to volatilize for approximately one hour prior to head space analysis for organic vapors using a PID. The headspace of the samples will be analyzed with the PID, the values recorded, and the two samples with the highest levels of VOCs from the boring will be submitted for laboratory analysis.

Samples submitted for analysis will be placed into laboratory-supplied containers (4-ounce, unpreserved jars with Teflon-lined lids), placed on ice maintaining chain of custody protocol. Samples will be analyzed for BTEX/MTBE/Naphthalene using EPA Method 8260B.

MEME Events

Three Notch recommends that monthly 8-hour duration MEME events be conducted at the site in order to reduce dissolved hydrocarbon concentrations in the target area adjacent to monitoring wells MW-1 and MW-4. Each 8-hour MEME event will be conducted using a mobile system operated by Three Notch or a third-party vendor. The primary objective will be soil vapor recovery and PCW removal, utilizing total fluids extraction from the wells. The technical specifications for the MEME system are presented in Appendix F.

Natural Attenuation

Groundwater samples will be collected quarterly from all site monitoring wells. The groundwater samples will be collected from the monitoring wells using new clean plastic bailers and transferred to 40 milliliter (mL) glass volatile organic analysis (VOA) vials preserved with hydrochloric acid (HCl) for BTEX/MTBE/Naphthalene analysis using EPA Method 8260B. During each groundwater sampling event, all monitoring wells will also be monitored for natural attenuation parameters (DO, pH, and Redox).

Once the COC concentrations are reduced to below the SSTLs, corrective action activities will be discontinued, and re-bounce monitoring will be initiated. Should the COC concentrations remain above the SSTLs after a two-year period, Three Notch will re-evaluate the corrective plan. Three Notch will recommend the site for No Further Action (NFA) status once remediation goals are met.

PROPOSED REPORTING REQUIREMENTS

Three Notch will submit reports in accordance with ADEM requirements. These reports will include the following:

Reporting of CAP Implementation/Well Installation

This report will detail the installation of the two recovery wells. In addition, the Solid Waste Profile will be obtained under this cost proposal, and a copy of the Solid Waste Profile will be included in this report.

Reporting of Natural Attenuation with MEME Events Effectiveness

Three Notch proposes to submit quarterly NAMR reports, which will summarize field activities and the progress of site groundwater constituent concentrations towards achieving approved corrective action levels. The following data will be included in each report: field activities performed, groundwater elevations, groundwater analytical results as compared to target levels, potentiometric surface maps, COC contour maps, and MEME data results. The reports will also include remediation effectiveness and recommendations concerning additional measures deemed necessary.

Request for Closure Evaluation of Corrective Action

This report will include data that demonstrates that remediation goals have been achieved and will request a status of NFA for the site. Methods for the abandonment of monitoring and recovery wells will be described.

Well Abandonment

This report will describe in detail the closure of the site and removal of all monitoring and recovery wells.

SCHEDULE OF IMPLEMENTATION

It is anticipated that the proposed corrective action plan will begin with the first MEME and groundwater monitoring event following the approval of the CAP. The following schedule indicates the timetable for major project events to be completed as part of this corrective action plan:

Time Following CAP Approval (months)	Project Event	Project Event Length
1	Well Installation	1 Week
0 – 24	Quarterly groundwater monitoring and monthly 8-hour MEME events, evaluation of performance, and recommendations for further corrective action if required	2 Years
25	Well abandonment; completion and submittal of final report if allowable by ADEM	2 Months

PROPOSED SAMPLING AND MONITORING ACTIVITIES

Following the approval of the CAP, monthly 8-hour duration MEME events will be conducted at the site in order to reduce dissolved hydrocarbon concentrations in the source areas. During the events, groundwater and soil vapor will be extracted from designated recovery wells. The MEME events will be conducted using a mobile liquid ring Multi-Phase Extraction (MPE) system operated by Three Notch, or equivalent. The MEME system has been approved by ADEM for use at numerous locations in Alabama for free product recovery, emergency response, and pilot testing activities. The unit operates with continuously monitored off-gas treatment (thermal destruction).

Prior to the MEME event, static water levels in selected wells will be recorded. Applied vacuum at the extraction wells and casing vacuums in the observation wells will be recorded periodically during the event. Water level and vacuum measurements, to determine the radius of influence, will be obtained periodically from observation wells. Measurements of flow and hydrocarbon concentrations will also be obtained periodically. Field measurements will be obtained using a calibrated FID instrument. Hydrocarbon removal rates will be calculated and plotted.

Groundwater samples will be collected from monitoring and recovery wells on a quarterly basis. All site wells will be gauged and sampled during each quarterly groundwater monitoring event.

The groundwater samples will be collected from the monitoring and recovery wells using new clean plastic bailers. Samples will be transferred to 40 mL glass VOA vials preserved with HCl for BTEX, MTBE, and naphthalene analysis in accordance with EPA Method 8260B. During each groundwater sampling event, all sampled wells will also be sampled for natural attenuation parameters (DO, pH, and ORP). The natural attenuation parameters will provide information concerning the recovery of the shallow aquifer down gradient of the release area.

The results of the proposed activities will be submitted to ADEM on a quarterly basis in the form of a RNA/MEME Report. The report will include conclusions regarding the effectiveness of the recovery activities performed and recommendations for future site activities.

CONCLUSIONS AND RECOMMENDATIONS

Upon receiving ADEM's approval of the recommended approach, Three Notch will submit cost proposals for Well Installation and RNA with MEME activities.

APPENDICES

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Figures B

Site Location USGS Topographic Map

Land Use Map

Site Map with Utility and Well Locations

Lithologic Cross-Section

Soil Analytical Map

Potentiometric Surface Map - February 27, 2025

Groundwater Analytical and Benzene Contour Map - February 27, 2025

Water Well Inventory Map

Proposed Recovery Well Location Map

Typical Recovery Well Constructin Detail

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ADEM Forms D

UST Release Fact Sheet

UST Site Classification System Checklist

Tasks Performance Summary E

MEME System Specifications F

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Appendices

APPROVED ARBCA SSTLS

ADEM FORMS

TASKS PERFORMANCE SUMMARY

MEME SYSTEM SPECIFICATIONS



THREE
NOTCH
GROUP

TABLES



APPENDIX A

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-1		
INSTALLATION DATE:	01/31/23	WELL DEPTH (FT BTOC):	19.0	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	507.00	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table									
SITE NAME:				UST NUMBER:		WELL ID:	MW-1		
INSTALLATION DATE:	01/31/23	WELL DEPTH (FT BTOC):	19.0	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	507.00	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-2		
INSTALLATION DATE:	01/31/23	WELL DEPTH (FT BTOC):	19.5	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	506.87	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-2		
INSTALLATION DATE:	01/31/23	WELL DEPTH (FT BTOC):	19.5	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	506.87	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-3		
INSTALLATION DATE:	02/01/23	WELL DEPTH (FT BTOC):	19.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	506.86	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-3		
INSTALLATION DATE:	02/01/23	WELL DEPTH (FT BTOC):	19.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	506.86	WELL TYPE: DIAMETER (IN):	II 2

Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)

GROUNDWATER ANALYTICAL SUMMARY (mg/L)							
SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
02/07/23	<0.005	0.290	<0.025	0.146	0.287	0.723	0.455
09/26/23	0.029	0.361	0.037	1.83	1.37	3.598	0.617
05/15/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
08/29/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
12/05/24	<0.010	<0.010	<0.020	<0.010	<0.010	BDL	<0.050
02/27/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/10/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
GRP SSTLS:	0.0535	0.0134	2.67	1.87	26.7	-	0.0535
Inhalation SSTLS:	44400	25.6	526	169	175	-	31

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-4		
INSTALLATION DATE:	02/01/23	WELL DEPTH (FT BTOC):	19.5	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	506.74	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-4		
INSTALLATION DATE:	02/01/23	WELL DEPTH (FT BTOC):	19.5	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	506.74	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-5		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	507.29	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-5		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	507.29	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-6		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	507.36	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-6		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	507.36	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-7		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	505.17	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-7		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	505.17	WELL TYPE: DIAMETER (IN):	II 2

Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)

GROUNDWATER ANALYTICAL SUMMARY (mg/L)							
SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
09/26/23	<0.001	0.001	0.003	0.135	0.037	0.176	0.013
05/15/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
08/29/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
12/05/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
02/27/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/10/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
GRP SSTLS:	0.00502	0.00126	0.251	0.176	2.51	-	0.00502
Inhalation SSTLS:	4130	3.91	240	169	175	-	6.52

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-8		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	505.34	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-8		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	505.34	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-9		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	505.91	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-9		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	505.91	WELL TYPE: DIAMETER (IN):	II 2

Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)

GROUNDWATER ANALYTICAL SUMMARY (mg/L)							
SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
09/26/23	<0.001	0.002	<0.002	0.001	0.004	0.007	<0.005
05/15/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
08/29/24	NOT SAMPLED - DRY						
12/05/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
02/27/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/10/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
GRP SSTLS:	0.023	0.00575	1.15	0.804	11.5	-	0.023
Inhalation SSTLS:	4130	3.91	240	169	175	-	6.52

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-10		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	506.11	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-10		
INSTALLATION DATE:	09/12/23	WELL DEPTH (FT BTOC):	18.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	506.11	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-11		
INSTALLATION DATE:	05/06/24	WELL DEPTH (FT BTOC):	20.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	504.79	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-11		
INSTALLATION DATE:	05/06/24	WELL DEPTH (FT BTOC):	20.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	504.79	WELL TYPE: DIAMETER (IN):	II 2

Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)

GROUNDWATER ANALYTICAL SUMMARY (mg/L)							
SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
05/15/24	0.008	0.002	<0.002	<0.001	<0.001	0.002	<0.005
08/29/24	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
12/05/24	0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
02/27/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/10/25	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
GRP SSTLs:	0.00401	0.001	0.2	0.14	2	-	0.00401
Inhalation SSTLs:	4130	3.91	240	169	175	-	6.52

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-12		
INSTALLATION DATE:	05/06/24	WELL DEPTH (FT BTOC):	15.0	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	502.85	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	MW-12		
INSTALLATION DATE:	05/06/24	WELL DEPTH (FT BTOC):	15.0	SCREEN LENGTH (FT):	10	CASING ELEV (FT ABOVE MSL):	502.85	WELL TYPE: DIAMETER (IN):	II 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	VW-1		
INSTALLATION DATE:	09/11/23	WELL DEPTH (FT BTOC):	30.0	SCREEN LENGTH (FT):	2.5	CASING ELEV (FT ABOVE MSL):	505.89	WELL TYPE: DIAMETER (IN):	III 2
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	VW-1		
INSTALLATION DATE:	09/11/23	WELL DEPTH (FT BTOC):	30.0	SCREEN LENGTH (FT):	2.5	CASING ELEV (FT ABOVE MSL):	505.89	WELL TYPE: DIAMETER (IN):	III 2

Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)

GROUNDWATER ANALYTICAL SUMMARY (mg/L)							
SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
09/26/23	<0.001	<0.001	<0.002	0.002	0.002	0.004	0.007
05/15/24	NOT SAMPLED						
08/29/24	NOT SAMPLED						
12/05/24	NOT SAMPLED						
02/27/25	NOT SAMPLED						
06/10/25	NOT SAMPLED						
GRP SSTLs:	0.03	0.0075	1.5	1.05	15	-	0.03
Inhalation SSTLs:	44400	25.6	526	169	175	-	31

Monitoring Point Data Summary Table									
SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	PW-1		
INSTALLATION DATE:	-	WELL DEPTH (FT BTOC):	-	SCREEN LENGTH (FT):	-	CASING ELEV (FT ABOVE MSL):	-	WELL TYPE: DIAMETER (IN):	- -
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible][illegible]

Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	PW-1		
INSTALLATION DATE:	-	WELL DEPTH (FT BTOC):	-	SCREEN LENGTH (FT):	-	CASING ELEV (FT ABOVE MSL):	-	WELL TYPE: DIAMETER (IN):	-
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

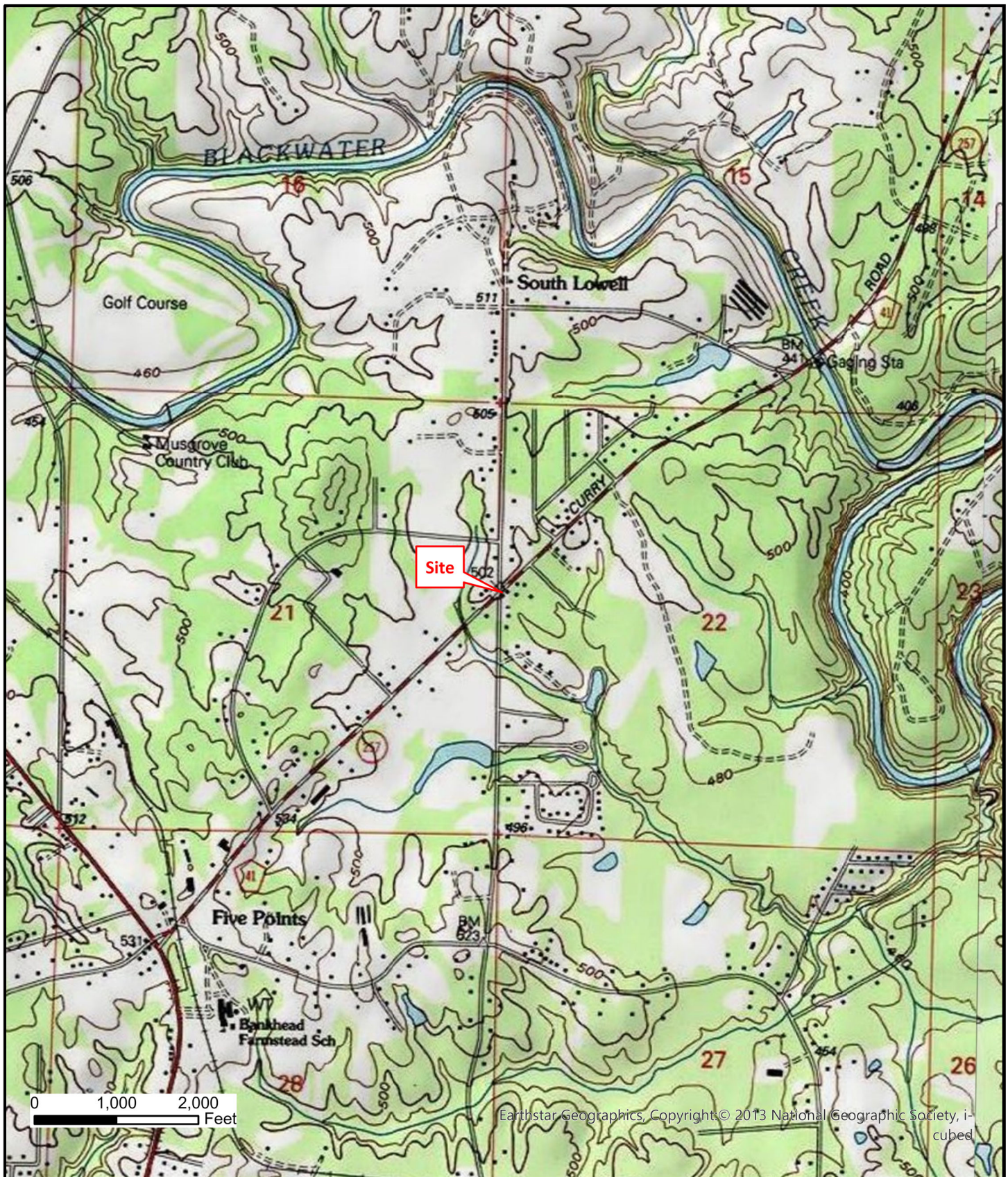
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Monitoring Point Data Summary Table

SITE NAME:	Vulcan Qwik-Sak			UST NUMBER:	23-12-01	WELL ID:	Carbon Effluent		
INSTALLATION DATE:	-	WELL DEPTH (FT BTOC):	-	SCREEN LENGTH (FT):	-	CASING ELEV (FT ABOVE MSL):	-	WELL TYPE: DIAMETER (IN):	-
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)									

[illegible]

FIGURES



Site Location USGS Topographic Map

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama





**THREE
NOTCH
GROUP**

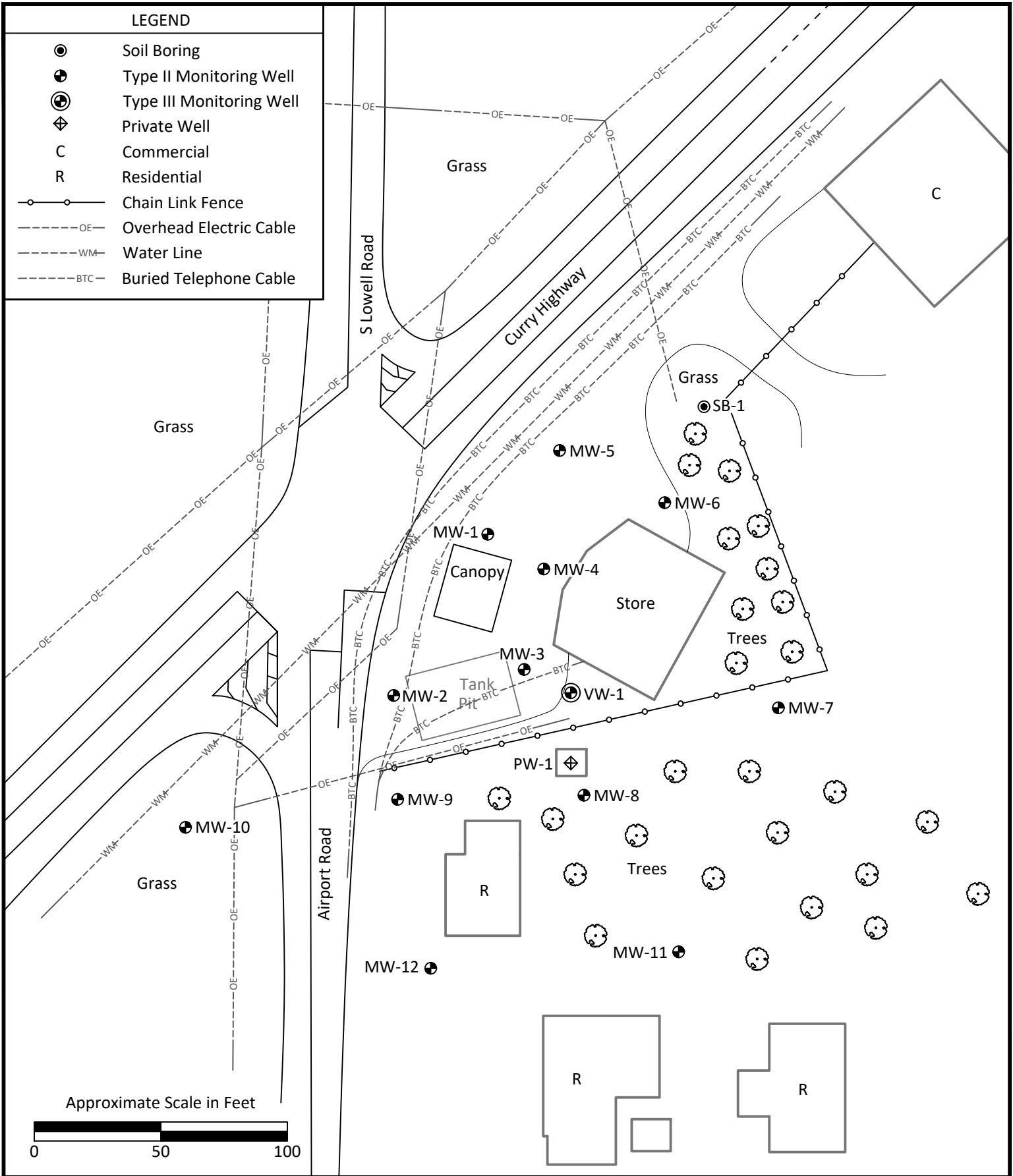
Land Use Map

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama



Approximate Scale in Feet

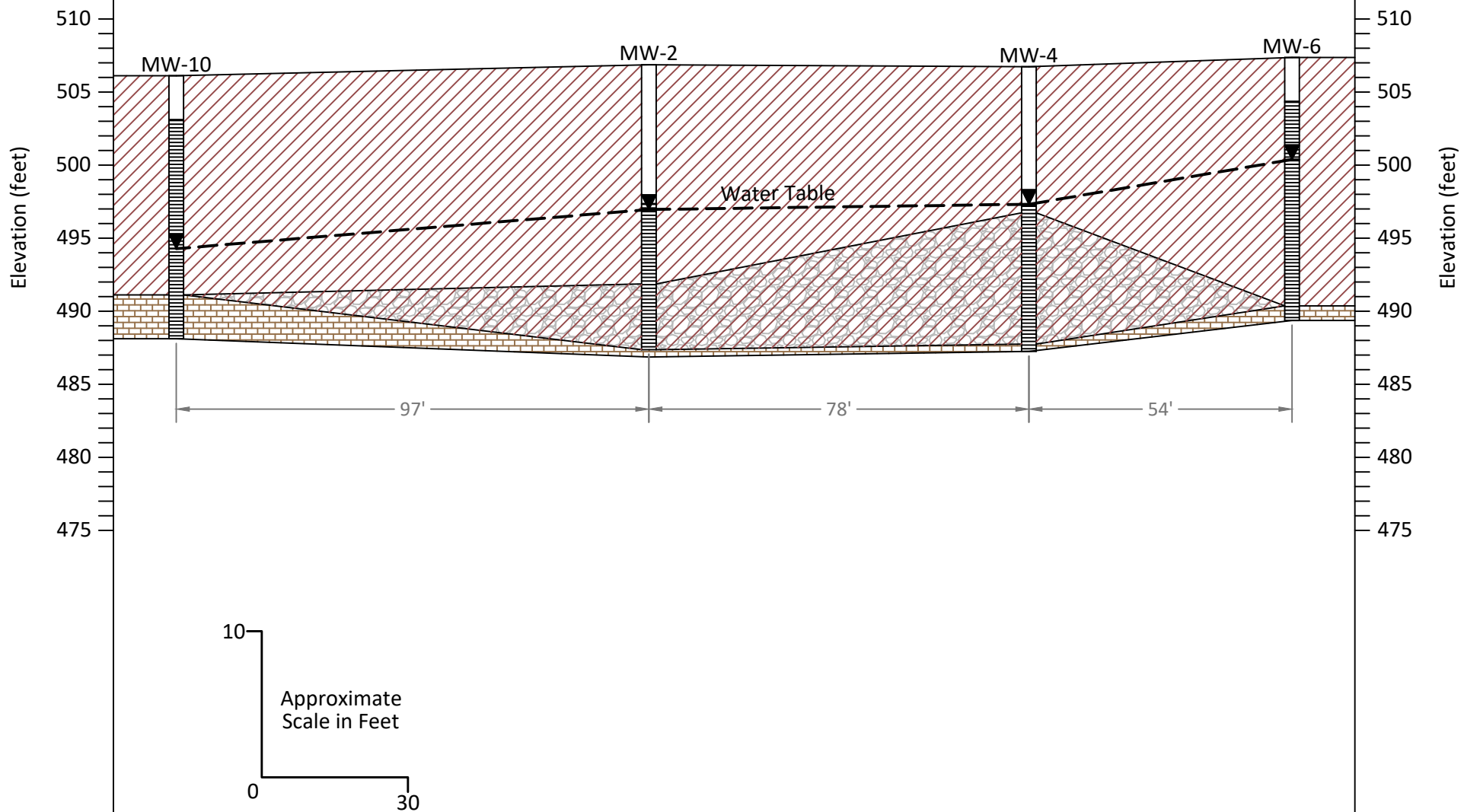




Site Map with Utility and Well Locations

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama





Lithologic Cross-Section

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama

Legend	
	Clay
	Gravelly Clay
	Limestone
	Screened Interval
	Groundwater Level

LEGEND

- Soil Boring
- ⊕ Type II Monitoring Well
- ⊕ Type III Monitoring Well
- ⊕ Private Well
- C Commercial
- R Residential
- Chain Link Fence

5-10	10-15	Depth (feet)
<0.006	<0.005	Benzene Concentration (mg/Kg)
1.479	0.191	BTEX Concentration (mg/Kg)
<0.006	<0.005	MTBE Concentration (mg/Kg)
0.726	0.214	Naphthalene Concentration (mg/Kg)

5-10	10-15
<0.006	<0.005
1.479	0.191
<0.006	<0.005
0.726	0.214

5-10	10-15
<0.007	<0.005
0.714	0.729
<0.007	<0.005
0.161	0.399

4-5	8-9
<0.008	<0.005
BDL	BDL
<0.008	<0.005
<0.042	<0.029

8-9	12-13
<0.009	<0.005
BDL	BDL
<0.009	<0.005
<0.048	<0.027

8-9	11-12
<0.007	<0.005
BDL	BDL
<0.007	<0.005
<0.038	<0.028

4	15
<0.002	<0.002
BDL	BDL
<0.002	<0.002
<0.010	<0.010

14	20
<0.002	<0.002
BDL	BDL
<0.002	<0.002
<0.010	<0.010

3-4	11-12
<0.005	<0.006
BDL	BDL
<0.005	<0.006
<0.027	<0.032

5-10	10-15
0.013	0.034
0.156	5.454
<0.007	<0.006
0.227	1.69

3-4	11-12
<0.006	<0.006
BDL	BDL
<0.006	<0.006
<0.034	<0.031

10-15	15-20
<0.005	0.013
BDL	0.281
<0.005	<0.005
<0.027	0.099

3-4	11-12
<0.008	<0.008
BDL	BDL
<0.008	<0.008
<0.042	<0.041

4-5	12-13
<0.007	<0.005
BDL	BDL
<0.007	<0.005
<0.037	0.123

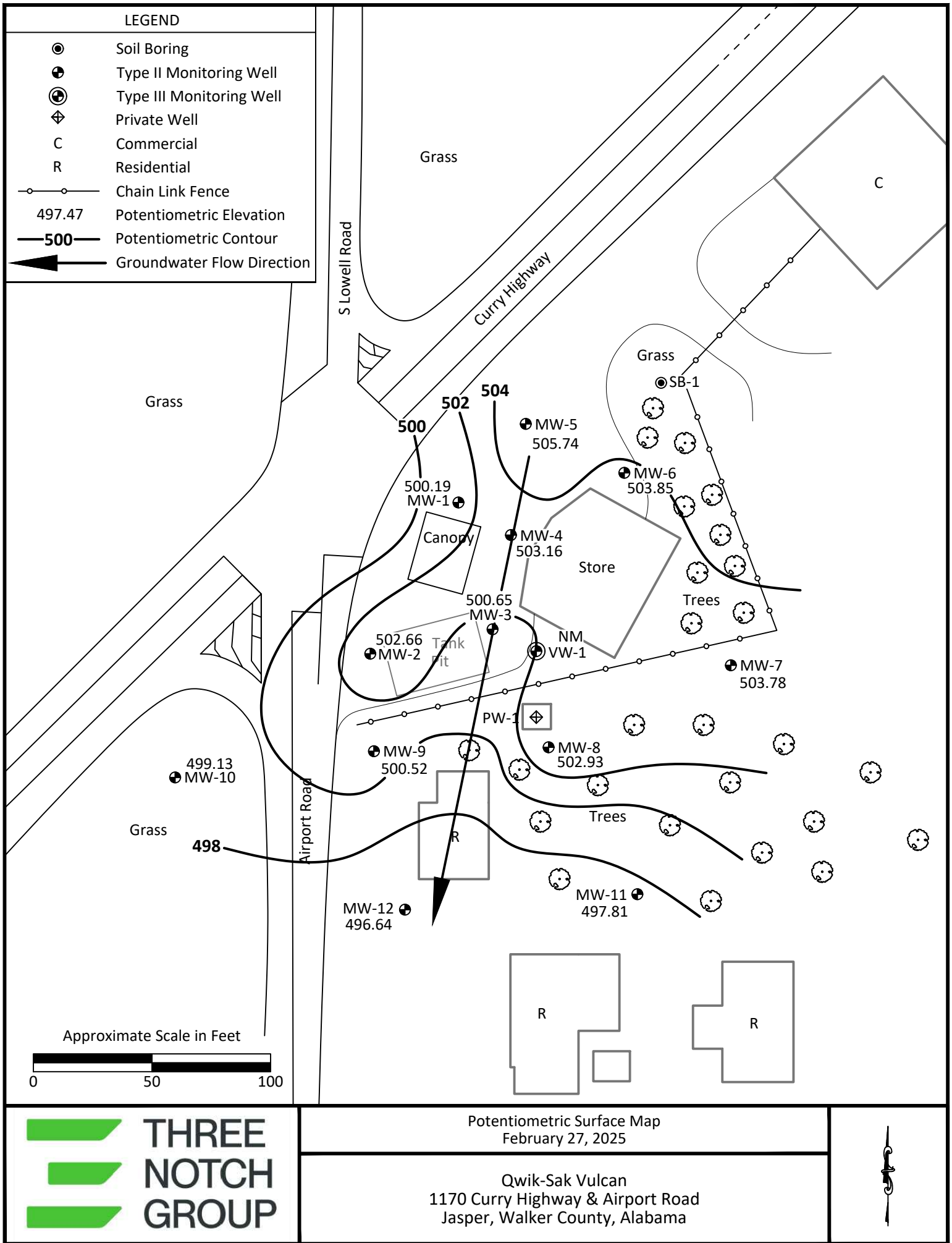
Approximate Scale in Feet

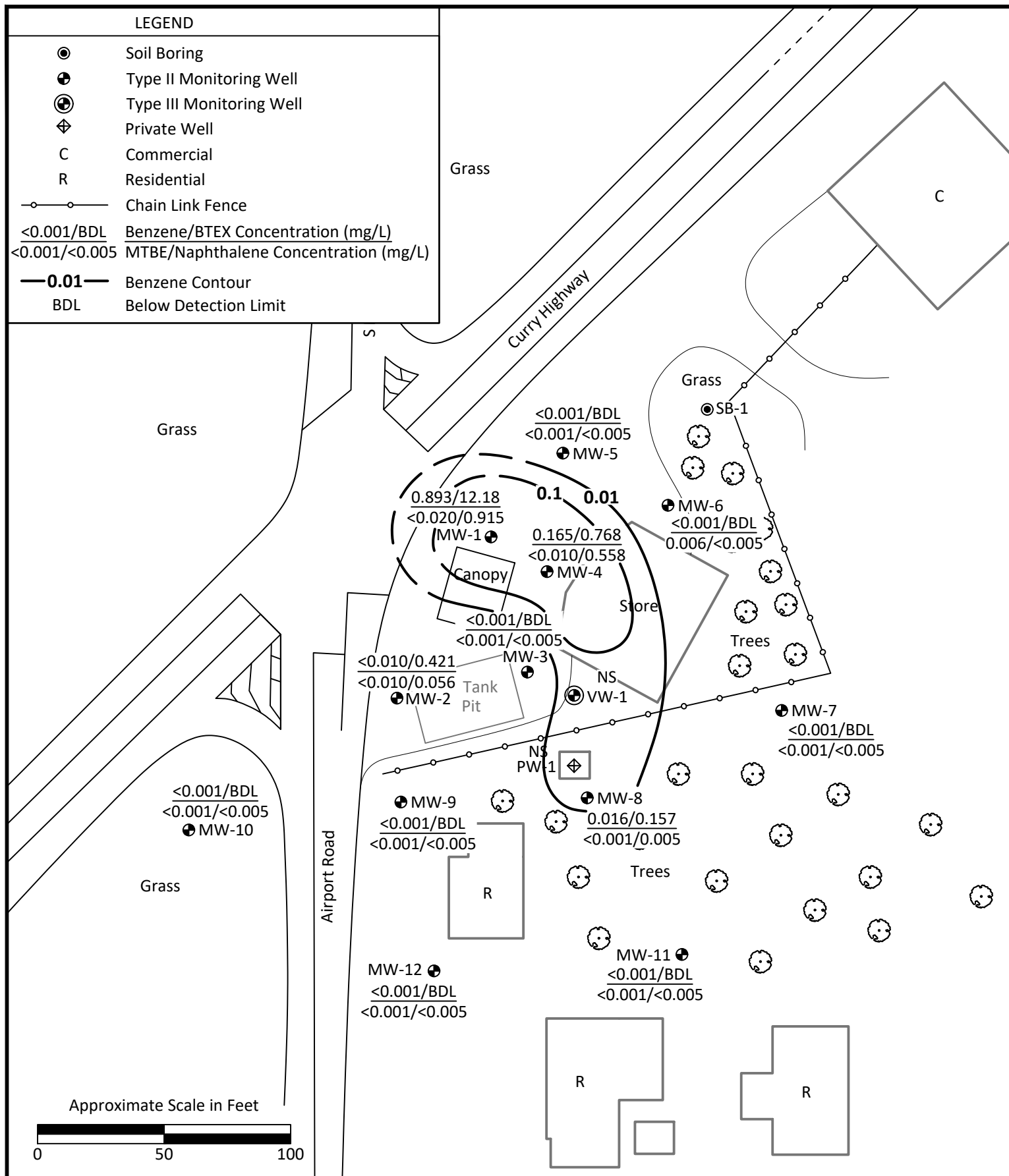


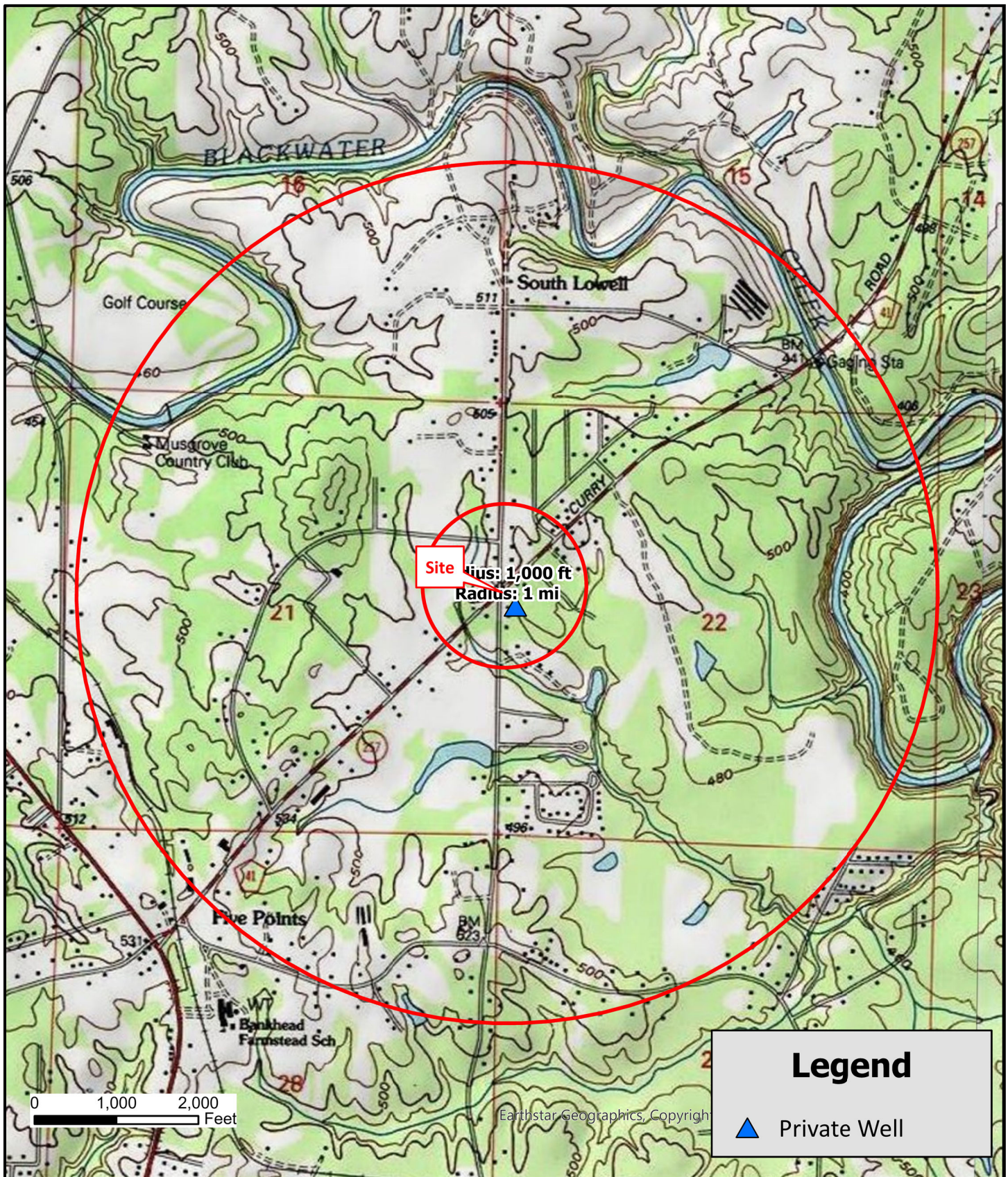
Soil Analytical Map

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama





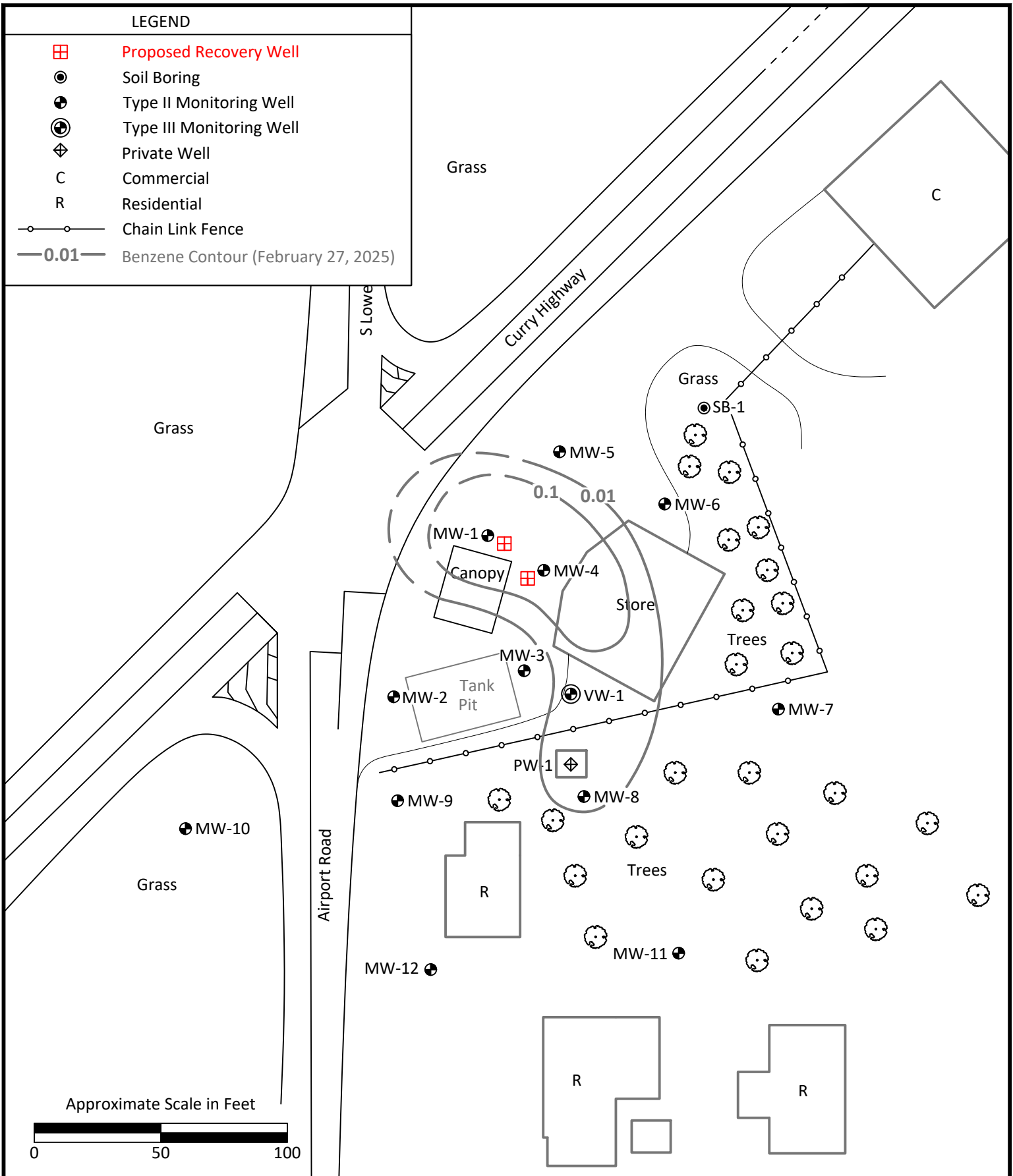




Water Well Inventory Map

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama

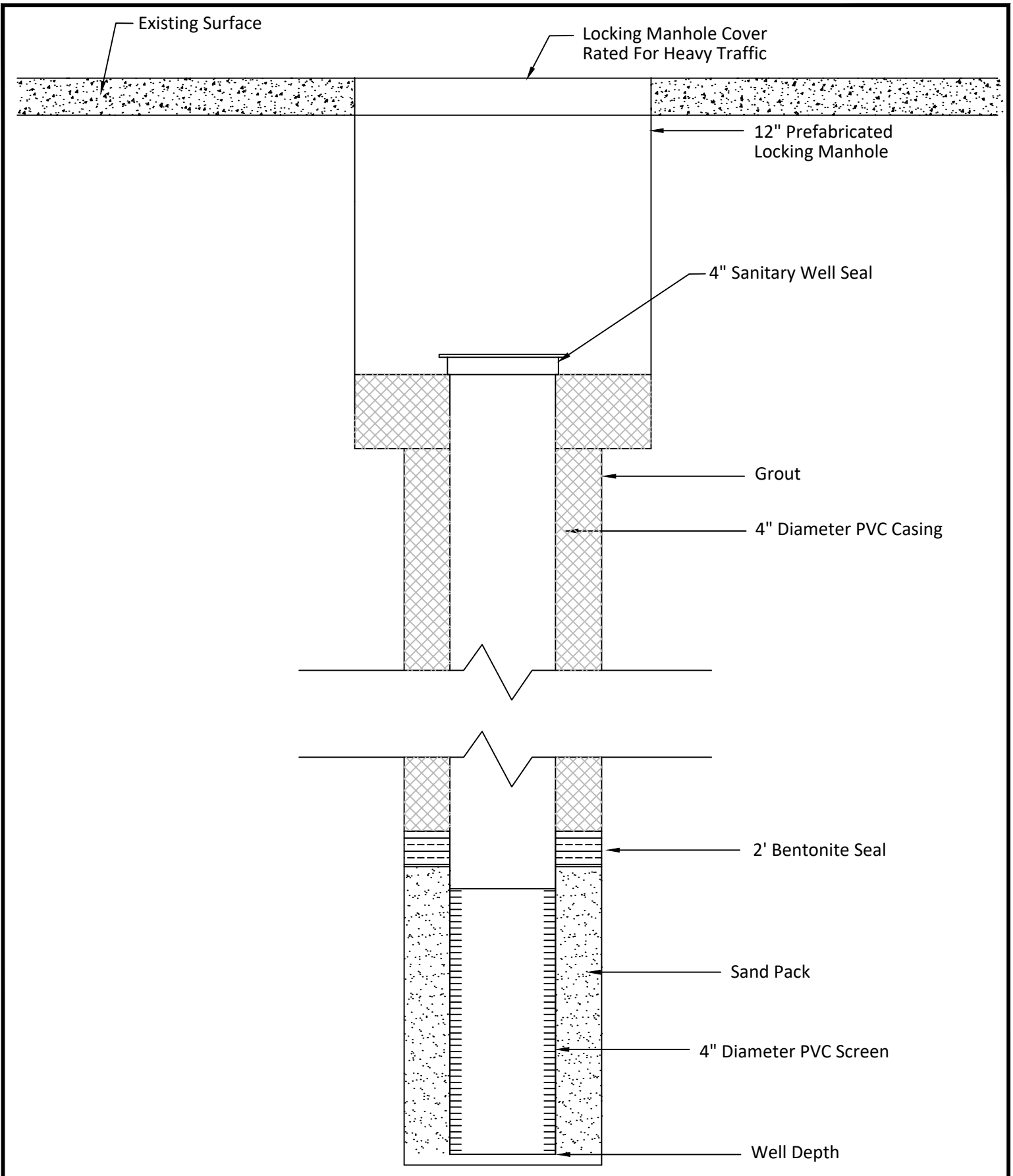




Proposed Recovery Well Locations Map

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama





**THREE
NOTCH
GROUP**

Recovery Well Construction Detail

Qwik-Sak Vulcan
1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama

NOT TO SCALE

APPROVED ARBCA SSTLS

ARBCA SUMMARY REPORT

FORM NO. 27

UST Incident No(s): UST 23-12-01

Facility ID: 15201-127-013351

Date Form Completed: 27-Jan-25

Form Completed By: Michael Kotar

TIER 2 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE): 59															
CHEMICALS OF CONCERN	COMPARISON FOR SOURCE SOIL			COMPARISON FOR SOURCE GROUNDWATER			COMPARISON FOR COMPLIANCE WELLS								
	Soil Source Rep. Conc. ¹	Allowable Soil Conc. ²	E/ NE	GW Source Rep. Conc. ³	Allowable GW Conc. at a POC ⁴	E/ N	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/ N E	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/ N E	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/ NE
	[mg/kg]	[mg/kg]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]	
COMPLIANCE WELL NO.	MW-2/MW-4			MW-1			MW-2			MW-4			MW-3		
DISTANCE FROM SOURCE	19/21			12			19			21			27		
RECENT TREND				Fluctuating			Stable			Fluctuating			Stable		
ORGANICS															
Benzene	0.034	0.00311	E	1.24	0.0211	E	0.047	0.0173	E	0.383	0.0162	E	0.361	0.0134	E
Toluene	0.018	0.905	NE	3.55	4.21	NE	0.145	3.46	NE	0.074	3.25	NE	0.037	2.67	NE
Ethylbenzene	2.6	0.802	E	3.24	2.95	E	1.87	2.42	NE	1.96	2.27	NE	1.83	1.87	NE
Xylenes (Total)	2.82	12.7	NE	10.6	42.1	NE	3.81	34.6	NE	2.14	32.5	NE	1.37	26.7	NE
MTBE	0.0035	0.0068	NE	0.05	0.0843	NE	0.02	0.0692	NE	0.011	0.065	NE	0.029	0.0535	NE
Anthracene															
Benzo(a)anthracene															
Benzo(a)pyrene															
Benzo(b)fluoranthene															
Benzo(g,h,i)perylene															
Benzo(k)fluoranthene															
Chrysene															
Fluoranthene															
Fluorene															
Naphthalene	1.69	0.0843	E	1.36	0.0843	E	0.765	0.0692	E	0.754	0.065	E	0.617	0.0535	E
Phenanthrene															
Pyrene															
METALS															
Arsenic															
Barium															
Cadmium															
Chromium VI															
Lead															
Zinc															

NOTE: Use the ARBCA Computational Software to calculate the allowable (i) soil source conc., (ii) GW source conc., and (iii) compliance well conc.

Page 1 of 4

1: The soil source representative concentrations have to be calculated and entered here.

2: Allowable soil concentrations at the source protective of groundwater at the POE.

3: The groundwater source representative concentrations have to be calculated and entered here.

4: Allowable groundwater concentrations at the source protective of groundwater at the POE.

5: Representative concentrations in the compliance well.

6: Allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

E: Representative concentration exceeds allowable concentration.

NE: Representative concentration does not exceed allowable concentration.

Recommended Attachment: A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC.

ARBCA SUMMARY REPORT

FORM NO. 27

UST Incident No(s): UST 23-12-01

Facility ID: 15201-127-013351

Date Form Completed: 27-Jan-25

Form Completed By: Michael Kotar

TIER 2 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE):				59				COMPARISON FOR COMPLIANCE WELLS							
CHEMICALS OF CONCERN	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE
	[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]	
COMPLIANCE WELL NO.	VW-1			MW-5			MW-9			MW-3			MW-6		
DISTANCE FROM SOURCE	45			53			54			73			74		
RECENT TREND				Stable									Stable		
ORGANICS															
Benzene	0.0005	0.0075	NE	0.0005	0.00591	NE	0.002	0.00575	NE	0.15	0.00351	E	0.0005	0.00343	NE
Toluene	0.001	1.5	NE	0.001	1.18	NE	0.001	1.15	NE	0.645	0.701	NE	0.001	0.685	NE
Ethylbenzene	0.002	1.05	NE	0.0005	0.828	NE	0.001	0.804	NE	0.299	0.491	NE	0.005	0.48	NE
Xylenes (Total)	0.002	15	NE	0.0005	11.8	NE	0.004	11.5	NE	1.33	7.01	NE	0.0005	6.85	NE
MTBE	0.0005	0.03	NE	0.0005	0.0236	NE	0.0005	0.023	NE	0.001	0.014	NE	0.014	0.0137	E
Anthracene															
Benzo(a)anthracene															
Benzo(a)pyrene															
Benzo(b)fluoranthene															
Benzo(g,h,i)perylene															
Benzo(k)fluoranthene															
Chrysene															
Fluoranthene															
Fluorene															
Naphthalene	0.007	0.03	NE	0.0025	0.0236	NE	0.0025	0.023	NE	0.157	0.014	E	0.0025	0.0137	NE
Phenanthrene															
Pyrene															
METALS															
Arsenic															
Barium															
Cadmium															
Chromium VI															
Lead															
Zinc															

NOTE: Use the ARBCA Computational Software to calculate the allowable (i) soil source conc., (ii) GW source conc., and (iii) compliance well conc.

Page 2 of 4

5: Representative concentrations in the compliance well.

6: Allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

E: Representative concentration exceeds allowable concentration.

NE: Representative concentration does not exceed allowable concentration.

Recommended Attachment: A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC.

ARBCA SUMMARY REPORT	FORM NO. 27
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UST Incident No(s): UST 23-12-01	Facility ID: 15201-127-013351
Date Form Completed: 27-Jan-25	Form Completed By: Michael Kotar

TIER 2 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE):				59											
	COMPARISON FOR SOURCE SOIL			COMPARISON FOR SOURCE GROUNDWATER			COMPARISON FOR COMPLIANCE WELLS								
CHEMICALS OF CONCERN	Soil Source Rep.	Allowable Soil	E/ NE	GW Source Rep.	Allowable GW	E / N	CW Rep. Conc.	Allowable GW	E / NE	CW Rep. Conc.	Allowable GW	E / NE	CW Rep. Conc.	Allowable GW	E/ NE
	Conc. ¹	Conc. ²		Conc. ³	Conc. at a POC ⁴		Conc. ⁵	Conc. at a POC ⁶		Conc. ⁵	Conc. at a POC ⁶		Conc. ⁵	Conc. at a POC ⁶	
	[mg/kg]	[mg/kg]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]	
COMPLIANCE WELL NO.							MW-10			MW-12			MW-7		
DISTANCE FROM SOURCE							116			118			128		
RECENT TREND													Stable		

ORGANICS															
Benzene							0.0005	0.00151	NE	0.001	0.00146	NE	0.001	0.00126	NE
Toluene							0.001	0.303	NE	0.001	0.293	NE	0.003	0.251	NE
Ethylbenzene							0.003	0.212	NE	0.0005	0.205	NE	0.135	0.176	NE
Xylenes (Total)							0.008	3.03	NE	0.0005	2.93	NE	0.037	2.51	NE
MTBE							0.0005	0.00605	NE	0.001	0.00586	NE	0.0005	0.00502	NE
Anthracene															
Benzo(a)anthracene															
Benzo(a)pyrene															
Benzo(b)fluoranthene															
Benzo(g,h,i)perylene															
Benzo(k)fluoranthene															
Chrysene															
Fluoranthene															
Fluorene															
Naphthalene							0.007	0.00605	E	0.0025	0.00586	NE	0.013	0.00502	E
Phenanthrene															
Pyrene															
METALS															
Arsenic															
Barium															
Cadmium															
Chromium VI															
Lead															
Zinc															

NOTE: Use the *ARBCA Computational Software* to calculate the allowable (i) soil source conc., (ii) GW source conc., and (iii) compliance well conc.

1: The soil source representative concentrations have to be calculated and entered here.

3: The groundwater source representative concentrations have to be calculated and entered here.

5: Representative concentrations in the compliance well.

E: Representative concentration exceeds allowable concentration.

Recommended Attachment: A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC.

2: Allowable soil concentrations at the source protective of groundwater at the POE.

4: Allowable groundwater concentrations at the source protective of groundwater at the POE.

6: Allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

NE: Representative concentration does not exceed allowable concentration.

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ARBCA SUMMARY REPORT

FORM NO. 27

UST Incident No(s): UST 23-12-01

Facility ID: 15201-127-013351

Date Form Completed: 27-Jan-25

Form Completed By: Michael Kotar

TIER 2 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE): 59															
COMPARISON FOR COMPLIANCE WELLS															
CHEMICALS OF CONCERN	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE	CW Rep. Conc. 5	Allowable GW Conc. at a POC 6	E/ NE
	[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]	
COMPLIANCE WELL NO.	MW-11														
DISTANCE FROM SOURCE	144														
RECENT TREND															
ORGANICS															
Benzene	0.002	0.001	E												
Toluene	0.001	0.2	NE												
Ethylbenzene	0.0005	0.14	NE												
Xylenes (Total)	0.0005	2	NE												
MTBE	0.008	0.00401	E												
Anthracene															
Benzo(a)anthracene															
Benzo(a)pyrene															
Benzo(b)fluoranthene															
Benzo(g,h,i)perylene															
Benzo(k)fluoranthene															
Chrysene															
Fluoranthene															
Fluorene															
Naphthalene	0.0025	0.00401	NE												
Phenanthrene															
Pyrene															
METALS															
Arsenic															
Barium															
Cadmium															
Chromium VI															
Lead															
Zinc															

NOTE: Use the ARBCA Computational Software to calculate the allowable (i) soil source conc., (ii) GW source conc., and (iii) compliance well conc.

Page 4 of 4

5: Representative concentrations in the compliance well.

6: Allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

E: Representative concentration exceeds allowable concentration.

NE: Representative concentration does not exceed allowable concentration.

Recommended Attachment: A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC.

ARBCA SUMMARY REPORT		FORM NO. 29a
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UST Incident No(s): UST 23-12-01	Facility ID: 15201-127-013351
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Date Form Completed: 27-Jan-25	Form Completed By: Michael Kotar
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TIER 2 ON-SITE TARGET LEVELS FOR INHALATION AND INGESTION
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NOTE: The SSTLs listed for each route of exposure are the minimum SSTLs for all the receptors for that particular route of exposure. The Tier 2 on-site target levels are the minimum SSTLs of all routes of exposures within each medium.

CHEMICALS OF CONCERN	SURFICIAL SOIL		SUBSURFACE SOIL			GROUNDWATER			
	Outdoor Inhalation, Ingestion, & Dermal Contact [mg/kg]	On-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/kg]	Outdoor Inhalation [mg/kg]	On-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/L]	Outdoor Inhalation [mg/L]	Ingestion of Water [mg/L]	On-Site Tier 2 Target Levels [mg/L]
ORGANICS									
Benzene	231	231	0.0887	22	0.0887	25.6	1750	NA	25.6
Toluene	101	101	11.6	101	11.6	526	526	NA	526
Ethylbenzene	41.2	41.2	37.8	41.2	37.8	169	169	NA	169
Xylenes (Total)	47.1	47.1	14	47.1	14	175	175	NA	175
MtBE	378	378	348	3470	348	44400	48000	NA	44400
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	27.8	27.8	8.96	27.8	8.96	31	31	NA	31
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTE:

NA: Not Available

ARBCA SUMMARY REPORT

FORM NO. 29b

UST Incident No(s): UST 23-12-01

Facility ID: 15201-127-013351

Date Form Completed: 27-Jan-25

Form Completed By: Michael Kotar

TIER 2 OFF-SITE TARGET LEVELS FOR INHALATION AND INGESTION

NOTE: The SSTLs listed for each route of exposure are the minimum SSTLs for all the receptors for that particular route of exposure. The Tier 2 off-site target levels are the minimum SSTLs of all routes of exposures within each medium.

CHEMICALS OF CONCERN	SURFICIAL SOIL		SUBSURFACE SOIL			GROUNDWATER			
	Outdoor Inhalation, Ingestion, & Dermal Contact [mg/kg]	Off-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/kg]	Outdoor Inhalation [mg/kg]	Off-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/L]	Outdoor Inhalation [mg/L]	Ingestion of Water [mg/L]	Off-Site Tier 2 Target Levels [mg/L]
ORGANICS									
Benzene	231	231	0.0135	8.27	0.0135	3.91	1750	0.005	0.005
Toluene	101	101	1.08	101	1.08	240	526	1	1
Ethylbenzene	41.2	41.2	3.52	41.2	3.52	169	169	0.7	0.7
Xylenes (Total)	47.1	47.1	1.3	47.1	1.3	175	175	10	10
MtBE	378	378	32.4	3470	32.4	4130	48000	0.02	0.02
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	27.8	27.8	8.96	20.1	8.96	6.52	31	0.02	0.02
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTE:

NA: Not Available

ARBCA SUMMARY REPORT

FORM NO. 27

UST Incident No(s): UST 23-03-09

Facility ID: 24464-095-018113

Date Form Completed: 12-Mar-25

Form Completed By: Michael Kotar

TIER 2 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE): 530

	COMPARISON FOR SOURCE SOIL			COMPARISON FOR SOURCE GROUNDWATER			COMPARISON FOR COMPLIANCE WELLS								
CHEMICALS OF CONCERN	Soil Source Rep. Conc. ¹	Allowable Soil Conc. ²	E/ NE	GW Source Rep. Conc. ³	Allowable GW Conc. at a POC ⁴	E/ NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/ NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/ NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/ NE
	[mg/kg]	[mg/kg]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]	
COMPLIANCE WELL NO.	MW-3/MW-5/MW-6/MW-7			MW-3			MW-2			MW-1			MW-5		
DISTANCE FROM SOURCE	14/14/31/50			14			13			14			14		
RECENT TREND				Fluctuating			Fluctuating			Fluctuating			Fluctuating		
ORGANICS															
Benzene	7.2	0.441	E	31.7	0.389	E	31.7	0.389	E	4.11	0.389	E	31.7	0.389	E
Toluene	372	184	E	65.6	77.7	NE	87.8	77.7	E	8.46	77.7	NE	65.6	77.7	NE
Ethylbenzene	111	184	NE	12.9	54.4	NE	23	54.4	NE	5.17	54.4	NE	37.6	54.4	NE
Xylenes (Total)	698	601	E	73.2	175	NE	144	175	NE	35.4	175	NE	224	175	E
MTBE	0.2	0.479	NE	547	1.55	E	547	1.55	E	0.5	1.55	NE	547	1.55	E
Anthracene	0.0275	13.5	NE	0.00425	0.0434	NE	0.00425	0.0434	NE	0.0017	0.0434	NE	0.00425	0.0434	NE
Benzo(a)anthracene	0.0564	44.4	NE	0.0085	0.0094	NE	0.0085	0.0094	NE	0.0034	0.0094	NE	0.0085	0.0094	NE
Benzo(a)pyrene	0.109	20.7	NE	0.0085	0.00162	E	0.0085	0.00162	E	0.0034	0.00162	E	0.0085	0.00162	E
Benzo(b)fluoranthene	0.0695	24.4	NE	0.0085	0.0015	E	0.0085	0.0015	E	0.0034	0.0015	E	0.0085	0.0015	E
Benzo(g,h,i)perylene	0.0628	14.6	NE	0.0085	0.0007	E	0.0085	0.0007	E	0.0034	0.0007	E	0.0085	0.0007	E
Benzo(k)fluoranthene	0.0431	13	NE	0.0085	0.0008	E	0.0085	0.0008	E	0.0034	0.0008	E	0.0085	0.0008	E
Chrysene	0.097	8.41	NE	0.0085	0.0016	E	0.0085	0.0016	E	0.0034	0.0016	E	0.0085	0.0016	E
Fluoranthene	0.0944	134	NE	0.00425	0.206	NE	0.00425	0.206	NE	0.0017	0.206	NE	0.00425	0.206	NE
Fluorene	0.0891	202	NE	0.00425	1.98	NE	0.00425	1.98	NE	0.0017	1.98	NE	0.00425	1.98	NE
Naphthalene	8.5	29.2	NE	31.7	1.55	E	31.7	1.55	E	2.5	1.55	E	31.7	1.55	E
Phenanthrene	0.0784	186	NE	0.00425	1	NE	0.00425	1	NE	0.0017	1	NE	0.00425	1	NE
Pyrene	0.0834	121	NE	0.00425	0.135	NE	0.00425	0.135	NE	0.0017	0.135	NE	0.00425	0.135	NE
METALS															
Arsenic															
Barium															
Cadmium															
Chromium VI															
Lead															
Zinc															

NOTE: Use the ARBCA Computational Software to calculate the allowable (i) soil source conc., (ii) GW source conc., and (iii) compliance well conc.

Page 1 of 6

1: The soil source representative concentrations have to be calculated and entered here.

2: Allowable soil concentrations at the source protective of groundwater at the POE.

3: The groundwater source representative concentrations have to be calculated and entered here.

4: Allowable groundwater concentrations at the source protective of groundwater at the POE.

5: Representative concentrations in the compliance well.

6: Allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

E: Representative concentration exceeds allowable concentration.

NE: Representative concentration does not exceed allowable concentration.

Recommended Attachment: A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC.

ARBCA SUMMARY REPORT						FORM NO. 29a			
UST Incident No(s): UST 23-03-09			Facility ID: 24464-095-018113						
Date Form Completed: 12-Mar-25			Form Completed By: Michael Kotar						
TIER 2 ON-SITE TARGET LEVELS FOR INHALATION AND INGESTION									
NOTE: The SSTLs listed for each route of exposure are the minimum SSTLs for all the receptors for that particular route of exposure. The Tier 2 on-site target levels are the minimum SSTLs of all routes of exposures within each medium.									
CHEMICALS OF CONCERN	SURFICIAL SOIL		SUBSURFACE SOIL			GROUNDWATER			
	Outdoor Inhalation, Ingestion, & Dermal Contact [mg/kg]	On-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/kg]	Outdoor Inhalation [mg/kg]	On-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/L]	Outdoor Inhalation [mg/L]	Ingestion of Water [mg/L]	On-Site Tier 2 Target Levels [mg/L]
ORGANICS									
Benzene	235	235	0.411	10.5	0.411	16.9	1750	NA	16.9
Toluene	1050	1050	77.3	1050	77.3	526	526	NA	526
Ethylbenzene	482	482	284	482	284	169	169	NA	169
Xylenes (Total)	601	601	114	601	114	175	175	NA	175
MtBE	377	377	803	12500	803	29300	48000	NA	29300
Anthracene	13.5	13.5	13.5	13.5	13.5	0.0434	0.0434	NA	0.0434
Benzo(a)anthracene	44.4	44.4	44.4	44.4	44.4	0.0094	0.0094	NA	0.0094
Benzo(a)pyrene	20.7	20.7	20.7	20.7	20.7	0.00162	0.00162	NA	0.00162
Benzo(b)fluoranthene	24.4	24.4	24.4	24.4	24.4	0.0015	0.0015	NA	0.0015
Benzo(g,h,i)perylene	14.6	14.6	14.6	14.6	14.6	0.0007	0.0007	NA	0.0007
Benzo(k)fluoranthene	13	13	13	13	13	0.0008	0.0008	NA	0.0008
Chrysene	8.41	8.41	8.41	8.41	8.41	0.0016	0.0016	NA	0.0016
Fluoranthene	134	134	134	134	134	0.206	0.206	NA	0.206
Fluorene	202	202	202	202	202	1.98	1.98	NA	1.98
Naphthalene	280	280	101	490	101	31	31	NA	31
Phenanthrene	186	186	186	186	186	1	1	NA	1
Pyrene	121	121	121	121	121	0.135	0.135	NA	0.135
METALS									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTE:
NA: Not Available

UST Incident No(s): UST 23-03-09	Facility ID: 24464-095-018113
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Date Form Completed: 12-Mar-25	Form Completed By: Michael Kotar
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TIER 2 OFF-SITE TARGET LEVELS FOR INHALATION AND INGESTION

NOTE: The SSTLs listed for each route of exposure are the minimum SSTLs for all the receptors for that particular route of exposure. The Tier 2 off-site target levels are the minimum SSTLs of all routes of exposures within each medium.

CHEMICALS OF CONCERN	SURFICIAL SOIL		SUBSURFACE SOIL			GROUNDWATER			
	Outdoor Inhalation, Ingestion, & Dermal Contact [mg/kg]	Off-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/kg]	Outdoor Inhalation [mg/kg]	Off-Site Tier 2 Target Levels [mg/kg]	Indoor Inhalation [mg/L]	Outdoor Inhalation [mg/L]	Ingestion of Water [mg/L]	Off-Site Tier 2 Target Levels [mg/L]
ORGANICS									
Benzene	235	235	0.0628	3.96	0.0628	2.59	1750	NA	2.59
Toluene	1050	1050	7.2	455	7.2	159	526	NA	159
Ethylbenzene	482	482	26.5	482	26.5	169	169	NA	169
Xylenes (Total)	601	601	10.6	601	10.6	131	175	NA	131
MtBE	377	377	74.8	4720	74.8	2730	48000	NA	2730
Anthracene	13.5	13.5	13.5	13.5	13.5	0.0434	0.0434	NA	0.0434
Benzo(a)anthracene	44.4	44.4	44.4	44.4	44.4	0.0094	0.0094	NA	0.0094
Benzo(a)pyrene	20.7	20.7	20.7	20.7	20.7	0.00162	0.00162	NA	0.00162
Benzo(b)fluoranthene	24.4	24.4	24.4	24.4	24.4	0.0015	0.0015	NA	0.0015
Benzo(g,h,i)perylene	14.6	14.6	14.6	14.6	14.6	0.0007	0.0007	NA	0.0007
Benzo(k)fluoranthene	13	13	13	13	13	0.0008	0.0008	NA	0.0008
Chrysene	8.41	8.41	8.41	8.41	8.41	0.0016	0.0016	NA	0.0016
Fluoranthene	134	134	134	134	134	0.206	0.206	NA	0.206
Fluorene	202	202	202	202	202	1.98	1.98	NA	1.98
Naphthalene	280	280	9.44	490	9.44	4.31	31	NA	4.31
Phenanthrene	186	186	186	186	186	1	1	NA	1
Pyrene	121	121	121	121	121	0.135	0.135	NA	0.135
METALS									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTE:
NA: Not Available

ADEM FORMS

UST RELEASE FACT SHEET

GENERAL INFORMATION:

SITE NAME: Qwik-Sak Vulcan
ADDRESS: 1170 Curry Highway & Airport Road
Jasper, Walker County, Alabama

FACILITY I.D. NO.: 15201-127-013351
INCIDENT NO.: UST23-12-01

RESULTS OF EXPOSURE ASSESSMENT:

How many private drinking water wells are located within 1,000 ft. of site?

1

How many public water supply wells are located within 1 mile of the site?

0

Have any drinking water supply wells been impacted by contamination from this release?

No

Is there an imminent threat of contamination to any drinking water wells?

☐ Yes ☒ No

Have vapors or contaminated groundwater posed a threat to the public?

☐ Yes ☒ No

Are any underground utilities impacted or imminently threatened by the release?

☒ Yes ☐ No

Have surface waters been impacted by the release?

☐ Yes ☒ No

Is there an imminent threat of contamination to surface waters?

☐ Yes ☒ No

What is the type of surrounding population?

Commercial/Residential

CONTAMINATION DESCRIPTION:

Type of contamination at site: ☒ Gasoline, ☐ Diesel, ☐ Waste Oil
☐ Kerosene, ☐ Other _____

Free product present in wells? ☐ Yes ☒ No Maximum thickness measured: N/A

Maximum TPH concentrations measured in soil: N/A

Maximum BTEX or PAH concentrations measured in groundwater: 18.52 mg/L in MW-1 (09/26/23)

ADEM GROUNDWATER BRANCH
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:	Qwik-Sak Vulcan
SITE ADDRESS:	1170 Curry Highway & Airport Road
	Jasper, Walker County, AL
FACILITY I.D. NO.:	15201-127-013351
UST INCIDENT NO.:	UST23-12-01
OWNER NAME:	Vulcan Oil Company, Inc
OWNER ADDRESS:	P.O. Box 100
	Shannon, AL 35142
NAME & ADDRESS OF PERSON COMPLETING THIS FORM:	Alecia Hamilton
	Three Notch Group, Inc.
	700 Southgate Drive, Suite A
	Pelham, AL 35124

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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A.2	Vapor concentrations at or approaching explosive levels are present in subsurface utility system(s), but no buildings or residences are impacted.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B.2	An active domestic water supply well, domestic water supply line or domestic surface water intake is impacted or immediately threatened.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B.3	The release is located within a designated Wellhead Protection Area I.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D.2	A non-potable water supply well is impacted or immediately threatened.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
F.2	Groundwater is impacted and a domestic well is located within 1,000 feet of the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.3	Contaminated soils and/or groundwater are located within designated Wellhead Protection Areas (Areas II or III).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CLASS H	SHORT TERM THREAT TO HUMAN HEALTH, SAFETY, OR SENSITIVE ENVIRONMENTAL RECEPTORS		
H.1	Impacted surface water, storm water 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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.2
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ADEM GROUNDWATER BRANCH
SITE CLASSIFICATION CHECKLIST (5/8/95)

TASKS PERFORMANCE SUMMARY

TASK PERFORMANCE SUMMARY

CAP Evaluation/Development Report

June 2025 (CP-09)

Qwik-Sak Vulcan

1170 Curry Highway & Airport Road

Jasper, Walker County, AL

Task Completed by Personnel/Title:	Project Management	Work Plan Preparation/ Review	Cost Proposal Preparation/ Review	Field Work	Data Interpretation/ Tabulations	Drafting	Report Preparation/ Review	Payment Request Preparation/ Review
Alec Black, PG							X	
David Dailey, PE							X	
Michelle Grantham, PM			X					X
Alecia Hamilton, PM	X		X		X			X
John David Galloway, ES/Tech								
Evan Morrison, Tech				WG, GSC				
Ray Hollinghead, Drafter						X		
Karen Moore, Admin	X				X		X	
Lee Ann Wagner, Admin			X				X	X
Kim Ballard, Admin			X					X
Leigh Caylor, Admin								X
Michelle Wilson, Admin								

Notes:

DO=Drilling Oversight

BL=Boring Log Description/Soil Classification

WG=Well Gauging

GSC=Groundwater Sample Collection

MEME=MEME Oversight

PM=Project Management

O&M=Routine Operation & Maintenance

HRS=High Resolution Study

DEV=Well Development

SVY=Survey

MEME SYSTEM SPECIFICATIONS

MEME TECHNOLOGY OVERVIEW

Mobile Enhance Multi-phase Extraction (MEME) technology is used to remove volatile organic compounds (VOCs) present in the free phase, dissolved phase, and absorbed phase in the subsurface to cost effectively remediate contaminated sites. This technology has been used for more than 20 years, and it remains as one of the most effective technologies for the remediation of petroleum impacted soil and groundwater.

Three Notch Group, Inc (Three Notch) MEME system removes vapors and liquids simultaneously from the subsurface. Ambient air (approximately 5 cubic feet per minute) is introduced through the casing of monitoring wells, across the groundwater interface, and back up a drop tube, creating turbulence, which provides the ability to extract groundwater. A Dwyer flowmeter is attached to a well head is used to measure the amount of ambient air, which is subtracted from the total flow. Magnehelic vacuum gauges are also used to measure the extraction vacuum, as well as the vacuum applied to the subsurface.

The extracted vapors and liquids are transferred to the MEME system's treatment system, where the liquids are removed in the air/water separator and transferred into a storage tank for proper disposal. The remaining vapors are treated using a forced air thermal oxidation (ThOx) unit and incinerated at up to 1,500 degrees Fahrenheit. The treated air is then discharged into the atmosphere after receiving approval from the Alabama Department of Environmental Management (ADEM).

THREE NOTCH GROUP MEME SYSTEM SPECS

Vacuum System:

- Roots 406 DVJ Vacuum Pump
 - Unit may be operated dry to 24"Hgg
 - 30 HP Motor, XP, 460 Vac 3 Ph 60 Hz, 3550 RPM
 - Direct Coupled
 - Inline Filter
 - Discharge Silencer, custom
 - Acoustical Enclosure - frame style, painted to customer specified color
- Inlet Air/Water Separator
 - Reservoir Capacity, 60 gallon
 - 304 Stainless Steel Construction
 - Impingement Baffle Section
- Extraction Pump, Moyno
 - 304 SS Interconnection vapor pipe
 - 304 SS Water Tank Mounted on Deck approx 1600 gallon
 - Dilution Air 4-20 MA electric actuated valve
 - Jet Port electric actuated valve

20 Ton Trailer, B&B, 25', Pintle Hitch

Generator - Diesel, 45 KW Remote Start

- 460 Vac, 3 Ph, 60 Hz
- NOT acoustically treated but enclosed

Thermal Oxidizer Rated to 7.5 MM Btu/hr

304 SS body and stack

- Propane burner
- Burner and Gas train

On board Propane fuel capacity of 320 gallons

- Four propane tanks mounted on the underside of trailer

Control System

- 30 HP VFD Box for Vacuum Pump
- Line Reactor
- Motor Control Panel for burner fan and extraction pump
- One box combined oxidizer control and system control
- Allen Bradley Micrologix 1400
- Android tablet for remote control
- Cellular Modem
- Local Wireless Network

Instrumentation Includes:

- (2) Vacuum Transmitters before blower
- (1) Pressure Transmitter after blower
- (2) Fox Flow Transmitters blower inlet and jet port
- (3) RTD Transmitters blower inlet, discharge, enclosure
- (2) Oxidizer Thermocouples
- (3) Liquid level switches, separator control
- (3) Liquid level switches, water reservoir

Flame arrestor is included.

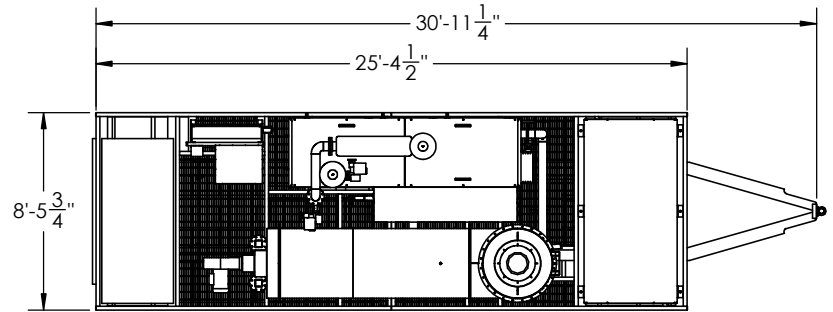
Unit will be fully tested prior to shipment. Control Panel will be UL698a stamped. Customer onsite training will be supplied for 2 days on a site in Alabama and initial training at the pdblowers Gainesville location. The vacuum system will be controlled by a variable frequency drive that will allow it to operate from approximately 400 ACFM (Actual Cubic Feet per Minute) at 4"Hgg to 330 ACFM at 24"Hgg. Maximum vacuum level is 26"Hgg at 150 ACFM. Minimum allowable speed would be 850 RPM operating within design specs. Jet port for the blower operates automatically at higher vacuum levels. This allows the unit to pull a higher vacuum on the process stream.

Deck mounted holding tank (approx 1600 gallons) for extended operation. The tank should be pumped to an acceptable weight before traveling on the road.

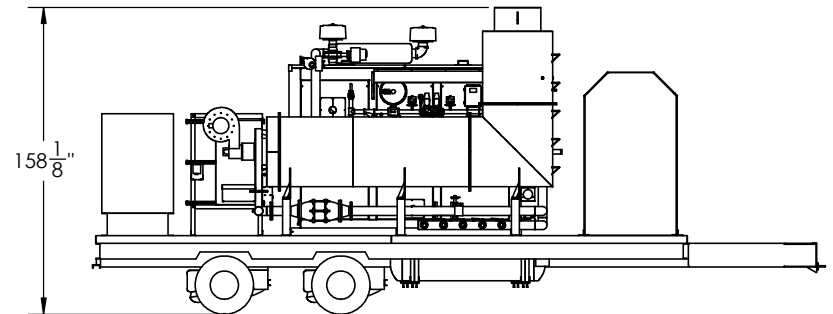
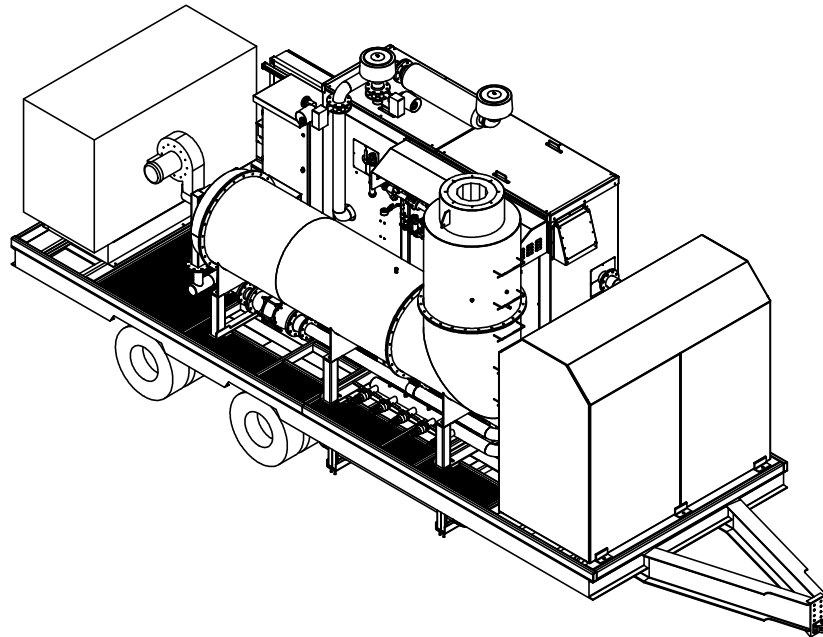
Thermal Oxidizer System

The thermal oxidizer will be designed to consume up to 7.5 MMBtu/hr of fuel and volatile vapors. The vessel will be constructed of 304 SS, 3/16" thick. Combustion air will be supplied by a turbo blower, 5HP with variable frequency drive. Volatile vapors will be introduced into the chamber via the vacuum system discharge and a through a flame arrestor. Combustion air requirements will vary from over 1100 scfm down to 160 scfm depending on Btu requirements.

DWG. NO.
60097



TOP VIEW



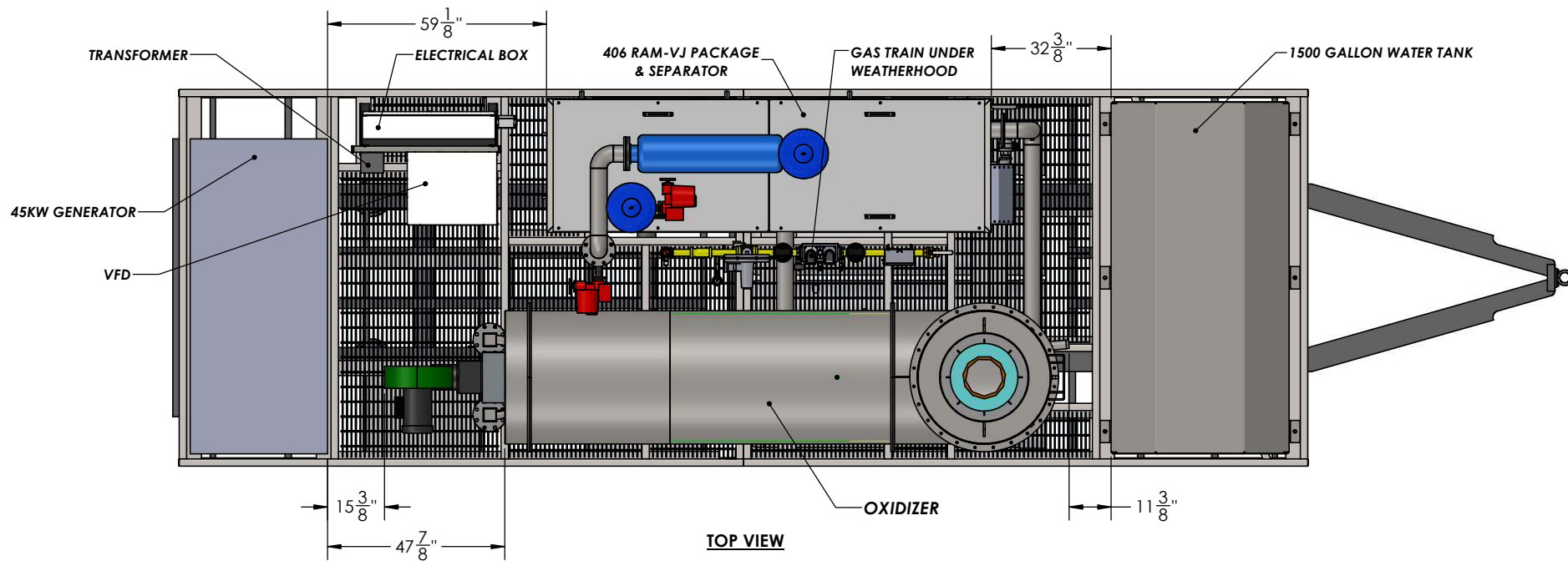
FRONT VIEW

JOB NUMBER	PARENT P/N
403803	
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UNLESS OTHERWISE SPECIFIED:		DRAWN	DATE	NAME
DIMENSIONS ARE IN INCHES		AUTHOR	02/16/21	MH
TOLERANCES:		CHECKED BY		
FRACTIONAL: 1/16"		MFG APPR.		
ANGULAR: MATCH BEND		COMMENTS:		
TWO PLACE DECIMAL				
THREE PLACE DECIMAL				
INTERPRET GEOMETRIC TOLERANCING PER:				
MATERIAL				
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THICKNESS:				
FINISH:				
WEIGHT: 40920.40				

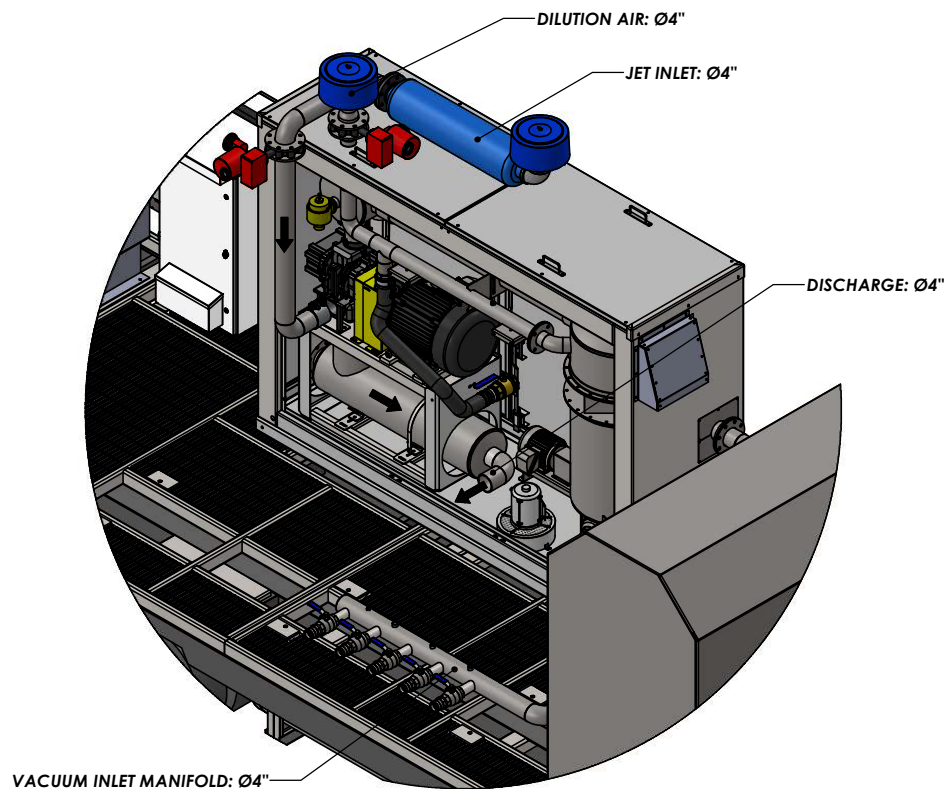
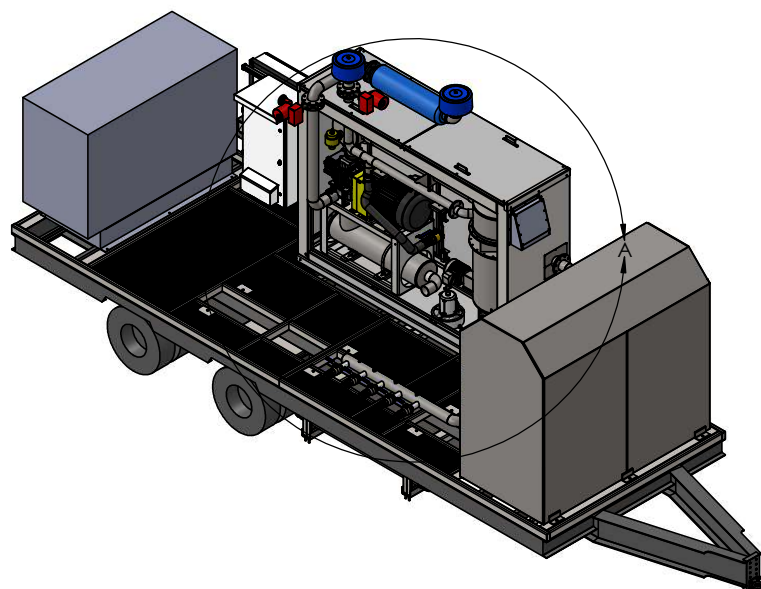
pdbl ^o wers Inc	
2280 Chicopee Mill Road SW • Gainesville, GA • 30504 800-536-9933	
TITLE: TRAILER, REMEDIATION 45KW GENERATOR 406VJ, THERMOX	
SIZE	DWG. NO.
B	60097
SCALE: 1:48	
SHEET 1 OF 3	

DWG. NO.
60097




JOB NUMBER	PARENT P/N
403803	
MATERIAL SEE BOM	
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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: $\pm 1/16$ " ANGULAR MATCH: ± 1 DEGREE TWO PLACE DECIMAL: ± 0.01 " THREE PLACE DECIMAL: ± 0.001 "				DRAWN	DATE	NAME	 2280 Chicopee Mill Road SW • Gainesville, GA • 30504 800-536-9933
INTERPRET GEOMETRIC TOLERANCING PER:				AUTHOR	02/16/21	MH	
MATERIAL: SEE BOM				CHECKED BY			
THICKNESS:				MFG APPR.			
FINISH:				COMMENTS:			
WEIGHT: 40877.72							
				TITLE: TRAILER, REMEDIATION 45KW GENERATOR 406VJ, THERMOX			
				SIZE DWG. NO. REV			
				B 60097			
				SCALE: 1:28 SHEET 2 OF 3			



DETAIL A
SCALE 1 : 28

<div>UNLESS OTHERWISE SPECIFIED:</div> <div>DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± .005 ANGULAR: ± .01 TWO PLACE DECIMAL: ± .01 THREE PLACE DECIMAL: ± .001</div>		DRAWN	DATE	NAME	<div></div> <div>7280 Chippewee Mill Road SW • Gainesville, GA • 30504 800-536-9933</div>
		AUTHOR	02/16/21	MH	
		CHECKED BY			
		MFG APPR			
<div>JOB NUMBER PARENT P/N</div> <div>403803 </div>		COMMENTS:			TITLE:
					TRAILER, REMEDIATION 45KW GENERATOR 406VJ, THERMOX
<div>PROPRIETARY AND CONFIDENTIAL</div> <div>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PDABLERS, INC. ANY REPRODUCTION WITHOUT THE WRITTEN PERMISSION OF PDABLERS, INC. IS PROHIBITED.</div>		INTERPRET GEOMETRIC TOLERANCING PER:			<div>SIZE DWG. NO. REV</div> <div>B 60097 </div> <div>SCALE: 1:50 SHEET 3 OF 3</div>
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