MODIFIED CORRECTIVE ACTION PLAN (CP-42)

Mr. John Cosby
Petro
ADEM Facility ID: 22292-047-005237
UST Incident Number: UST13-09-02
907 Broad Street
Selma, Alabama 36701
(Dallas County)

January 8, 2025

Prepared for:
Mr. John Cosby
P.O. Box 231178
Montgomery, Alabama 36123-1178

Prepared by:
SPHERE 3 ENGINEERING, INC
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SPHERE 3 File: JC.PET.42

SPHERE 3
ENGINEERING, INC

CERTIFICATION PAGE

I certify under penalty of law that this Modified Corrective Action Plan and all 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

Greg Hoagland, P.E.

21581

Registration Number

January 8, 2025

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TEXT

FIGURES

APPENDICES

I. ADEM UST INCIDENT FORMS

Underground Storage Tank (UST) Release Fact Sheet

GENERAL INFORMATION:

SITE NAME: **Petro (now as Mid City Mart)**

ADDRESS: **907 Broad Street; Selma, Dallas County, AL**

FACILITY I.D. NO.: **22292-047-005237**

UST INCIDENT NO.: **UST13-09-02**

RESULTS OF EXPOSURE ASSESSMENT:

How many private drinking water wells are located within 1,000 feet of site? **None**

How many public water supply wells are located within 1 mile of site? **Two (2)**

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? **No**

Have vapors or contaminated groundwater posed a threat to the public? **No**

Are any underground utilities impacted by the release? **No**

Have surface waters been impacted by the release? **No**

Is there an imminent threat of contamination of surface waters? **No**

What is the type of surrounding population? **Commercial/Residential**

CONTAMINATION DESCRIPTION:
Type of contamination at site: {**X**} Gasoline { } Diesel { } Waste Oil { } Kerosene { } Other:
Free product present in wells? { } Yes {**X**} No
Historical maximum select COCs concentrations measured in soil: **2.030 mg/kg benzene / 0.022 mg/kg MTBE / 17.500 naphthalene**
Historical maximum select COCs concentrations in groundwater: **19.100 mg/L benzene / 2.630 mg/L MTBE / 2.480 mg/L naphthalene**

ADEM 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:	Petro (now as Mid City Mart)
SITE ADDRESS:	907 Broad Street
	Selma (Dallas County) Alabama 36701
FACILITY I.D. NO.:	22292-047-005237
UST INCIDENT NO.:	UST13-09-02
OWNER NAME:	Mr. John Cosby
OWNER ADDRESS:	P.O. Box 231178; Montgomery, Alabama 36123
NAME & ADDRESS OF PERSON COMPLETING THIS FORM:	Greg Hoagland, P.E. SPHERE 3 Engineering, Inc.
	3433 Sierra Drive; Hoover, Alabama 35216

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.	☒	☐
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.	☐	☒
GLASS 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:	F.1

II. INTRODUCTION

General

SPHERE 3 Engineering, Inc. (SPHERE 3) was retained by Mr. John Cosby to prepare a Modified Corrective Action Plan (CAP) for his Underground Storage Tank (UST) facility known as Petro, located at 907 Broad Street in Selma, Alabama (see Figures 1 and 2). The objective of the Modified CAP is to design a Multiphase Extraction (MPE) system in an effort to efficiently remediate the subsurface soils and local groundwater to the Site Specific Target Levels (SSTLs). The Modified CAP has been prepared in accordance with the Alabama Department of Environmental Management (ADEM) regulation R: 335-6-15-.08, .27 and .29 and the Alabama UST Release Investigation and Corrective Action Guidance Manual. Costs associated with development and implementation of the Modified CAP are eligible for reimbursement by the Alabama Tank Trust Fund (ATTF).

III. PROPOSED REMEDIATION METHODS

Soil, Free Product, and Groundwater Remediation Methods

SPHERE 3 recommends a typical Multiphase Extraction (MPE) system to remediate the subsurface soils and local groundwater. The design of the MPE system will be interpreted from the data generated and procedures used during the numerous Mobile Enhanced Multiphase Extraction (MEME) events previously conducted at the facility.

The subsurface soils consist predominantly of iron and mica-rich, very sandy unconsolidated sediments, with thin, lenticular clay layers.

For practical purposes, the design criteria (capture zone and liquid yield) of the proposed MPE system will be conservatively based upon MPE systems and Mobile Enhanced Multiphase Extraction (MEME) events initiated at facilities of similar lithology. The capture zone or zone of influence per extraction point will be defined as the radius about each extraction point at which a minimum potentiometric influence of 0.10 feet in native, undisturbed soils may be observed under application conditions. The number of extraction points is determined by applying as many capture zones as necessary to cover the source area and the centroid of the dissolved and adsorbed (soils) plume. The liquid yield will be determined as the product of the number of extraction points multiplied by the start-up well yield per extraction point.

According to data generated through applications at similar lithologies, an influence in the groundwater table of 0.10 feet is conservatively interpreted at an average radial distance of 20 feet and an average start-up well yield of 2 gallon per minute (gpm) per extraction point is possible. The

number of capture zones necessary to conservatively capture the COCs and free product plume is eight (8) (see Figure 8). The start-up liquid yield is then estimated as 16 gpm. The liquid yield could and will likely decrease as the storage of the targeted aquifer is depleted during sustained periods of system operation.

MPE System Design

A MPE system will be used to remediate the on-site subsurface soils, free product, and dissolved COCs. RNA will be utilized to monitor the passive reduction of COC levels in the remaining wells, including the area defined by monitor wells MW-2, MW-4 and RW-21.

For this application, SPHERE 3 is proposing a system manufactured by MK Environmental of Lombard, Illinois, fully integrated within an enclosed portable building. The design specifications of the system will be detailed in subsequent text.

The proposed MPE well network will encompass four (4) extraction points (see Figure 8). Each proposed MPE well will be newly constructed to a targeted depth of 20 feet below the ground surface (bgs) using 4-inch Schedule 40 PVC materials, including 15 feet of 0.01-inch slotted well screen. A cross sectional diagram of the typical construction of the proposed extraction wells is provided as Appendix A. Soil sampling at the MPE wells is not proposed.

By applying MPE technology, subsurface vapors, dissolved phase hydrocarbon, and free product will be removed, under negative pressure conditions, through a drop tube assembly (stinger) constructed at each extraction point. Each stinger will be constructed with 1½-inch diameter flexible, schedule 40 PVC hose. The negative pressure will be generated by a water sealed liquid ring pump (LRP).

Each extraction well will be fitted with a 24-inch square, traffic-rated manway. Each manway will be secured in a 48-inch square high-strength concrete pad poured and finished to match the existing land grade. Each extraction well will be individually plumbed to the MPE system with below-grade headers constructed with 1.5-inch diameter schedule 40 PVC materials (see Figure 11 Cross Section A-A').

A pre-milled sanitary well seal will be installed at the top of each extraction point to accommodate the stinger. The sanitary well seal will seal each extraction point from atmospheric conditions. An applied vacuum gauge will be installed on each stinger and each extraction well casing. Cam lock fittings will be used to connect the stinger to the respective extraction header. A typical MPE well head connection is presented as Figure 9.

The extraction headers (one per extraction point) will be constructed with 1.5-inch diameter schedule 40 PVC materials with high-pressure fittings (couplings and elbows). A typical section of an extraction header will be twenty (20) feet in length with a 3-inch bell-shaped, slip coupling. Header piping couplings will be sealed with PVC bonding agents to reduce the risk of short circuitry. The extraction header piping will be buried in a series of excavated trenches. The trenches will be excavated approximately 24 inches deep and 24 inches wide. A nominal 3 inches of self-compacting bedding material (3/4" crushed limestone) will be placed at the base of the trenches. After installation of the header piping, a nominal 4 inches of 3/4" crushed limestone

will be placed over the header pipes. The uppermost portion of the trenches will be backfilled with re-compacted soils and sealed with nominal 6 inches of crushed limestone to match the existing surface conditions. Figure 11 (Cross Section A-A') is a diagram of a typical extraction header trench.

Each header will be individually plumbed to a common manifold. Each leg of the extraction manifold will be equipped with an isolation (ball) valve, a negative liquid trap, and a vacuum gauge. A schematic of the MPE manifold is presented as Figure 10. The MPE manifold proposed for this application will be constructed with four (4) legs, one for each application point.

In consideration of the physical properties of the local subsurface soils, which will substantially govern the volumetric air emissions of a proposed MPE LRP, emissions generated by the proposed MPE system will be controlled with vapor-phase carbon granules. The specifications of the vapor-phase carbon component will be detailed in subsequent text. Actual system emissions (prior to vapor-carbon treatment) will be determined at system start-up. Emissions control monitoring is specified in report section *V. Operations & Maintenance Activities*.

All system components, including the emissions control components, and the extraction manifold will be secured within a gated equipment compound. The compound will be constructed with galvanized fencing materials near the center of the southern property (see Figures 8). The compound will be constructed to the dimensions of 18 feet in length and 15 feet wide and perimeter height of 6 feet high (minimum) with nine (9) perimeter column. The perimeter of the compound will be constructed with galvanized fencing materials with privacy slats. Within the compound, SPHERE 3 will spread crushed stone with aerial dimensions of 10 feet wide by 13 feet long. Details of the equipment compound construction are illustrated on Figure 12.

The compound will be serviced with a 200-amp, 3-phase electrical service extending aerially from a new pole to be erected at a location east of the proposed equipment compound. A potable water line will be plumbed to the system to seal and cool the LRP. A telecommunications service line will be constructed for telemetry purposes.

The portable system will consist of a 25-horsepower water sealed LRP capable of producing a 375 ACFM airflow at an operating pressure of -18 inches of Mercury (Hg), a shallow tray SA15b stripperator, rated for up to 15 gallons per minute, two air water separators, and a coalescing oil/water separator. The system will be equipped with an integrated telemetry system, which may be used to remotely monitor and limitedly control the system. Details of the system and the system components are presented as Appendix B.

At the system, the recovered fluids and vapors will be advanced through the following integrated components:

- a series of air/water separators;
- an oil/water separator;
- a shallow tray aerator (groundwater);
- a precipitated minerals and particulate filter, and;

- vapor-phase carbon (air/vapors).

The aerated groundwater effluent will be discharged, under the State's General National Pollutants Discharge Elimination System (NPDES) permit, to a storm sewer inlet situated at the eastern property boundary. The storm sewer likely empties (directly or through a drainage structure) into Valley Creek, a tributary of the Alabama River. Valley Creek is located approximately 3,500 feet west of the facility at an approximate elevation of 160 feet above mean sea level (amsl). The Alabama River is located approximately 3,800 feet south of the facility at an approximate elevation of 75 feet amsl. See Figure 1. A NPDES permit application will be executed upon approval of the CAP.

The groundwater effluent will be sampled (monthly) and reported in accordance with the ADEM Permits and Services Division permit requirements. At a minimum, the General NPDES permit requires the following discharge specifications:

pH:	6.0 to 8.5 standard units (su) daily minimum/maximum;
Oil & Grease:	15 mg/L daily maximum;
MTBE:	report the daily maximum in μg/L;
Benzene:	15.5 μg/L daily maximum;
Toluene:	8,723 μg/L daily maximum;
Ethylbenzene:	1,244 μg/L daily maximum;
Total Xylenes:	report the daily maximum in μg/L;
Flow:	report the daily maximum in gpd.

To improve the system's ability to meet the requirements of the State's General NPDES permit, the groundwater processed by the system will be treated with an oil/water separator, an aggressive, high-volume air stripper, and a triple-bag suspended iron and particulate filter. System discharge control monitoring will be specified in report section *V. Operations & Maintenance Activities.*

A 3-inch diameter schedule 40 PVC discharge (effluent) line will be constructed from the equipment compound to an outfall location within the storm sewer inlet at the near the corner of Broad Street (a.k.a. U.S. Highway 22) and J.L. Chestnut Jr. Boulevard (see Figure 8). The discharge conduit will be buried in an excavated trench. The trench will be excavated approximately 20 inches deep and 12 inches wide. A nominal 3 inches of self-compacting bedding material (3/4" crushed stone) will be placed at the base of the trench. After installation of the effluent conduit, a nominal 4 inches of 3/4" crushed stone will be placed over the effluent pipe. The uppermost portion of the trench will be backfilled with re-compacted soils and sealed with 6 inches of 3,500 p.s.i. concrete poured and finished to match the existing parking surface. Figure 11 (Cross Section B-B') is a diagram of a typical effluent conduit trench.

Waste soils generated as a result of the proposed drilling and construction activities will be temporarily stored in a lined 20-yard roll-off container and disposed at the Big Sky Environmental, LLC Subtitle D landfill in Adamsville, Alabama. The waste soils disposal will be certified through the ADEM Land Division.

Emissions generated by the proposed MPE system, will be controlled with vapor-phase carbon granules. Actual LRP air emissions (prior to vapor-carbon treatment) will be determined at system start-up and will be sampled each month. The results of the LRP air emissions will be included in each Corrective Action System Effectiveness Monitoring Report (SEMR). The LRP air emissions will be controlled using two (2) replenishable 400-pound carbon vessels arranged in series. Compliant to ADEM Air Department regulations, emissions of volatile organic compounds (VOCs) shall not exceed 2,000 pounds life-time or 15 pounds per day at maximum rate of 3 pounds per hour. For gasoline UST remediation projects, VOCs are equivalent to gasoline range (C-12 to C-6) organics. System emissions control monitoring will be specified in Section *V. Operations & Maintenance Activities.*

Equipment Controls

Electricity will be distributed to the proposed MPE system equipment through a common control panel. The electrical controls will be constructed within a watertight panel mounted on the LRP skid. The panel will be equipped with the appropriate (soft) motor starters, safety interlocks, auxiliary controls, remote telemetry, and runtime meters. In order to supply the electricity necessary to power the system components, a 200-amp, 3-phase electrical service, extending aerially from a new pole to be erected at a location west of the proposed equipment compound, will be constructed. The electrical service will be distributed through a 200-amp disconnector (lockable) mounted on a selected wall of the equipment enclosure.

Estimated Duration of Clean-up

The estimated time (or duration) of clean-up has been based on the removal of dissolved and adsorbed-phase hydrocarbon. The remediation of the subsurface plume will be governed by the system's ability to capture and treat the local groundwater within the footprint of the highest dissolved phase hydrocarbon. According to Figure 6, the areal extent of the bulk of the dissolved COCs plume has an area of approximately 8,000 square feet (ft^2).

As specified, four (4) MPE application wells are proposed. Assuming:

- uniformity of the subsurface soils;
- consistency of the horizontal and vertical groundwater velocities, and;
- each point will capture vapors and groundwater at the same efficiency.

At equal distribution (or equal recovery), each MPE application well will have an ultimate capture area of approximately 2,000 ft^2/extraction well.

According to slug testing data collected as part of the Secondary Investigation, the saturated Darcy Velocity is approximately 25 feet/year. Assuming:

- a uniform thickness of the dissolved phase plume;
- an equal, consistent, sustained cumulative drawdown of each extraction point, and;
- a negative soil pore pressure (under MPE conditions) hydraulic motion enhancement factor of 7x
- a depleted storage factor of 5%

A MPE enhanced unit availability of 425.5 ft^2/year/extraction well can be estimated as the circular area defined by a MPE-operations enhanced saturated hydraulic conductivity [(7 x (1-0.05) x 1.75 feet)^2 x π].

The estimated time for clean-up may be expressed in consideration of the ultimate capture area of each extraction point and the unit availability of the dissolved phase plume:

$$Duration_{Clean\text{-}up} = Area_{Capture} \div Availability_{MPE\ Enhanced}$$

$$Duration_{Clean\text{-}up} = 2{,}000\ ft^2/\text{extraction well} \div 425.5\ ft^2/\text{year/extraction well}$$

$$Duration_{Clean\text{-}up} = 4.70 \text{ years or } \sim 5 \text{ years}$$

Construction and Equipment Costs Comparisons

To provide a competitive cost analysis for the purchase of the system equipment and the installation activities associated with the Corrective Action system, SPHERE 3 solicited two (2) separate bids for the equipment purchase and two (2) separate bids for the system installation from local, reputable companies with experience in this type of construction.

The equipment bids were solicited from Sepco of Madison, Mississippi and MK Environmental of Lombard, Illinois. The quotes were received as follows:

- MK Environmental $138,684.00
- Sepco $140,445.00

The equipment quotes are presented in Appendix C. Each bid includes comparable equipment components, which meet or exceed the specifications proposed herein. Therefore, of the bids received, SPHERE 3 recommends the equipment proposed by MK Environmental.

In an effort to conduct a competitive cost comparison for the installation of the proposed Corrective Action system, SPHERE 3 solicited quotes from Curtis Service, Inc. of Oneonta, Alabama and All Star Construction of Orange Beach, Alabama. The comparison is as follows:

- Curtis Service, Inc. $68,700.00
- All Star Construction $69,400.00

Each bid includes:

1. construction of the MPE header piping network trenches;
2. construction of the treated water (NPDES) effluent conduit and outfall;
3. construction of the potable water supply service line;
4. construction of the equipment compound, and;
5. crane placement and anchoring of all equipment.

The construction services quotes are presented in Appendix C. Each bid includes comparable materials and services, which meet or exceed the specifications proposed herein. Therefore, of the bids received, SPHERE 3 recommends the use of Curtis Service, Inc. Because of substantial fluctuations in the costs of materials generated by processes which rely on the use of crude oil products or include copper, all bids are guaranteed for only 60 days.

The construction of the electrical service will require a separate license, permit and inspection. In an effort to conduct a competitive cost comparison, SPHERE 3 solicited a quote from Tortorice Electrical Service, Inc. of Bessemer, Alabama, a reputable, licensed electrical contractor familiar and experienced with this type of construction. Their bid is as follows:

- Tortorice Electrical Service, Inc. $9,500.00

The electrical service construction quote is presented in Appendix C. Because of substantial fluctuations in the costs of materials generated by processes which rely on the use of crude oil products or include copper, all bids are guaranteed for only 60 days.

SPHERE 3 and its personnel will provide the materials necessary for and the construction of:

1. the MPE manifold (with 4 legs);
2. the MPE manifold to LRP connection;
3. the exhaust stack at the effluents;
4. the particulate filter (from the air stripper) connection;
5. the treated water discharge connection, and;
6. the MPE header to MPE extraction well connections (including stinger) (4).

Required Utilities

The proposed MPE system will require 200 amps of 3-phase, 230 volts of electricity, preferably supplied through a closed delta transformer arrangement. The area is serviced by Alabama Power Company (APCO). SPHERE 3 personnel have notified APCO of the probable requirements. In response, APCO representatives stated that all APCO equipment upgrade charges would be waived. In that consideration, SPHERE 3 has opted to estimate the APCO service construction cost as $0.00 (zero dollars). If a cost is incurred as part of the APCO construction, the amount charged by APCO plus the standard passthrough charge will be sought for reimbursement and an addendum will be prepared upon receipt of the APCO invoice.

The proposed MPE system will also require a potable tap water service. The area is serviced by Selma Water & Sewer. According to Ms. Donna Mason of the Water Department, a tap service charge of $625.00 and a service deposit of $200.00 would be required.

Telephone services will be provided by MK Environmental. This service is cellular and is provided for telemetry services. The cost of this services is $109.45/month

Operations Permitting

The proposed Corrective Action system will require Notices of Intent (NOIs) filed with the ADEM Air Division and the ADEM Permits and Services Division (NPDES Permit). The NOIs will be completed and all fees (where applicable) will be paid upon approval of this CAP.

IV. RATIONALE FOR SELECTION OF REMEDIATION ALTERNATIVES

Selection of the site remediation methods is based on a number of factors. Several of the main factors considered for the selection of the remedial action system include the exposure assessment, the site hydrogeology, the feasibility of implementing a selected corrective action based on previously conducted Corrective Action, cost, operation and maintenance, disposal options, and site location.

Utilization of a MPE system has been demonstrated to be effective technique of remediation at locations where groundwater is shallow and soil permeability is moderate to low. In addition to physical recovery of the subsurface plume, a MPE application will also enhance the natural biodegradation of hydrocarbon by supplying oxygen to the subsurface microorganisms, which make up a subsurface bioreactor. Under passive conditions, very small quantities of oxygen exist in the subsurface. This oxygen deficient condition is due to the consumption of the oxygen by the bioreactor. Under these anaerobic conditions, biodegradation of hydrocarbon is slow. When a MPE system is operating, air flows through the soil and provides the necessary oxygen to create aerobic conditions. These conditions nourish and enhance growth of the bioreactor and, therefore, increase the rate of the natural biodegradation of the hydrocarbon.

After consideration of these and other remedial alternatives, the MPE technique coupled with vapor-phase carbon (for air emission control) and an aggressive air stripper to strip away the dissolved COCs appears to be the most practical given the subsurface plume conditions and soil matrix.

V. OPERATIONS AND MAINTENANCE ACTIVITIES

Routine Operations and Maintenance

To maintain the integrity of the system during operation, the routine operations and maintenance (O&M) will be scheduled to include seven (7) site visits per quarter. The O&M activities will begin the week following the initial start-up, "dial-in" and initial air quality sampling activities included with system installation and will be implemented according to the following schedule of tasks:

Visit One:	General Maintenance
Visit Two:	Progress Maintenance
Visit Three:	General Maintenance
Visit Four:	General Maintenance
Visit Five:	Progress Maintenance
Visit Six:	General Maintenance
Visit Seven:	Quarterly Cleaning and Groundwater Monitoring

Where the tasks are defined as follows:

General Maintenance:

1. Field measure the emission rate at the exhaust of the MPE Pump;
2. Make operational adjustments as necessary;
3. Collection of ambient temperature and barometric pressure;
4. Collection of applied vacuum pressure data at each extraction point;
5. Collection of MPE exhaust temperature and flow conditions data;
6. Collection of vacuum reduction temperature and flow conditions data;

8.Cleaning and Disposals as necessary;

9. System operation adjustments as necessary;

Progress Maintenance:

10. All included in a General Maintenance visit;
11. Collection of a MPE influent air sample;
12. Analysis of the MPE influent air sample for BTEX, MTBE and TPH;
13. The collection of an influent and effluent water sample at the air stripper;
14. The laboratory analysis of each water sample (air stripper - influent and effluent) for BTEX/MTBE by method 8260B. The effluent sample will also be analyzed for pH (measured in the field), Oil & Grease, naphthalene by method 8260B, and possibly total Lead;
15. The collection of airflow data from each MPE exhaust stack;
16. The collection of volumetric flow data of the effluent water (NPDES discharge);

Quarterly Cleaning and Groundwater Monitoring:

17. All included in a Progress Maintenance visit;
18. Collection of groundwater elevations from all facility monitor wells or collection of groundwater samples from select facility monitor wells, and;
19. Analysis of each groundwater sample for BTEX, MTBE and naphthalene by method 8260B.
20. Thorough cleaning of the compound area.

Periodically, the system's oil/water separator and air stripper (the stripperator) will require evacuation of oily sludge and precipitated mineral deposits. The sludge and mineral deposits occur as part of the normal operation of the stripperator and must be conducted by someone with the capacity to manage and dispose of such waste. The frequency of the sludge and mineral evacuation will be determined after the system has been operational of a period of approximately 60 days. Initially, funding for cleaning the stripperator will be requested in the form of an addendum to a current ATTF Cost Proposals. As the cleaning frequency is confirmed, the costs will be included in the appropriate ATTF Cost Proposals.

Operations and Maintenance Personnel

The General & Progress Maintenance routines will be perform by an experienced, qualified technician who is familiar the particular system. The same technician and an accompanying support technician will perform each quarterly monitoring event. All on-site personnel will be qualified as a Hazardous Materials Handling representatives trained under the OSHA standard 29 CFR 1910.

VI. PROPOSED REPORTING REQUIREMENTS

A schedule of implementation will be submitted within fifteen (15) days of the approval of the CAP Modification. All data and findings associated with the operations & maintenance of the corrective action system will be reported in quarterly reports.

VII. SCHEDULE OF IMPLEMENTATION

The CAP Modification will be implemented within 60 days of approval.

VIII. QUALITY ASSURANCE/QUALITY CONTROL PLAN

Air Sampling

Air samples are collected utilizing a "Pulse Pump" (air sampling) pump. The pump is primed, prior to collection of each sample, to displace any trapped air or gases with the targeted air make-up. The air is drawn in and exits through polyethylene tubing. The sample is stored a Tedlar® air/gas sampling bag. The pump is also used to extract air/gases from a vacuum and drive them into a field screening instrument. The air sample collection and screening protocols are described below.

Air Screening

Air screening is conducted to provide a field indication of the levels of hydrocarbon gases in vapor phase. The air/gases are screened with a Photoionization Detector (PID) equipped with a methane filter. As stated above, the air/gases are driven into the PID with the air sampling pump. The samples are immediately screened at ambient conditions and the data recorded onto a headspace analysis worksheet.

The field screening test form contains the following information:

1. The project name (client and location);
2. Table number;
3. Personnel collecting the samples;
4. Field screening instrument used and I.D. number;
5. Calibration information;
6. Description of field screening method;
7. Sample identification information; and
8. Field screening data including time collected, time screened, ambient temperature, and field screening reading;

Air Sampling Protocols

Each air sample is submitted for laboratory analysis of BTEX, MTBE and TPH (GRO) by EPA method 18. The air samples are transferred, along with an ample supply of ice, in a cooler to an analytical laboratory following appropriate preservation and chain-of-custody protocols. Preservation protocols are not required for BTEX, MTBE and TPH analysis of air samples.

Soil Sampling

Soil samples are collected from all soil exploration borings following one of the following ASTM Standard Methods: D-1452 (Practice for Soil Investigation and Sampling by Auger Borings); D-1586 (Method for Penetration Test and Split -Barrel Sampling of Soils); or D-1587 (Practice for Thin-Walled Tube Sampling of Soils) (Note: samples collected from the upper 5 feet of each boring are collected with hand auger equipment). Soil samples are typically collected on either a continuous basis or on five-foot centers (i.e. samples intervals 3'-5', 8'-10', 13'-15', etc.). Each soil sample is divided into two portions. One portion is prepared for field screening and one portion is prepared for analytical testing. The soil sample collection and screening protocols are described below.

Soil Screening

Soil screening is conducted to provide a field indication of the relative levels of soil constituent concentrations. In the event that the boring depth is dependent upon the results of the soil screening (vertical extent investigations), the soil samples will be field screened immediately upon collection. Otherwise, the soil samples will be allowed to equilibrate to ambient conditions greater than 60 degrees Fahrenheit for at least one hour prior to soil screening.

The portion of the soil sample collected for field screening is placed in a pint or quart mason type glass jar until the jar is approximately half full. The top of the jar is then sealed with aluminum foil and a threaded lid ring. The sample is screened by puncturing the aluminum seal with the instrument probe and measuring the headspace of the ambient samples. The instrument currently used by SPHERE 3 is a PID. The PID are calibrated prior to headspace sampling and rechecked upon completion of headspace analysis each day. The PID is calibrated to a benzene standard.

Generally, the soil samples with the highest PID readings collected from the unsaturated zone are selected for analytical testing. If groundwater is not encountered in the boring, two soil samples are analyzed from each boring. Typically the deepest soil sample and the sample yielding the highest field screening value are selected for analytical testing. Additional soil samples may be selected for analytical testing, depending on site specific conditions.

Soil Sampling Protocol

All undisturbed soil samples are collected using either split spoon sampler (ASTM D-1586) or a Shelby Tube sampler (ASTM D-1587) (Note: soil samples collected from the upper 3 feet in each boring are collected with hand auger equipment). The sampling is conducted by advancing the borehole to the desired depth using a flight auger or hollow-stem auger. A clean split spoon or Shelby tube sampler is then advanced to the bottom of the hole and hammered or pushed into the soil. The sampler is then retrieved. The split spoon samples are removed by opening the split spoon and removing the sample using a clean stainless steel knife. The Shelby tube samples are removed with a hydraulic extruder. After being removed from the sampler, the sample is then placed on disposable foil-lined sample catchers for classification and analytical preparation. Upon completion of the sample collection, the boring is advanced to the depth of the next sample using the hollow stem or flight augers and the sampling procedure is repeated.

The soil samples selected for analytical testing are placed in laboratory grade 4 oz. glass jars and submitted for appropriate COCs analysis. The sample jars are packed full with soil in an effort to minimize headspace. Each container is sealed with a Teflon® lined cap. Each sample jar is labeled, placed in bubble pack and an airtight "Ziploc" bag, and immediately stored, along with an ample supply of ice, in a cooler. Each sample label includes the site location, sample identification number, name of collector, date and time of collection, and parameter(s) requested (if space permits).

All sample handling is conducted with disposable latex gloves. Between individual samples, all disposable items are discarded and all non-disposable equipment (knives, spatulas, cheese cutters, split spoon samplers and Shelby Tube samplers) are decontaminated utilizing the following procedure:

1) Rinse with potable water to remove bulk solids;
2) Wash with laboratory-grade detergent and potable water solution;
3) Rinse with deionized water;
4) Wash with isopropanol; and
5) Rinse with deionized water.

The soil samples are transferred, along with an ample supply of ice, in a cooler to an analytical laboratory following appropriate preservation and chain-of-custody protocols. Preservation protocols for COCs soil samples include maintaining samples temperatures at or below 4 degrees Celsius at all time. Additional preservatives are not necessary for soil samples.

Groundwater Sampling

Groundwater samples are collected approximately 7 to 14 days after monitor well development. Collecting groundwater samples from monitor wells includes the following activities: 1) gauging for the presence of LPH; 2) measurement of static water level; 3) calculation of standing water volume; 4) well purging; 5) sample collection; and 6) equipment cleaning. The results of the sampling activities are recorded on a monitor well sampling record form. The details of these six activities are described in the following sections.

Free Product Measurements

Free product thicknesses (if present) are measured prior to purging and sampling the well with a hydrocarbon/water interface probe. The thickness is measured by lowering the probe slowly into the well until a tone is heard (Note: an intermittent tone indicates the presence of water and a constant tone indicates the presence of free product). The first point, as the probe is lowered into a well, at which a constant tone is first heard, is considered as the top of the free product. The distance from the top of the PVC well casing to the top of the free product is recorded. This distance is confirmed by re-measuring. The probe is then slowly lowered further into the well until an intermittent tone is heard. Upon hearing an intermittent tone, the probe is slowly pulled upward until the constant tone is heard again. This is considered the free product/water table interface. The distance from the top of the PVC casing to the free product/water table interface is recorded. This distance is confirmed by re-measuring.

The free product thickness is determined by calculating the difference between these two distances (Note: the interface probe measures product and water levels to an accuracy of +/- 0.01 feet). If free product is identified by the interface probe, a clear bailer is lowered in the well to collect a sample of the free product for a visual confirmation.

Static Groundwater Elevation Measurements

The static groundwater levels are measured with the hydrocarbon/water interface probe. The measurements are recorded as the distance from the top of the PVC well casing to the point at which an intermittent tone is emitted from the probe. This distance is confirmed by re-measuring. Subsequently, each measurements is converted to an elevation with respect to either an arbitrary elevation of 100 feet established at the site or to mean sea level as determined from the associated USGS topography map.

Calculations of Standing Water Volumes
The standing water volume in each well is calculated as the volume of a cylinder:

$$\text{Volume} = \pi \times \text{diameter}^2 \div 4 \times \text{height},$$

Where the diameter considered is that of the well casing and the height considered is the length of the water column present in the well.

Well Purging
The well purging process is implemented after the static water level is measured and the standing water volume has been calculated. Well purging is generally achieved with an appropriate bailer.

Well purging with a bailer is conducted by attaching new nylon line to the bailer then lowering the bailer in to the well until the bailer is submerged. The bailer is then retrieved from the well in such a manner that the bailer and nylon line does not come into contact with any potential source of hydrocarbon constituents. In order to determine the amount of water removed from the well, the contents of the bailer is poured into a graduated bucket. This procedure is repeated until three well volumes of water are removed or the well is purged dry.

Groundwater Sample Collection
Groundwater samples are collected from monitor wells not containing LPH. The bailer is lowered into the well to a depth were the bailer is completely submerged. The bailer is then retrieved from the well in such a manner that the bailer and nylon line does not come into contact with any potential source of hydrocarbon constituents. The water is then immediately poured slowly into the sample containers.

Each groundwater sample is submitted for laboratory analysis of BTEX, MTBE & naphthalene by method 8260B. The groundwater is poured slowly down the side of the sample vial to avoid aeration. The sample vial is a laboratory grade 40-ml glass vial with a Teflon® septum cap. Sample is added until a convex meniscus is formed at the top of vial. A Teflon® septum cap is placed and threaded secure on the container. The container is then upended and checked for the presence of trapped air. If air is present, more sample is added and the process repeated until an air-free sample is attained. The preservation of the BTEX, MTBE & naphthalene groundwater samples includes both ice and hydrochloric acid.

Following the collection of groundwater samples, each is labeled, placed in bubble pack and stored, along with an ample supply of ice, in a cooler. Each label includes the site location, sample identification number, name of collector, date and time of collection, and parameter(s) requested (if space permits). The cooler is then sealed and transported overnight to the laboratory follow appropriate chain of custody protocols.

Cleaning of Groundwater Sampling Equipment
All equipment used for sampling is either well dedicated or discarded following the completion of the groundwater sampling activities.

Chain-of-Custody

Sample custody begins with the subcontracted laboratory as sample kits are prepared and submitted to SPHERE 3. Responsibility for sample container materials and preparation lies with the subcontracted laboratory. Sample containers and kits are normally shipped to SPHERE 3 by common carrier. Upon receipt of the kits, SPHERE 3 personnel complete an inventory of its contents to determine adequacy for the sampling program. Sample bottles may be pre-labeled and contain proper preservative. The sample kits are then resecured until ready for use.

Field sampling operations do not normally involve a transfer of sample custody during the project activities. The samples will remain in the custody of the SPHERE 3 personnel until delivered to the subcontract laboratory or dispatched via common carrier for shipment. In cases where samples leave the control of SPHERE 3, such as shipment to a laboratory by a common carrier (e.g. airfreight), a custody seal(s) will be placed on the shipping container. These seals act as a deterrent against vandalism.

To establish the documentation necessary to trace sample possession from time of collection, a chain-of-custody record will be filled out and will accompany every sample. The record contains the following types of information:

- Sample number
- Signature of collector
- Date and time of collection
- Sample type (e.g., ground water, immiscible layer)
- Identification of well
- Number of containers
- Parameters requested for analysis
- Signature of person(s) involved in the chain of possession

Field and Laboratory Quality Control

SPHERE 3 conducts internal quality control checks of sampling procedures and laboratory analyses. Described below is the field and laboratory QA/QC program.

Field QA/QC Program

Groundwater samples may be warranted by means of a trip blank. A trip blank is a field blank that is transported from the laboratory to the sampling site, handled the same as other samples, then returned to the laboratory for analysis in determining QA/QC of sample handling procedures. The trip blank should be filled with distilled water in the laboratory at a frequency of one (1) per cooler.

The results of the analysis of the blanks will not be used to correct the groundwater data. If constituents are found in the blanks, an attempt to identify the source will be initiated and corrective action, including resampling, will be evaluated.

After completion of each sampling program, the field data package (field logs, calibration records, chain-of-custody forms, etc.) will be reviewed by the project manager for completeness and accuracy. The review will include but are not limited to the following:

- A completeness review of field data contained on water and soil sampling logs;
- A verification that sampler rinsate blanks, field blanks, and trip blanks were properly prepared, identified, and analyzed;
- A check on field analyses for equipment calibration and condition;
- A review of chain-of-custody forms for proper completion, signatures of field personnel, and the laboratory sample, custodian, and dates.

Laboratory QA/QC Program

The selection of a contract laboratory is typically based upon several factors including cost; laboratory certification; quality data and reporting; and turn-around time. The most critical factor in the selection of an analytical laboratory is the quality of analysis and reporting.

As an analytical report is received by SPHERE 3, validation of the analytical data package will be reviewed by the project manager. The review will include but not be limited to the following:

- A comparison of the Data Package to the reporting level requirements designed for the project, to ensure completeness;
- A comparison of sampling dates, laboratory extraction dates, and analysis dates to determine if samples were extracted and/or analyzed within the proper holding times;
- A review of analytical methods and required detection limits to verify confirmation with the established parameters;
- A review of the laboratory blank(s) to evaluate handling procedures. The preparation techniques and frequencies, and the analytical results (if appropriate) will be considered.

IX. SELECT REFERENCES

SPHERE 3 Engineering, Inc., January 22, 2014, *Preliminary Investigation Report (CP-1), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., September 9, 2014, *Secondary Investigation Report (CP-2), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., July 14, 2015, *Additional Secondary Investigation Report (CP-3), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., September 28, 2015 through August 28, 2017 (6 reports), *Groundwater Monitoring Report, Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished reports.

SPHERE 3 Engineering, Inc., January 18, 2016, *Alabama Risk Based Corrective Action Tiers 1 and 2 Evaluation (CP-8), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., March 25, 2016, *Corrective Action Evaluation (CP-9), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., August 16, 2016, *Corrective Action Plan (CP-10), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., March 12, 2018, *Recovery Well and Trenching Installation and Groundwater Monitoring Report (CP-12), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., May 28, 2018 through May 24, 2024 (25 reports), *Mobile Enhanced Multiphase Extraction Supplemented Groundwater Monitoring Report, Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished reports.

SPHERE 3 Engineering, Inc., March 31, 2021, *High Resolution Site Characterization Report (CP-28), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

SPHERE 3 Engineering, Inc., February 21, 2022, *Additional Monitor Well Installation Report (CP-33), Petro; ADEM Facility ID: 22292-047-005237; UST Incident Number: UST13-09-02; 907 Broad Street, Selma, Dallas County, Alabama*, unpublished report.

U.S. Geological Survey, 7.5-minute topographic map, Selma, Alabama.

X. LIMITATIONS OF THIS PLAN

SPHERE 3 has prepared this Modified Corrective Action Plan for the facility known as Petro, located at 907 Broad Street in Selma, Alabama in accordance with the ADEM specifications.

The conclusions contained in this report are based upon conditions at the site during the field investigation and on the assumption that the exploratory borings are representative of the subsurface conditions throughout the site.

Reporting and interpretation is based solely on data obtained within this prescribed scope of work performed. Environmental conditions at this site not identifiable with this conducted work scope, if any, should not be considered the responsibility of SPHERE 3.

The only warranty made by SPHERE 3 in connection with the services provided is that we have used the degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended.

XI. SITE HEALTH AND SAFETY PLAN

SPHERE 3 ENGINEERING, INC
3433 Sierra Drive • Hoover, Alabama 35216 • Phone: (205) 403-3317 • Fax: (205) 403-3318

SITE HEALTH and SAFETY PLAN
Corrective Action System Installation

SUBMIT TO: Mr. Greg Hoagland, P.E.; SPHERE 3 Engineering, Inc.; President

PROJECT NAME: Mr. John Cosby
Petro
Corrective Action System Installation

PROJECT NUMBER: JC.PET.XX (where XX = the Cost Proposal number)

DESCRIPTION OF WORK: Trenching, Excavating, Construction

CLIENT CONTACT(S): Mr. John Cosby
P.O. Box 231178
Montgomery, Alabama 36123-1178

PROJECT SITE LOCATION: Petro
907 Broad Street
Selma, Alabama 36701

PROJECT SITE CONTACTS: Mr. John Cosby
P.O. Box 231178
Montgomery, Alabama 36123-1178
Phone: (334) 531-5229

PROJECT SUBCONTRACTORS:

Curtis Service Company	Tortorice Electrical
Mr. Michael Curtis	Mr. Charles Tortorice
Phone: (205) 212-8868	Phone: (205) 424-2698

PROJECT MANAGER: Greg Hoagland, SPHERE 3 Engineering, Inc.
Phone: (205) 403.3317 Cell: (205) 288-4896

ON-SITE MANAGER(S): Tres Bond, SPHERE 3 Engineering, Inc.
Phone: (205) 403.3317 Cell: (205) 288-7460

WORK SCHEDULE: Generally 7:00 a.m. through 5:00 p.m. each visit

SITE DESCRIPTION:

Located in Selma, Alabama, the site and contiguous properties are of commercial and residential designation. The facility property is improved with a convenience store that retails sundry items and motor fuels. Refer to attached area map showing location.

PLANNED SITE ACTIVITIES:

1. Excavating;
2. Trenching, and;
3. General Construction.

KNOWN CHEMICAL HAZARDS:

Component	Location	Media	TWA TLV*	TLV STEL**
Petroleum Distillates	All Site	SWA	400 ppm	--
Gasoline	All Site	SWA	300 ppm	500 ppm
Benzene	All Site	SWA	0.1 ppm	5 ppm
Toluene	All Site	SWA	100 ppm	150 ppm
Xylenes	All Site	SWA	100 ppm	150 ppm
Ethylbenzene	All Site	SWA	100 ppm	125 ppm

Notes:

Values per American Conference of Government Industrial Hygienists (ACGIH) or, 20 CFR Part 1910 (OSHA) whichever is most stringent.

S - soil; W - water; A - air

* The Threshold Limit Value (TLV) is the time weighted average concentration for a normal eight-hour day and forty-hour work week, to which all workers may be repeatedly exposed, day after day, without adverse effect.

** The Short-Term Exposure Limit (STEL) is the concentration at which workers can be exposed continuously for a short period of time. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times in an eight-hour period. There should be at least one hour between each 15 minute exposure at the STEL.

OTHER SUSPECTED CHEMICAL HAZARDS:

No other known. If encountered or suspected, contact Office Safety Manager.

CONCENTRATION MEASUREMENT METHODS:

Activity	Location	Detector*	Survey Method**
Air/Gases Sampling	All Site	PID & LEL	Work area breathing zone
Borehole Installation and Sampling	All Site	PID	Work area breathing zone
Groundwater Sampling	Specific	PID	Sources

Notes:
PID - Photoionization Detector.
* Instruments to be calibrated daily.
** Readings to be taken at a minimum of one per hour and more frequently in more contaminated areas or during critical activities.

ACTION LEVELS:

Activity	Location	Action Level	Precaution
All On-Site	All Site	>50 ppm	Cease activities until levels decrease

POTENTIAL PHYSICAL HAZARDS:

1. Overhead electric lines.
2. Underground electric and natural gas lines, gasoline product transfer lines, etc. (Note: all known utility line locations will be marked by a line-locating company prior to initiating the site activities).
3. Falling objects from the drilling rig (i.e. augers, drill rods, slide hammer, etc.).
4. Potential for explosive conditions.

REQUIRED HEALTH AND SAFETY APPAREL AND PROCEDURES:

All project activities will be conducted under OSHA Health & Safety Level D. Protective equipment will include:

1. Hard hat
2. Safety glasses
3. Steel toe safety boots
4. Orange Safety Vest with Reflectant Tape
5. Sleeved shirt, long pants (coveralls optional).
6. Latex and/or nitrile gloves, if phase material encountered (Tyvek Suits optional).

Smoking is prohibited at the worksite and facility properties. Explosion proof or intrinsically safe equipment must be used in areas designated as hazardous (potentially explosive). At least one class ABC fire extinguisher will be placed in a safe area, accessible to site activities. Access to the work area will be restricted except to essential personnel. A safe distance will be maintained between the work area and public roads and appropriate traffic control will be implemented.

CONTINGENCY PLANS:

If the vapor levels in the general work area are found to meet or exceed any of the action levels, then work will be discontinued and the work site evacuated as directed by the Project Manager (SPHERE 3 representative). The work area periphery will be monitored by the On-Site Manager and work will resume when vapor levels drop below the action levels. If vapor levels continue to meet or exceed action levels, work will cease and the work site will be secured and evaluated. Work shall not continue until the Site Safety Plan is appropriately revised to meet the new conditions.

Should persistent safety hazards, accident or fire occur, take appropriate immediate action if required (i.e., extinguish the fire, give first aid, etc.) and contact emergency personnel immediately, and then contact appropriate SPHERE 3 Safety personnel.

This plan does not override any existing client or site specific safety plan. All subcontractors used on these projects are required to submit safety plans applicable to their prescribed activities.

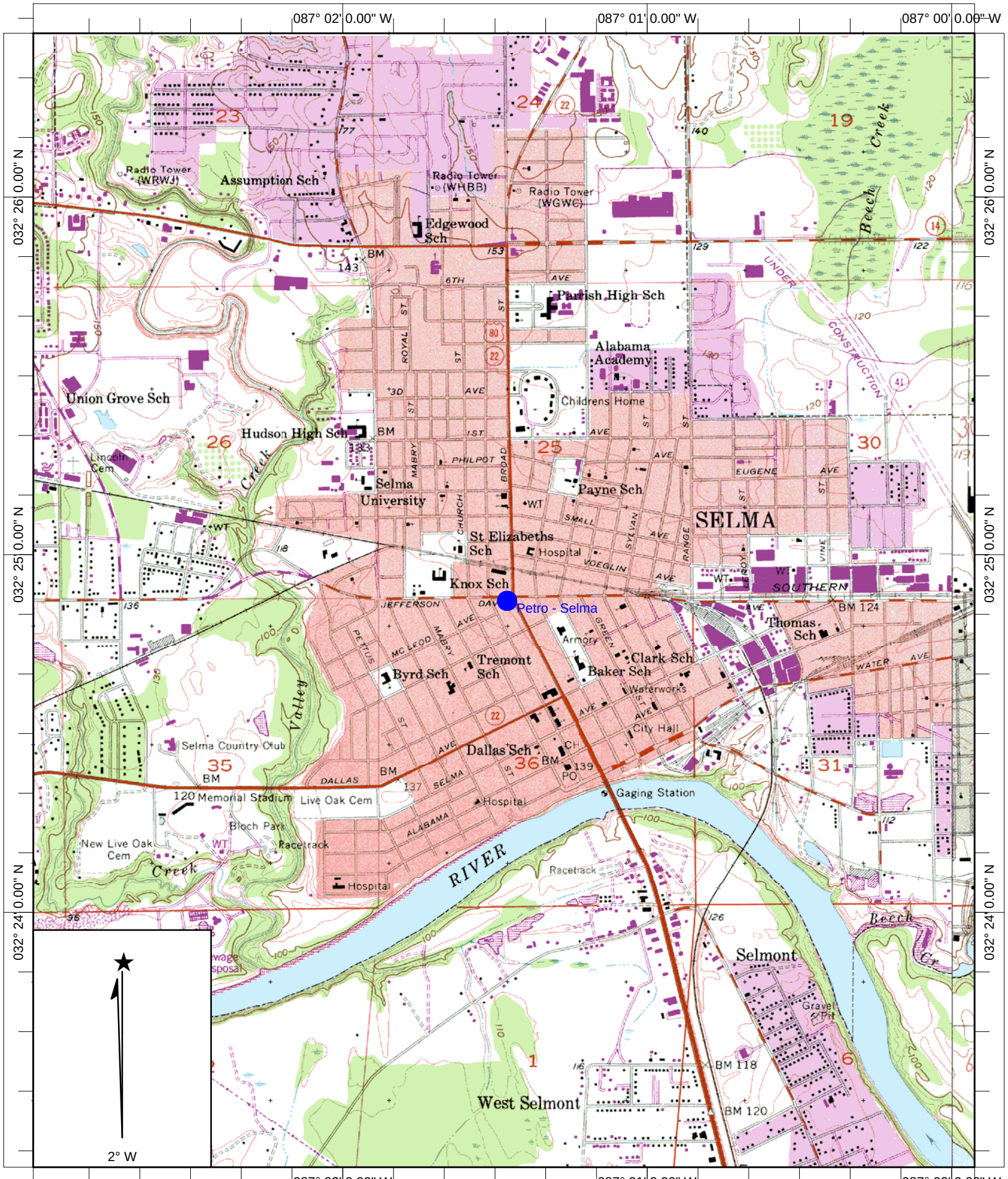
EMERGENCY CONTACTS AND PROCEDURES:

Should any situation or unplanned occurrence require outside or support services, the appropriate contact from the following list should be made.

In Case of Emergency, Dial **911**, other contacts listed below:

Agency	Person to Contact	Telephone
Fire & Rescue	Emergency Dispatcher	911
Police:	Emergency Dispatcher	911
Underground Utilities	Receptionist	1-800-292-8525
SPHERE 3 Project Manager	Greg Hoagland	(205) 403-3317
	Cell	(205) 288-4896

SPHERE 3
ENGINEERING, INC



Name: SELMA
Date: 1/22/2014
Scale: 1 inch equals 2000 feet

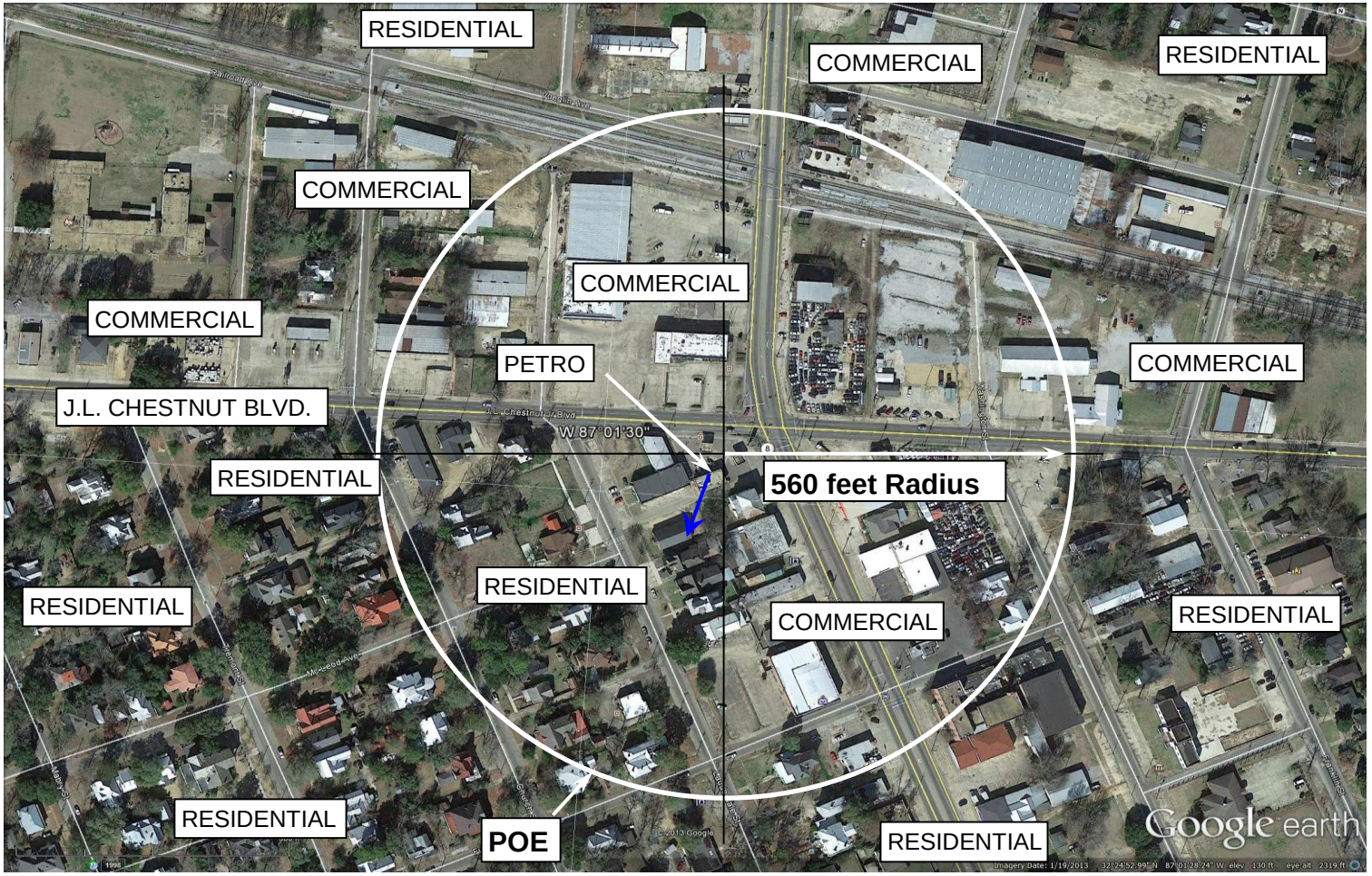
Location: 032° 24' 52.3" N 087° 01' 28.2" W
Caption: FIGURE 1
Area Vicinity (Topo) Map
Petro (UST13-09-02)

CADD FILE NO.: JC.PET

CHECKED BY

MEP

DRAWN BY



LEGEND

Source: Google Earth

POE - (Projected) Point of Exposure

Interpreted Groundwater Flow Direction

DATE	NO.	REVISION	BY
02/06/11	2	Resized to 8.5"x11"	GTD
05/17/05	1	Border Adjustments	JGH

SPHERE 3
ENGINEERING, INC

MR. JOHN COSBY

MONTGOMERY, ALABAMA

MODIFIED CORRECTIVE ACTION PLAN
Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SITE VICINITY MAP

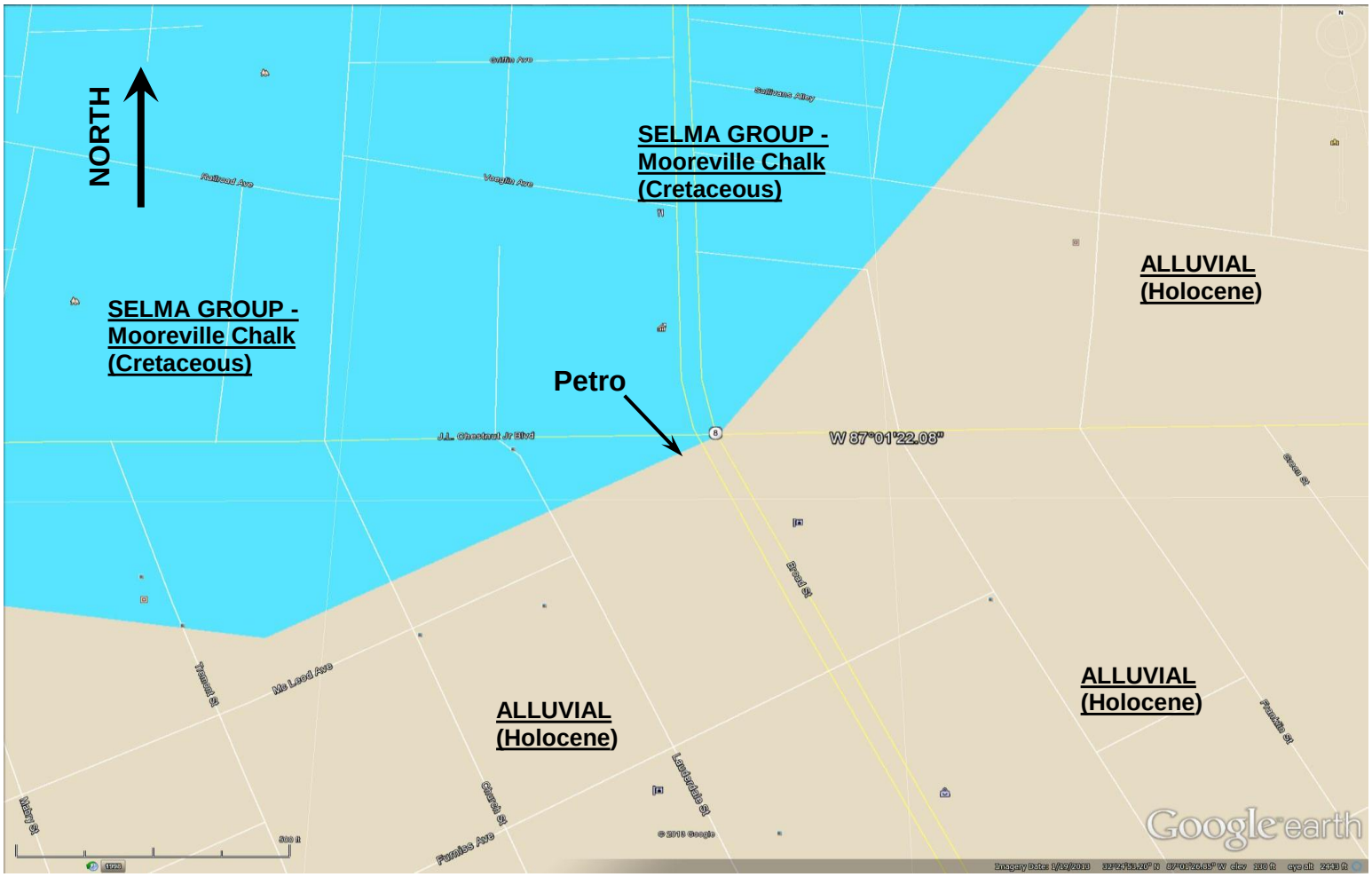
2
Figure

CADD FILE NO.: JC.PET

CHECKED BY

MEP

DRAWN BY



LEGEND

Source: Google Earth

DATE	NO.	REVISION	BY
02/06/11	2	Landscaped	GTD
05/17/05	1	Border Adjustments	JGH

SPHERE 3
ENGINEERING, INC

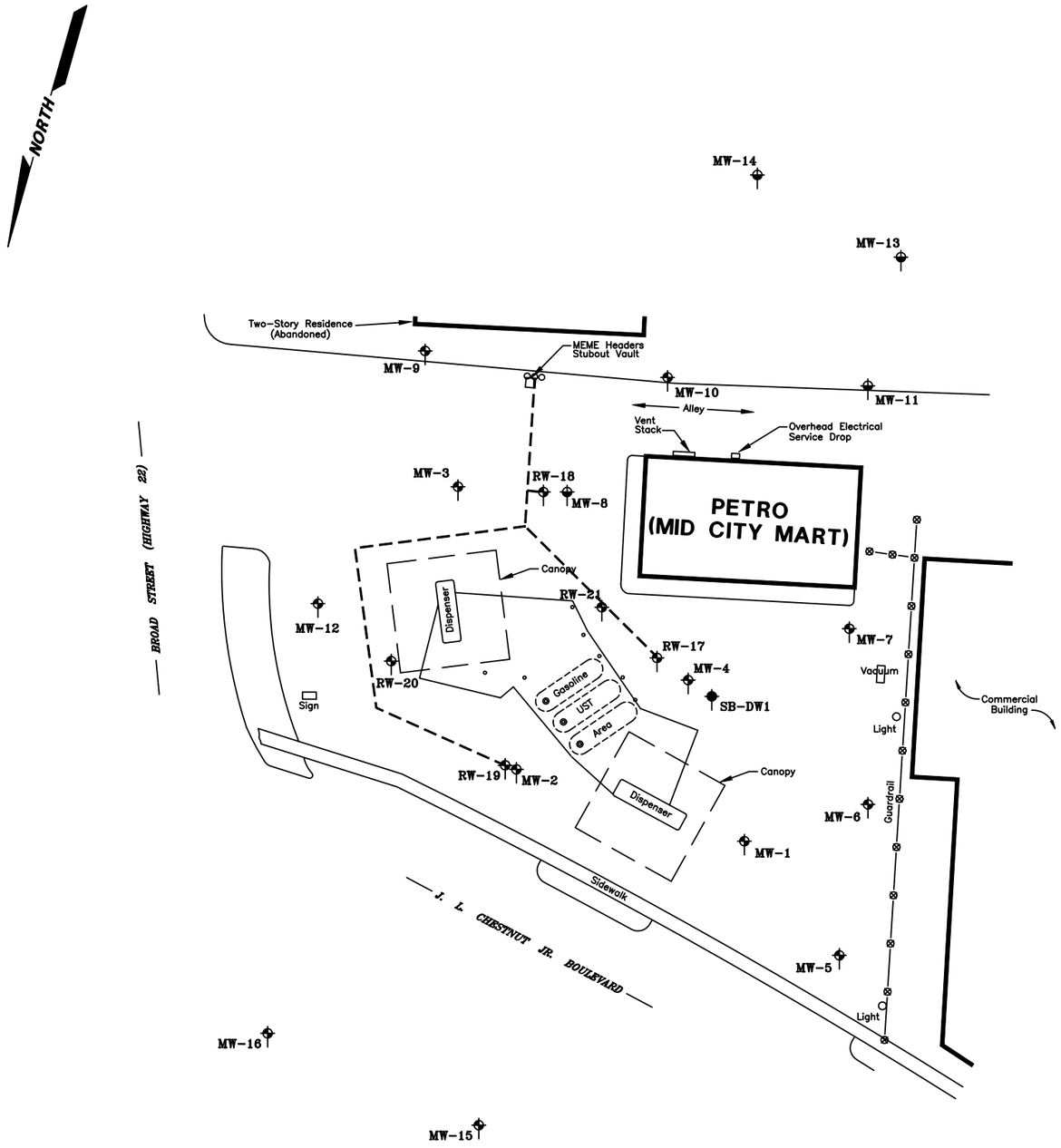
MR. JOHN COSBY
MONTGOMERY, ALABAMA

MODIFIED CORRECTIVE ACTION PLAN
Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

GEOLOGIC MAP

3
Figure

DRAWN BY | M.E.P. | CHECKED BY | CADD FILE NO. JC.PET



LEGEND

- Soil Exploration Boring
- Soil Exploration Boring/Type II Monitor Well
- Missing Soil Exploration Boring/Type II Recovery Monitor Well

0 Feet 30
Scale

SPHERE 3
ENGINEERING, INC

DATE	NO.	REVISION	BY

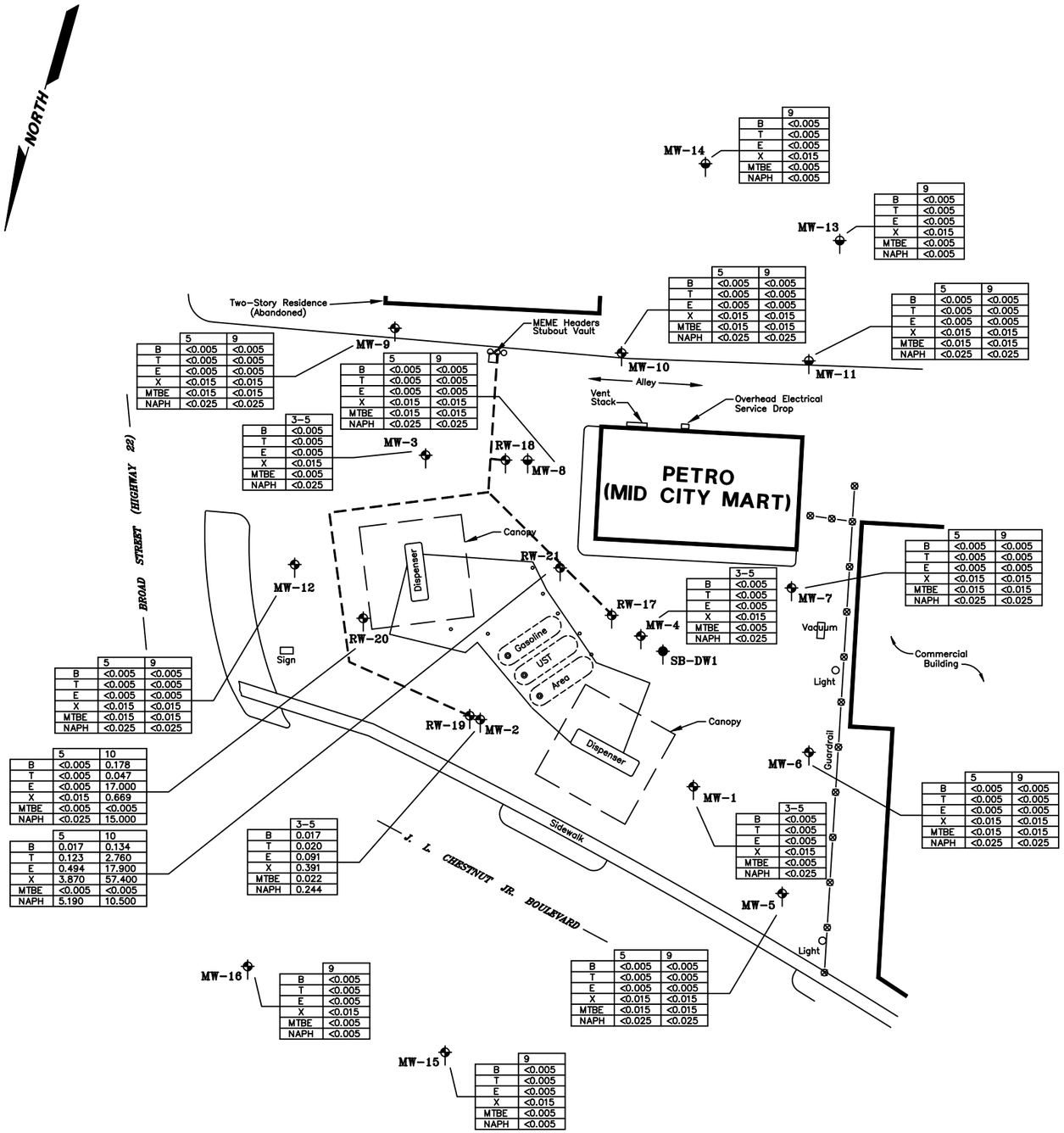
MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

SITE PLAN

4
Fig. No.

DRAWN BY | M.E.P. | CHECKED BY | CADD FILE NO. JC.PET



LEGEND

- Soil Exploration Boring
- Soil Exploration Boring/Type II Monitor Well
- Missing Soil Exploration Boring/Type II Recovery Monitor Well

	Sample Collection Depth (feet bgs)
B	Benzene Concentration (mg/kg)
T	Toluene Concentration (mg/kg)
E	Ethylbenzene Concentration (mg/kg)
X	Total Xylenes Concentration (mg/kg)
MTBE	Methyl-Tertiary-Butyl-Ether Concentration (mg/kg)
NAPH	Naphthalene Concentration (mg/kg)

bgs — below the ground surface

(mg/kg) — Milligrams per Kilogram

0 Feet 30
Scale

SPHERE 3 ENGINEERING, INC

DATE	NO.	REVISION	BY

MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

SOILS COCs CONCENTRATIONS MAP

Fig. No. 5

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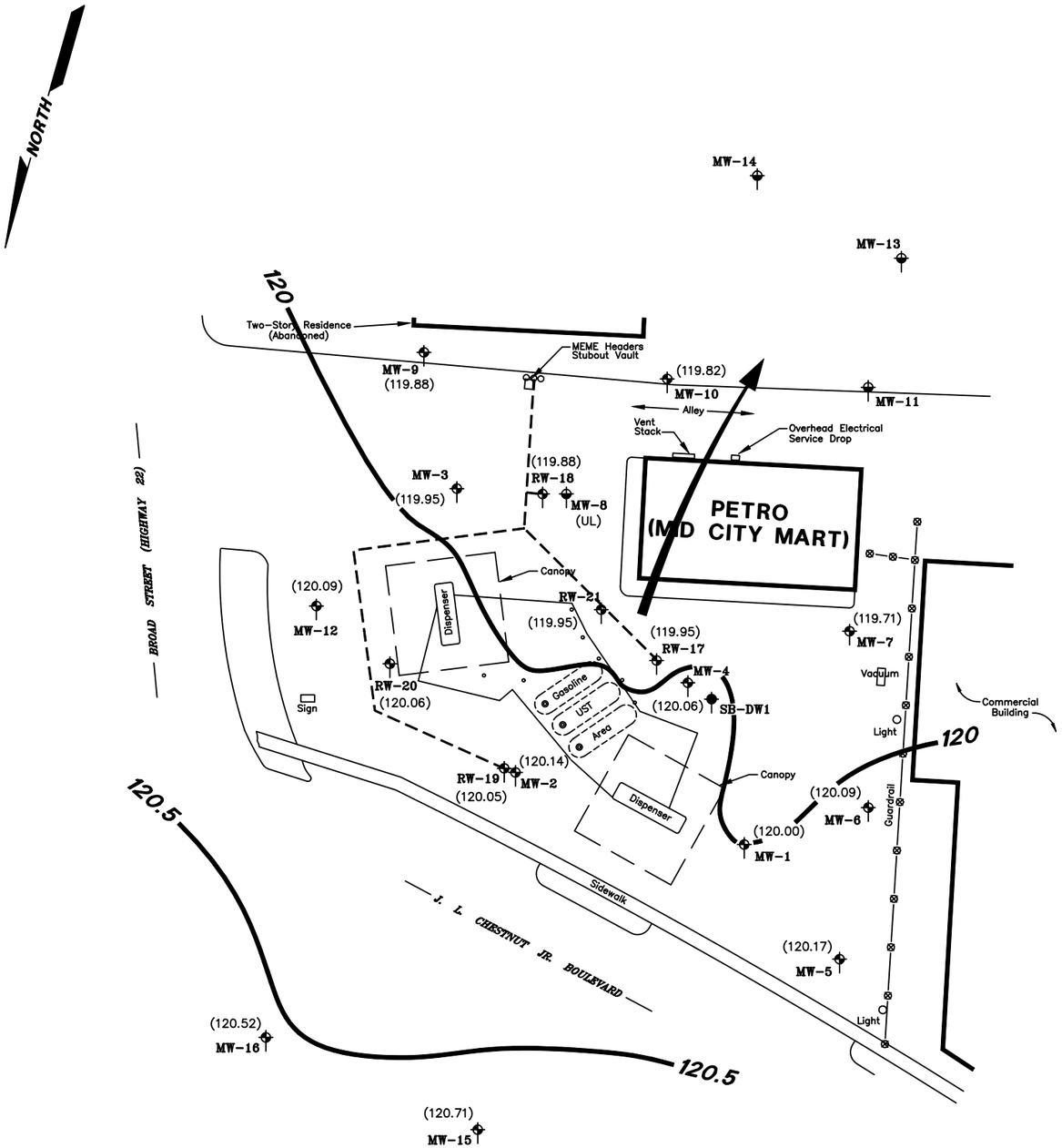


LEGEND

- Soil Exploration Boring
- Soil Exploration Boring/Type II Monitor Well
- Missing Soil Exploration Boring/Type II Recovery Monitor Well
- (120.00) Potentiometric Surface Elevation (feet a.m.s.l.)
- —120.5— Isopotentiometric Surface Elevation Contour (feet a.m.s.l.)
- Groundwater Flow Direction (3/12/2024)
- (UL) Unable to Locate
- (NM) Groundwater Level was not Measured

0 Feet 30
Scale

SPHERE 3 ENGINEERING, INC

DATE	NO.	REVISION	BY

MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

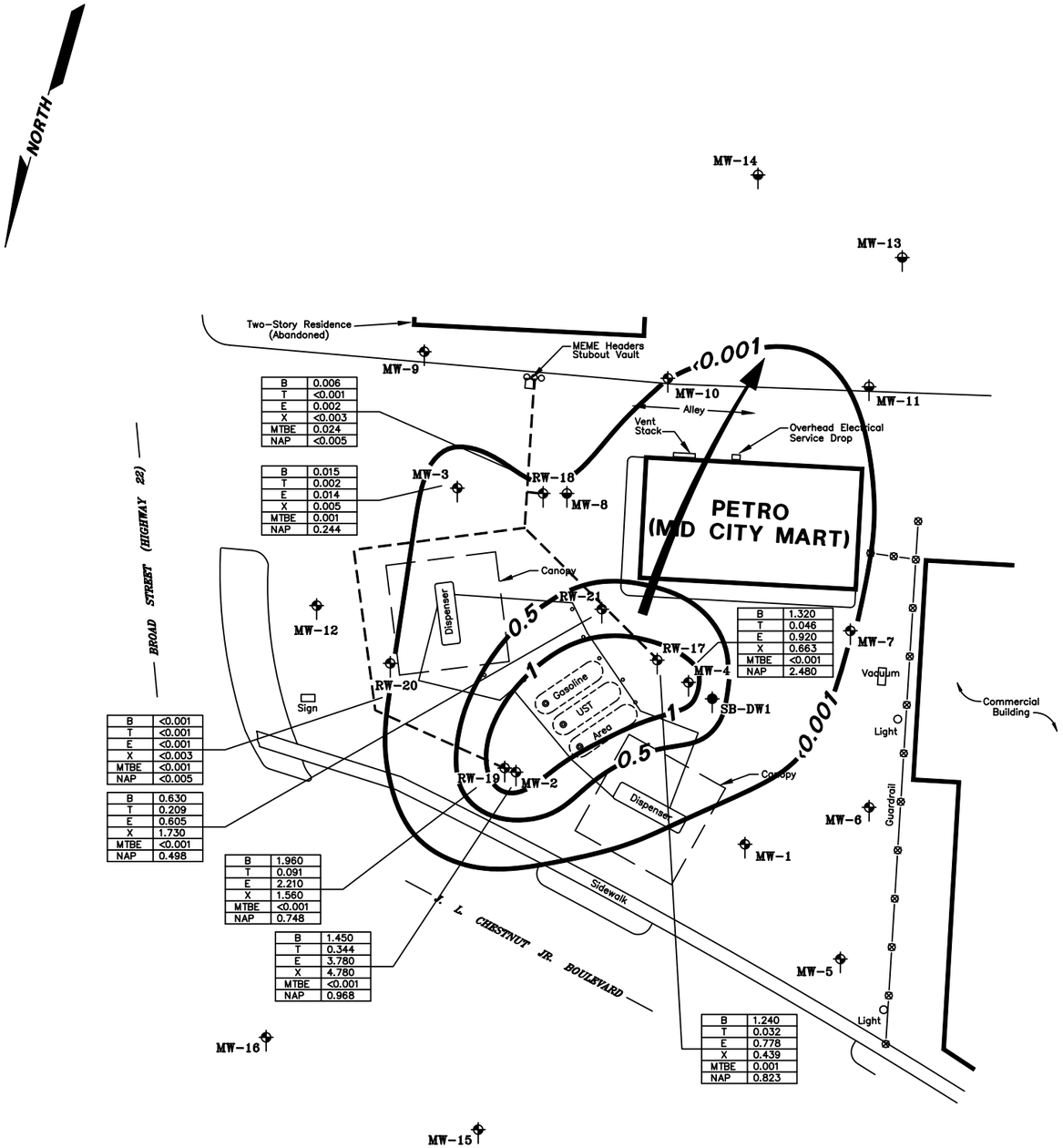
POTENTIOMETRIC SURFACE ELEVATION MAP (3/12/2024)

6
Fig. No.

CADD FILE NO. JC.PET

CHECKED BY M.E.P.

DRAWN BY



LEGEND

- Soil Exploration Boring
- Soil Exploration Boring/Type II Monitor Well
- Missing Soil Exploration Boring/Type II Recovery Monitor Well

B	Dissolved Benzene Concentration (mg/L)
T	Dissolved Toluene Concentration (mg/L)
E	Dissolved Ethylbenzene Concentration (mg/L)
X	Dissolved Total Xylenes Concentration (mg/L)
MTBE	Dissolved Methyl–Tertiary–Butyl–Ether Concentration (mg/L)
NAP	Dissolved Naphthalene Concentration (mg/L)

— 1 — Dissolved Benzene Isoconcentration Contour (mg/L)

Groundwater Flow Direction (3/12/2024)

(mg/L) Milligrams per Liter

0 Feet 30
Scale

SPHERE 3
ENGINEERING, INC

DATE	NO.	REVISION	BY

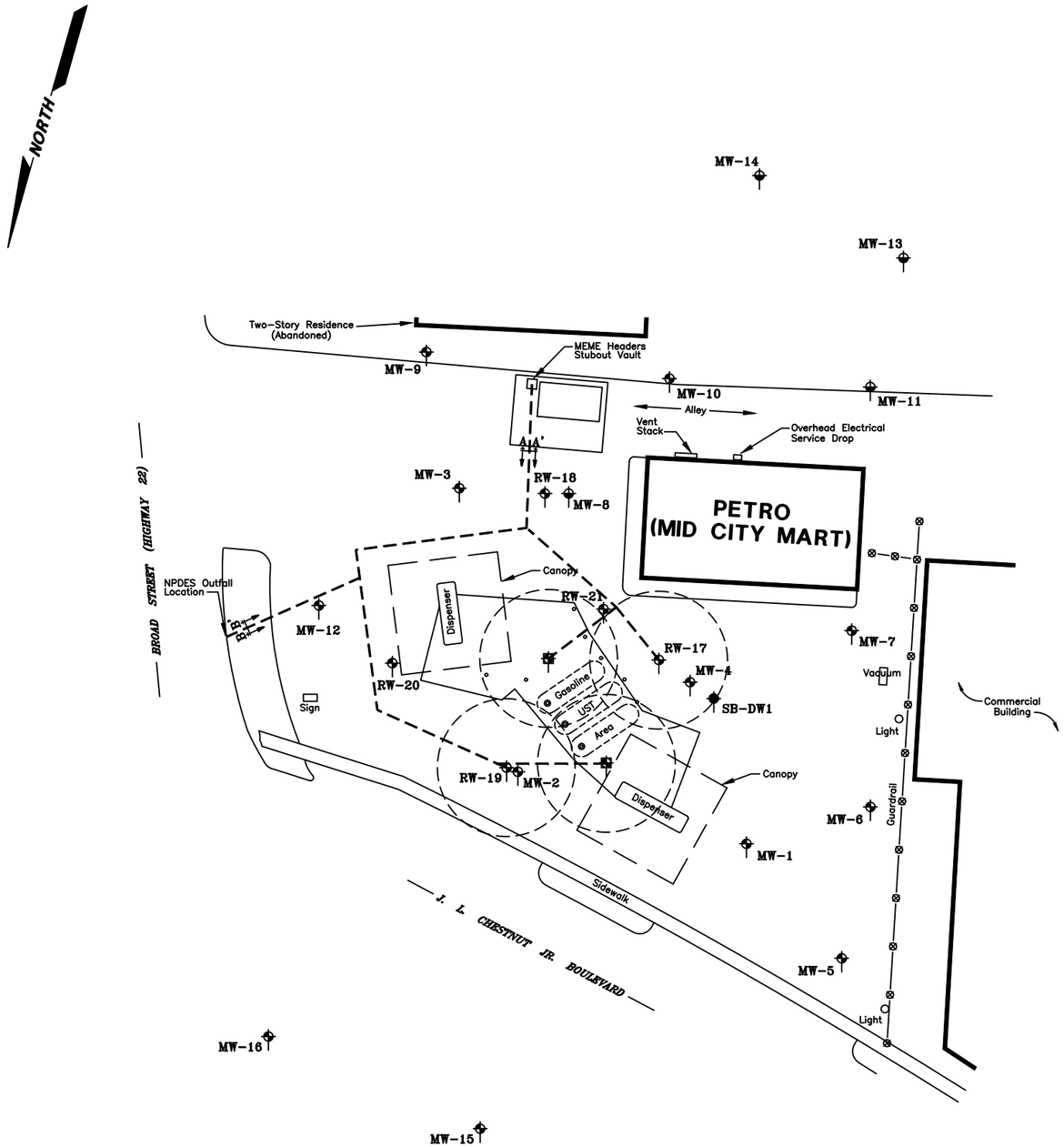
MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

DISSOLVED COCs CONCENTRATIONS MAP (3/12/2024)

Fig. No. 7

DRAWN BY | M.E.P. | CHECKED BY | CADD FILE NO. JC.PET



LEGEND

- Soil Exploration Boring
- Soil Exploration Boring/Type II Monitor Well
- Missing Soil Exploration Boring/Type II Recovery Monitor Well
- Proposed Soil Exploration Boring/Type II Monitor Well
- Proposed MPE Well and Estimated Capture Zone
- Proposed Extraction Header/MPE Discharge Trench
- A A' — Proposed Piping Trench Cross Section – see Figure 11

0 Feet 30
Scale

SPHERE 3 ENGINEERING, INC

DATE	NO.	REVISION	BY

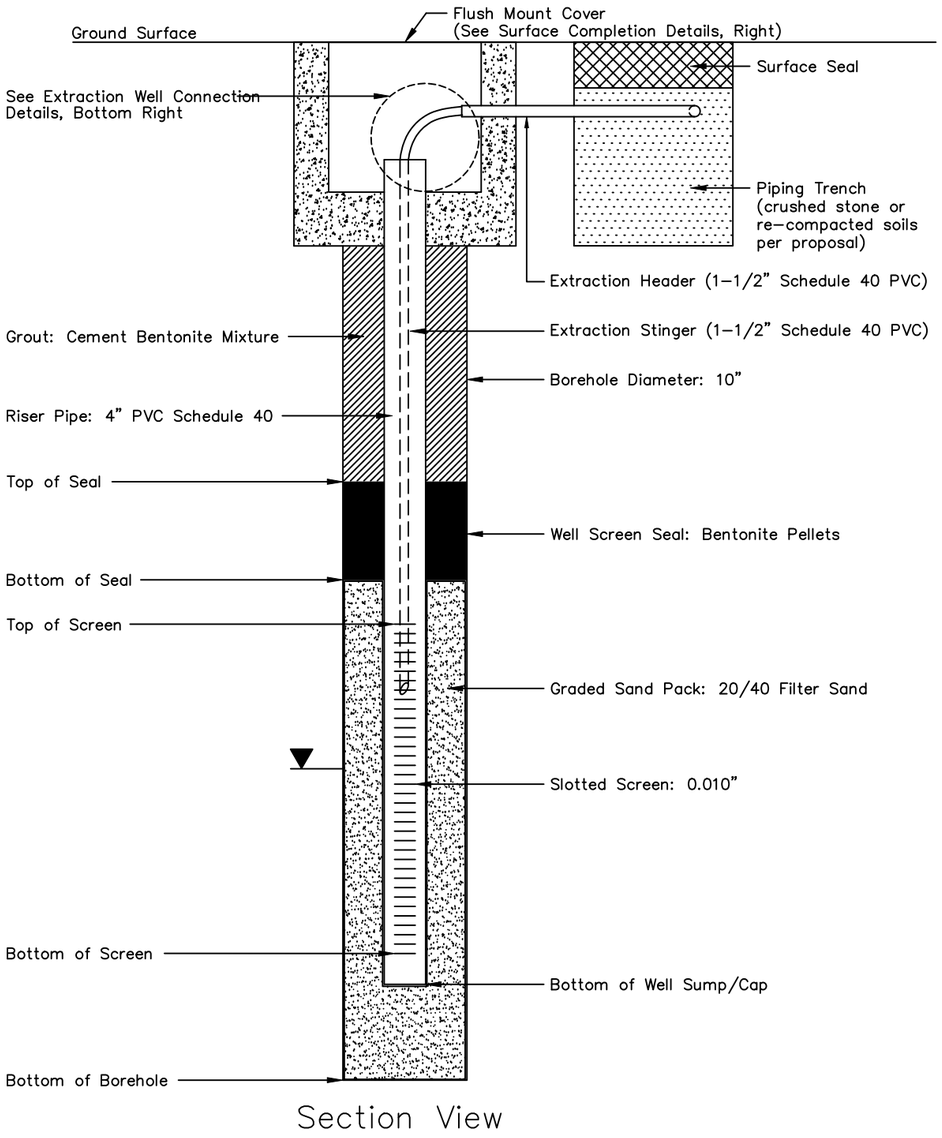
MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

PROPOSED MPE SYSTEM LAYOUT

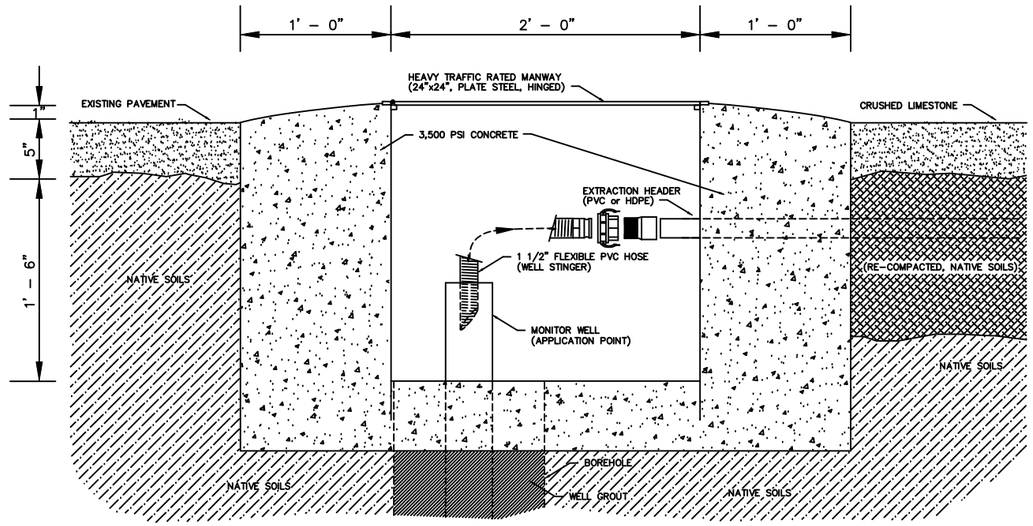
Fig. No. 8

DRAWN BY | MEP | CHECKED BY | JGH | CADD FILE NO. | JC.PET

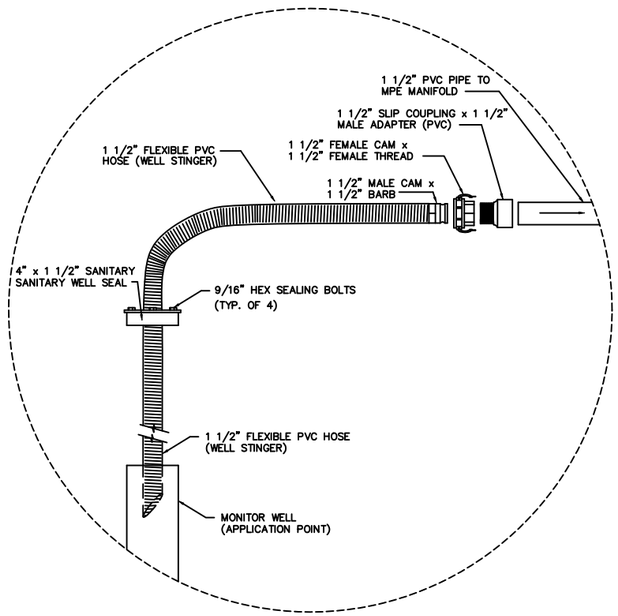


Section View

EXTRACTION WELL CROSS-SECTION
NO SCALE



SURFACE COMPLETION DETAILS
NO SCALE



EXTRACTION WELL CONNECTION DETAILS
NO SCALE

SPHERE 3 ENGINEERING, INC

DATE	NO.	REVISION	BY

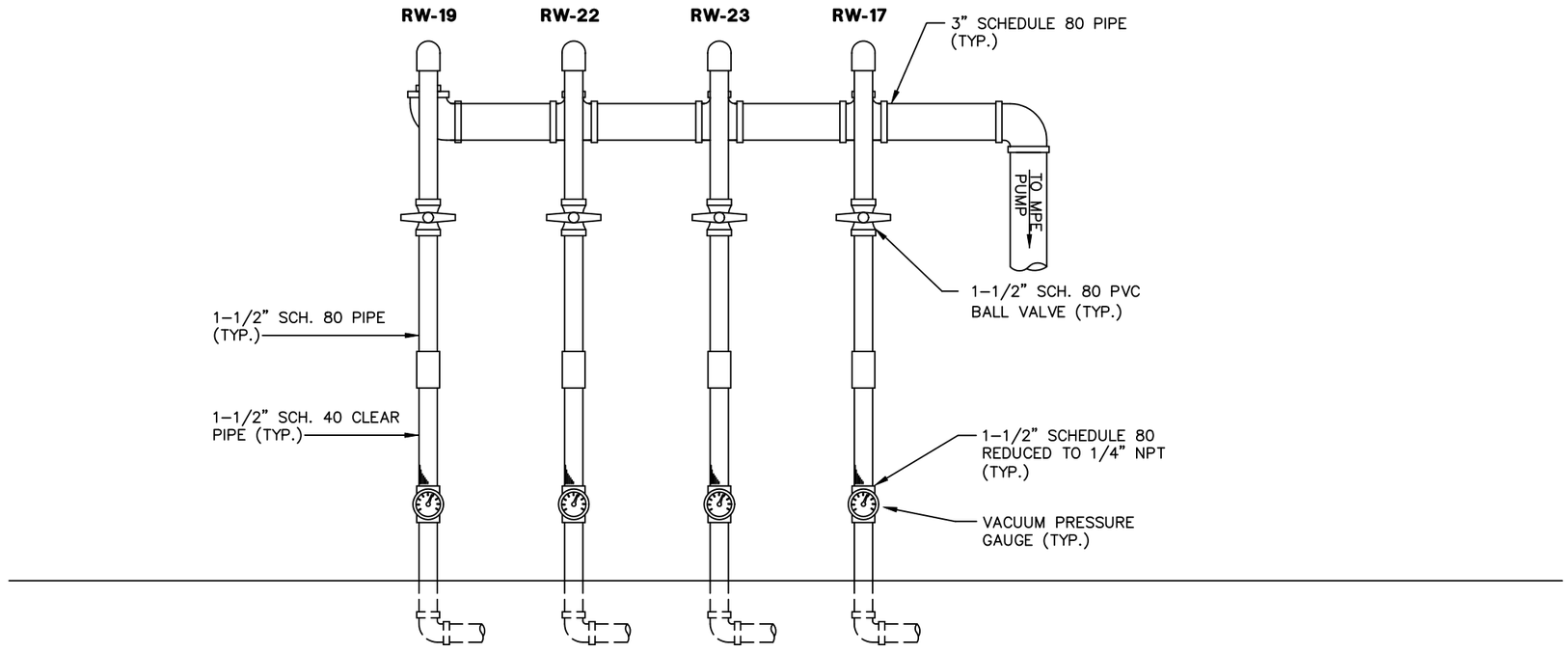
MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

EXTRACTION WELL CONSTRUCTION AND CONNECTION DETAILS

Fig. No. 9

DRAWN BY	M.E.P.	CHECKED BY		CADD FILE NO. JC.PET



SPHERE 3 ENGINEERING, INC

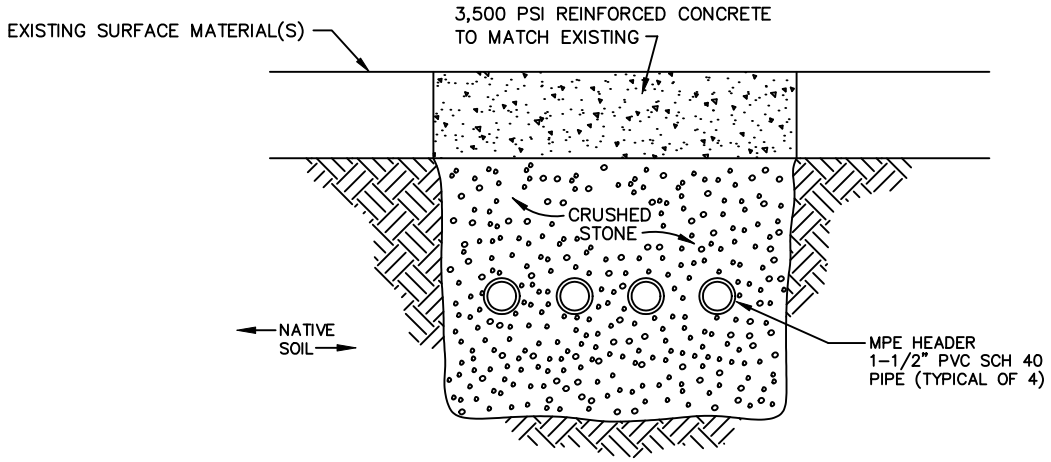
DATE	NO.	REVISION	BY

MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

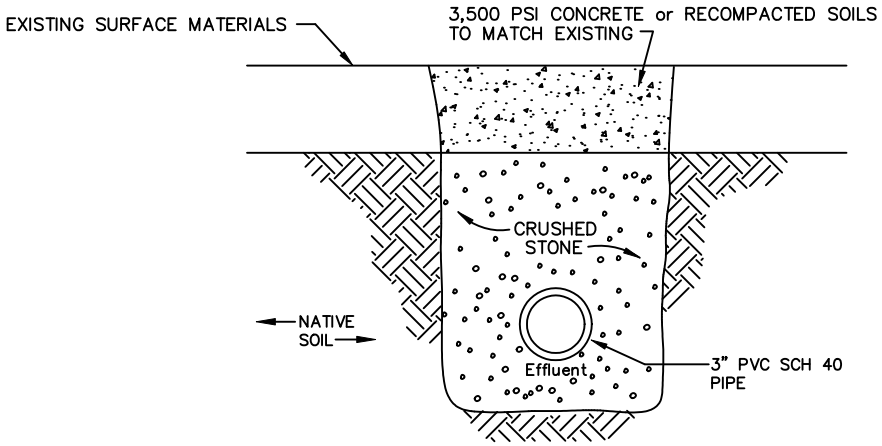
MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-04-02)
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

MPE MANIFOLD CONSTRUCTION DETAILS

10
Fig. No.



CROSS SECTION A-A´



CROSS SECTION B-B´

SPHERE 3 ENGINEERING, INC

Mr. John Cosby
Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

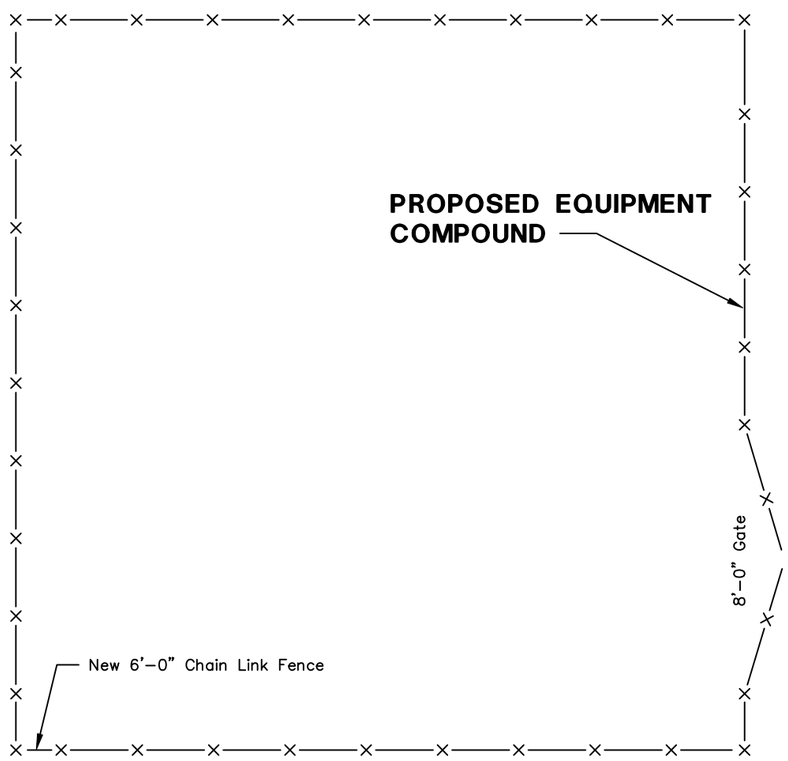
Project No.	Date:	Scale:	Drawn By:
JC.PET	12/23/2024	NTS	MEP

PIPING TRENCH DETAILS

Figure No.: 11

DRAWN BY | M.E.P. | CHECKED BY | CADD FILE NO. JC.PET

NORTH

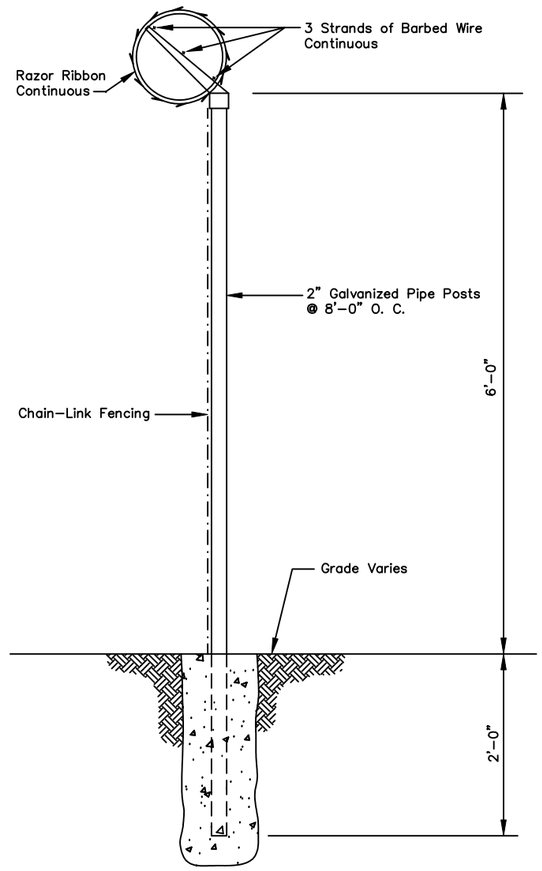


FENCE PLAN

LEGEND

Existing Structure

3,000 psi Concrete



FENCE DETAIL

NOTE: All chain link fencing, including the gate panels, is to be completed with brown privacy slats.

0 Feet 5
Horizontal Scale

SPHERE 3
ENGINEERING, INC

DATE	NO.	REVISION	BY

MR. JOHN COSBY
MONTGOMERY, ALABAMA
Client

MODIFIED CORRECTIVE ACTION PLAN
PETRO (UST13-09-02))
907 BROAD STREET
SELMA, ALABAMA 36701
Project Title

EQUIPMENT COMPOUND DETAILS

12
Fig. No.

SPHERE 3
ENGINEERING, INC

MONITORING WELL AND BORING LOG — LOG DEPTHS TO SCALE

MONITORING WELL I.D: **MW-1**

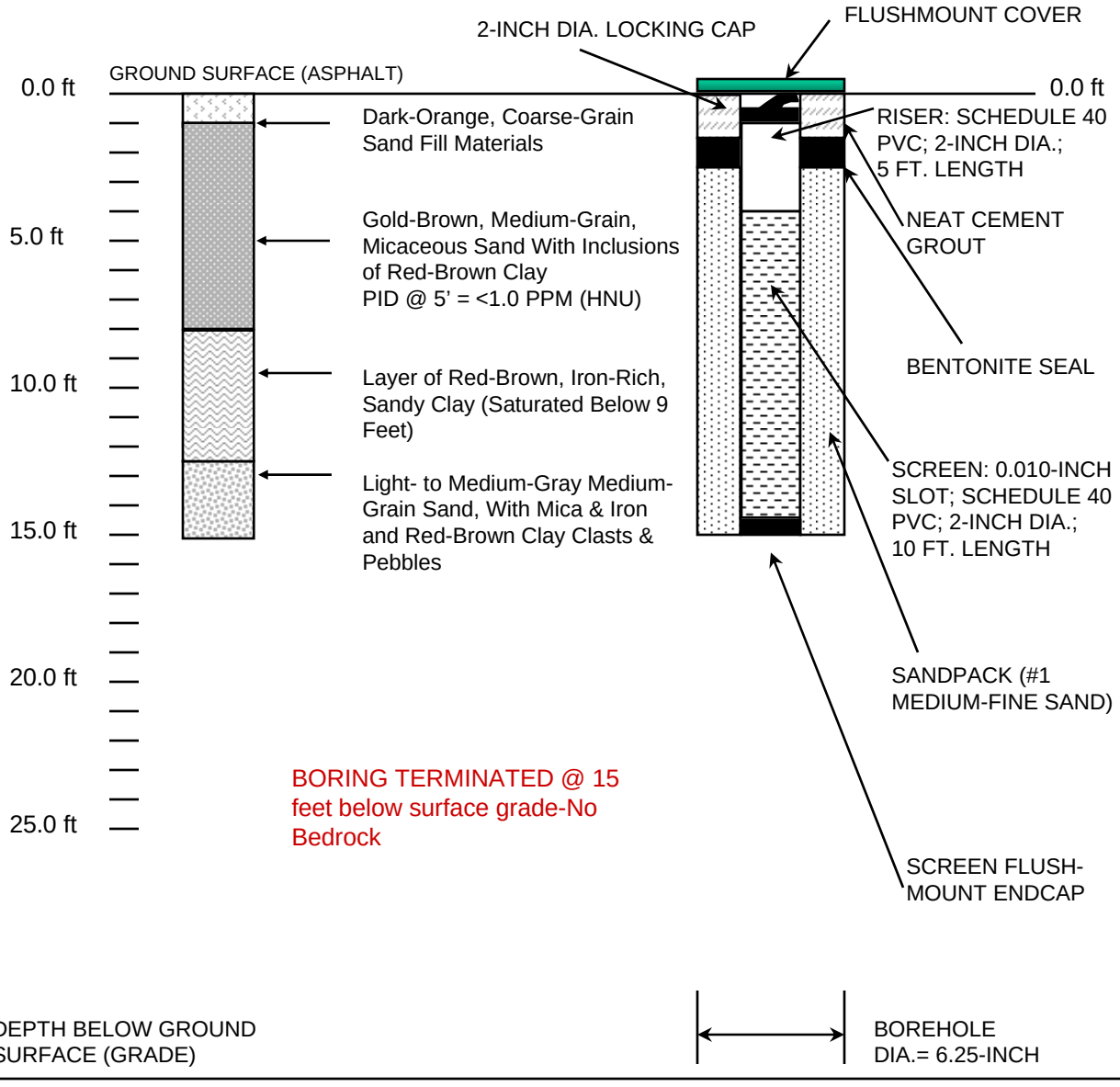
SITE: Petro (Mid-City Mart)
Preliminary Investigation Report
Selma, Alabama

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216
TEL: (205) 403-3317

SPHERE 3 Project I.D.: JC.PET.01
TOP OF CASING ELEVATION: 128.53 ft
DEPTH TO WATER: 9.11 ft BELOW TOC (12/11/2013)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 119.42 ft
WELL DEVELOPMENT DATE: 12/11/2013
DRILLER: Jim Smith
DRILLING DATE: 12/4/2013
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITORING WELL LOG*



MONITORING WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITORING WELL I.D: **MW-2**

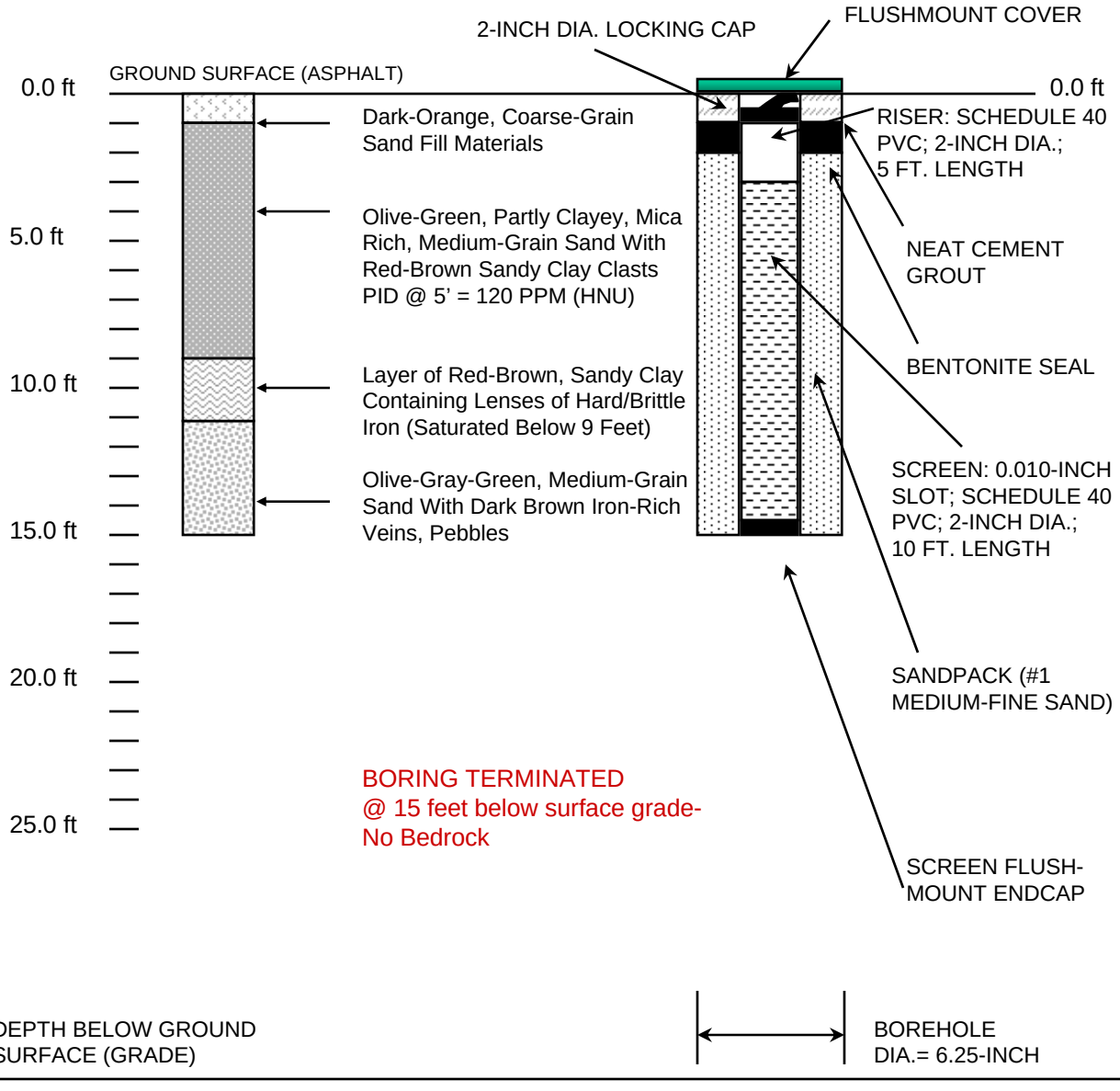
SITE: Petro (Mid-City Mart)
Preliminary Investigation Report
Selma, Alabama

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216
TEL: (205) 403-3317

SPHERE 3 Project I.D.: JC.PET.01
TOP OF CASING ELEVATION: 128.08 ft
DEPTH TO WATER: 8.56 ft BELOW TOC (12/11/2013)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 119.52 ft
WELL DEVELOPMENT DATE: 12/11/2013
DRILLER: Jim Smith
DRILLING DATE: 12/4/2013
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITORING WELL LOG*



MONITORING WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITORING WELL I.D: **MW-3**

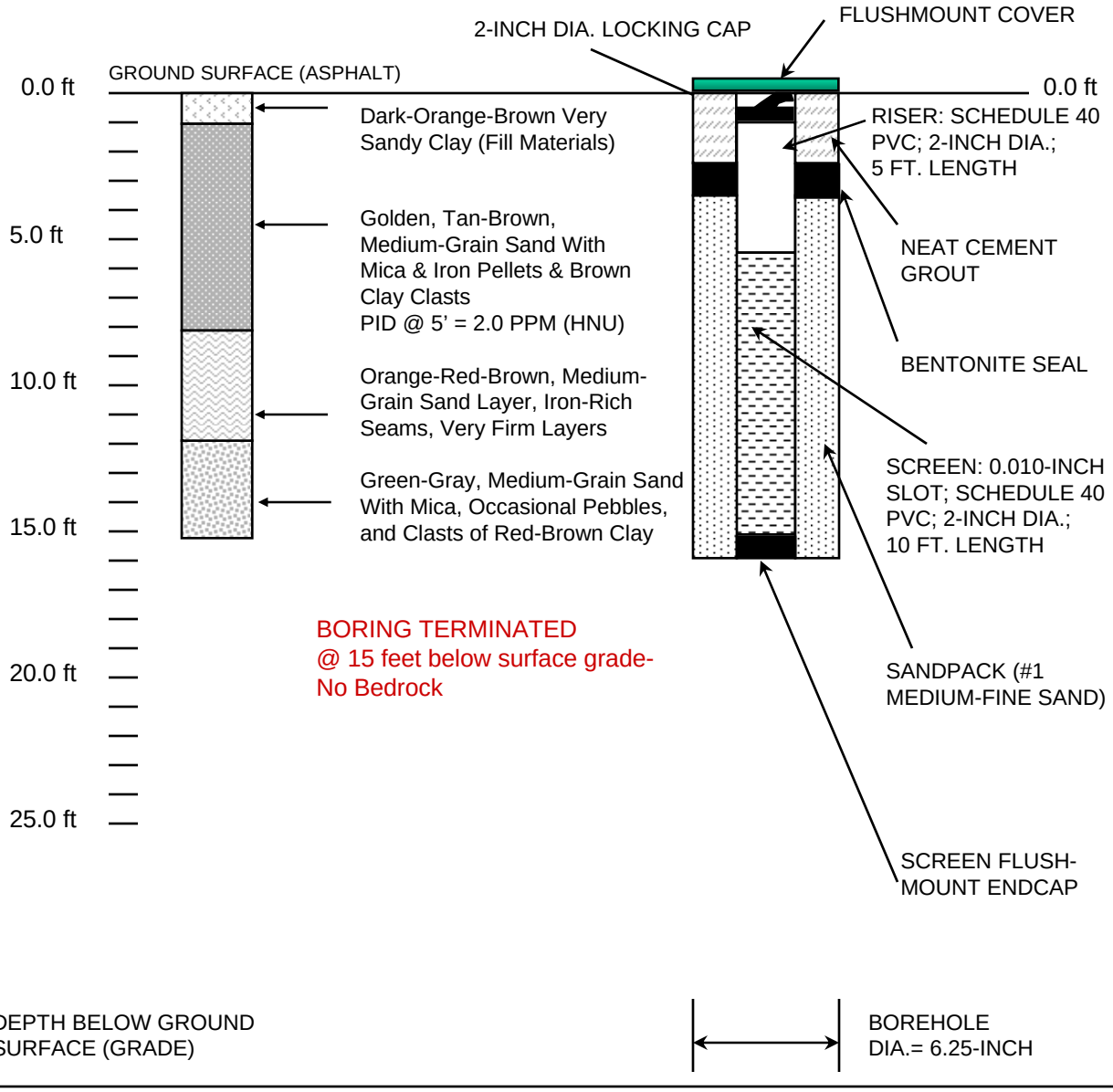
SITE: Petro (Mid-City Mart)
Preliminary Investigation Report
Selma, Alabama

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216
TEL: (205) 403-3317

SPHERE 3 Project I.D.: JC.PET.01
TOP OF CASING ELEVATION: 129.08 ft
DEPTH TO WATER: 8.80 ft BELOW TOC (12/11/2013)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.28 ft
WELL DEVELOPMENT DATE: 12/11/2013
DRILLER: Jim Smith
DRILLING DATE: 12/4/2013
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITORING WELL LOG*



MONITORING WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITORING WELL I.D: **MW-4**

SITE: Petro (Mid-City Mart)
Preliminary Investigation Report
Selma, Alabama

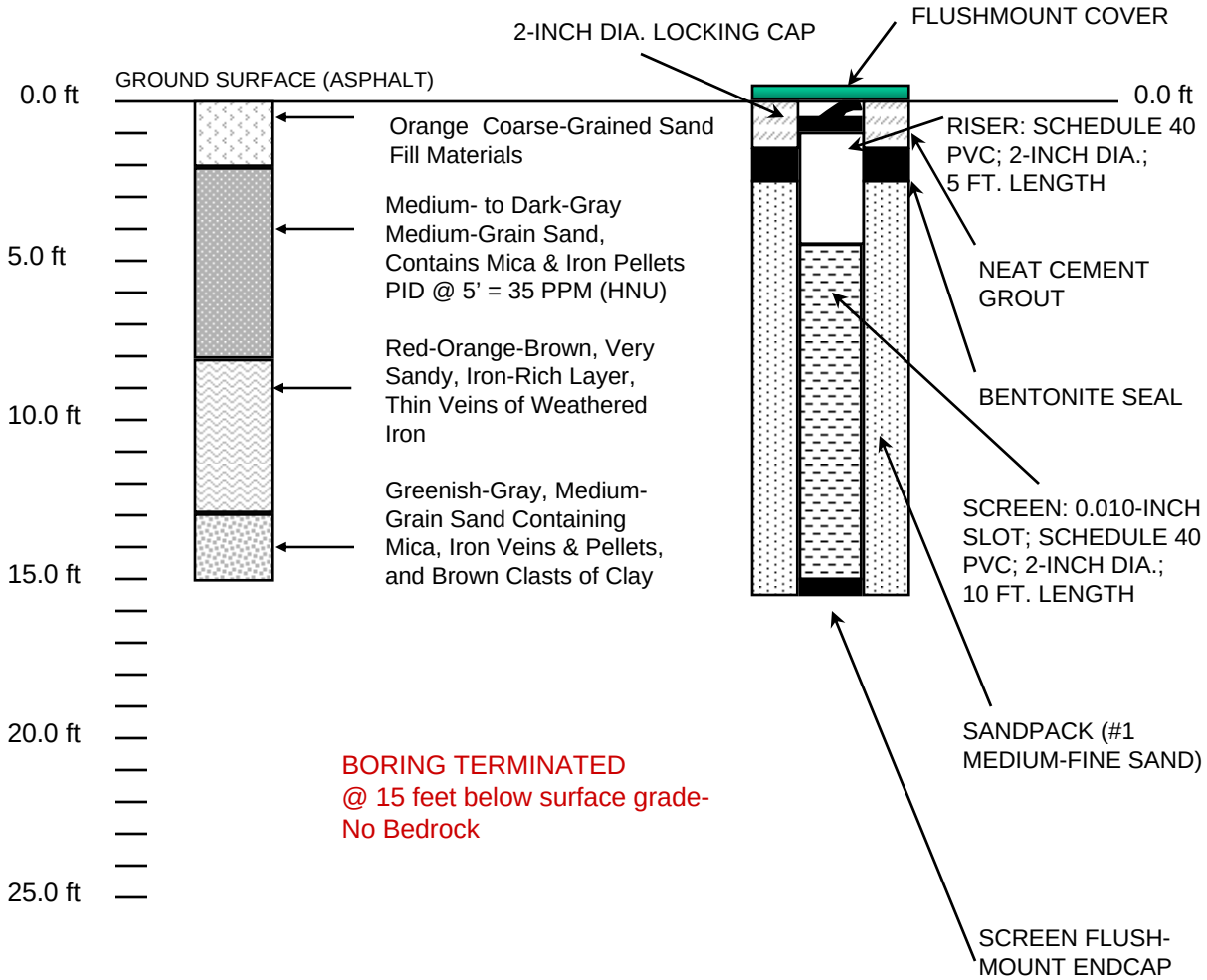
SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216
TEL: (205) 403-3317

SPHERE 3 Project I.D.: JC.PET.01
TOP OF CASING ELEVATION: 128.73 ft
DEPTH TO WATER: 9.41 ft BELOW TOC (12/11/2013)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 119.32 ft
WELL DEVELOPMENT DATE: 12/11/2013
DRILLER: Jim Smith
DRILLING DATE: 12/4/2013
DRILL RIG MODEL: CME-45

BORING LOG (USCS)

MONITORING WELL LOG



DEPTH BELOW GROUND SURFACE (GRADE)

BOREHOLE DIA.= 6.25-INCH

MONITOR WELL AND BORING LOG — LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-5**

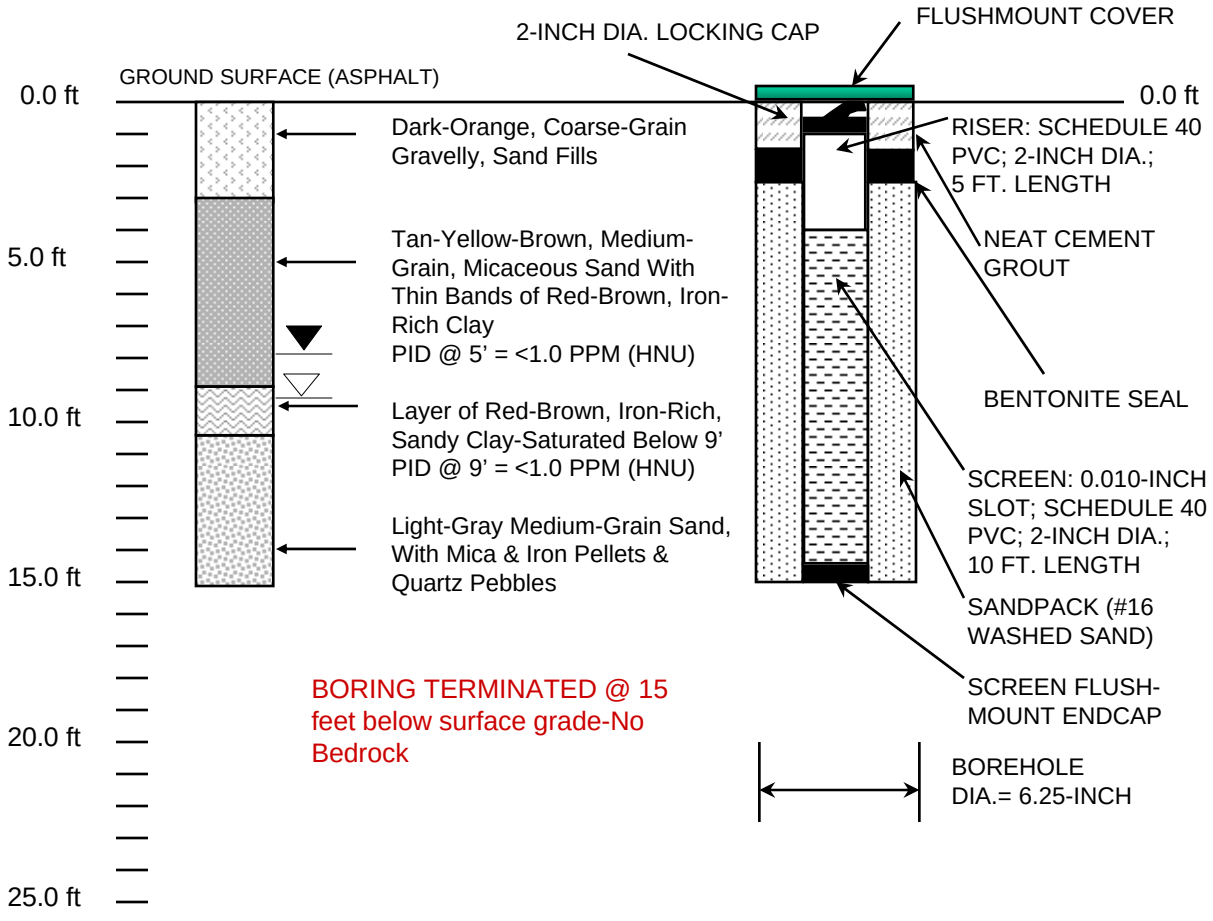
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 128.90 ft
DEPTH TO WATER: 7.83 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 121.07 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



▽ GROUNDWATER FIRST NOTED

▼ STATIC GROUNDWATER 6/25/2014

DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG — LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-6**

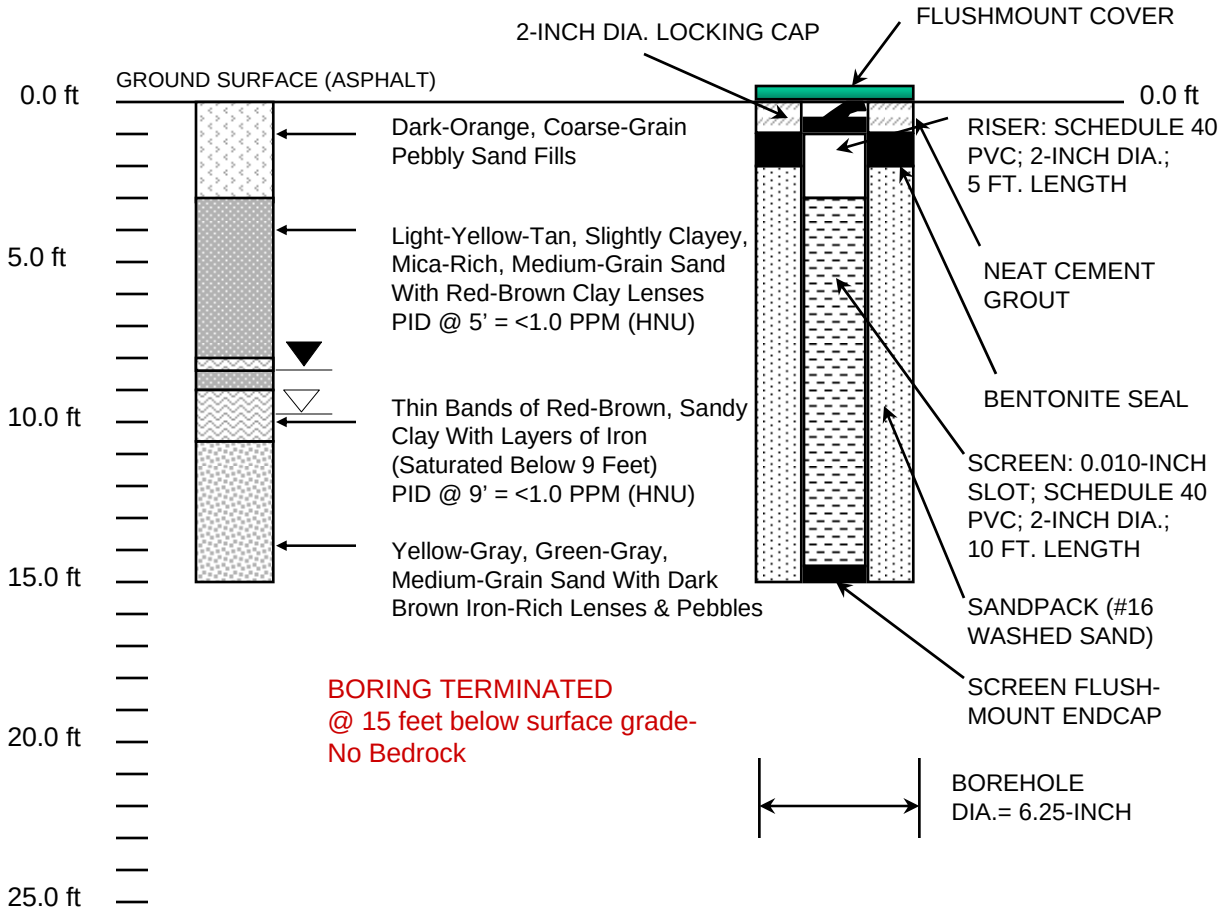
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 129.00 ft
DEPTH TO WATER: 8.04 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.96 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



▽ GROUNDWATER FIRST NOTED

▼ STATIC GROUNDWATER 6/25/2014

DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-7**

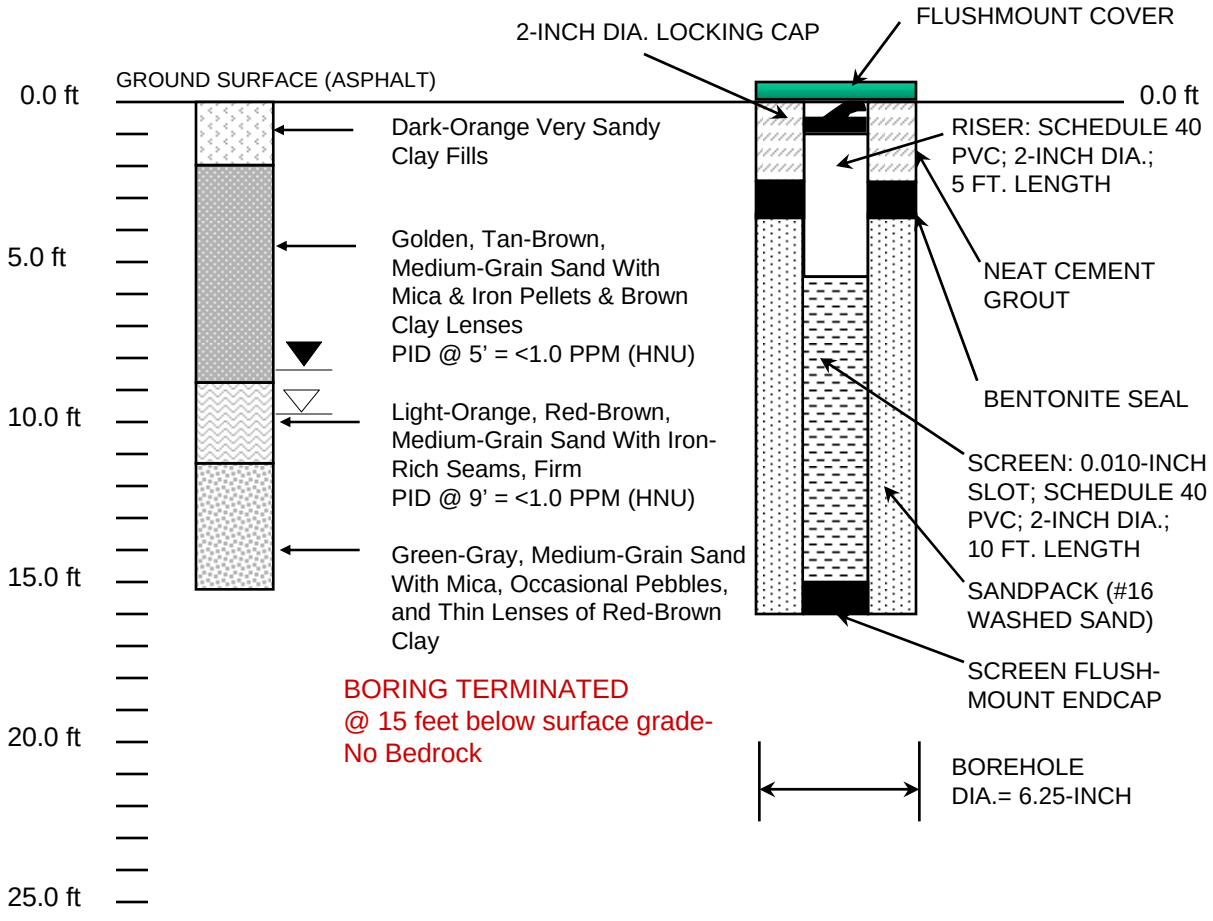
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 129.14 ft
DEPTH TO WATER: 8.35 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.79 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-8**

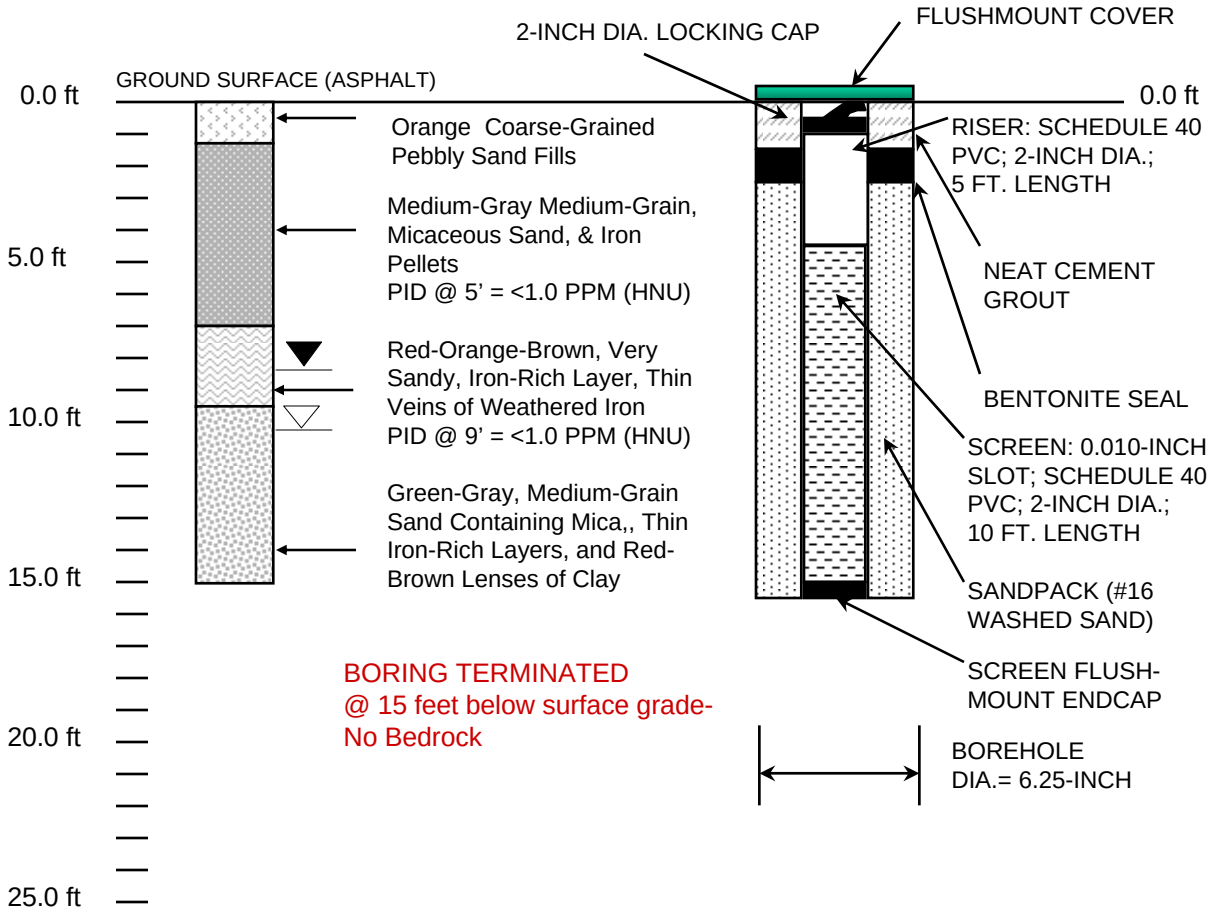
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 128.80 ft
DEPTH TO WATER: 8.08 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.72 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



GROUNDWATER FIRST NOTED

STATIC GROUNDWATER 6/25/2014

DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-9**

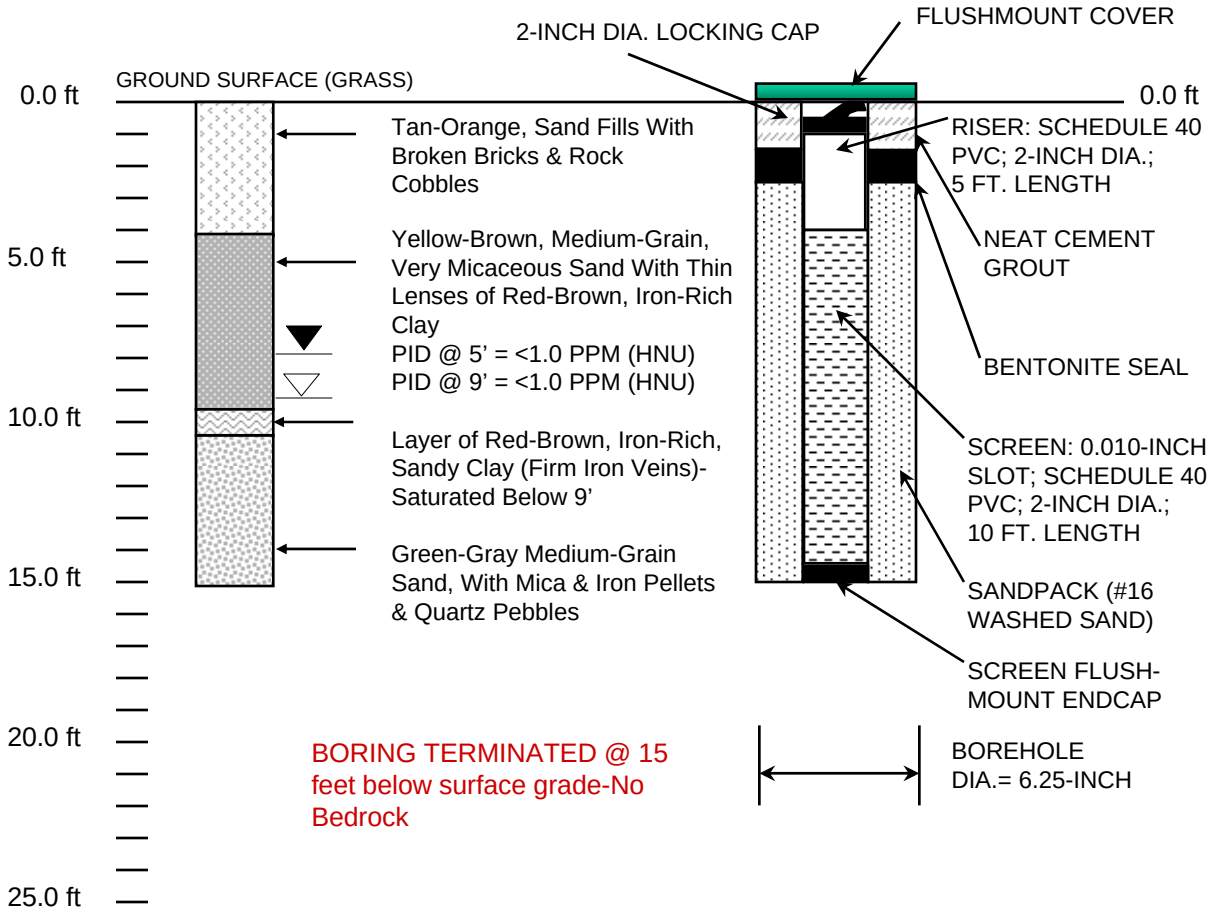
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 128.14 ft
DEPTH TO WATER: 7.40 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.74 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



▽ GROUNDWATER FIRST NOTED

▼ STATIC GROUNDWATER 6/25/2014

DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-10**

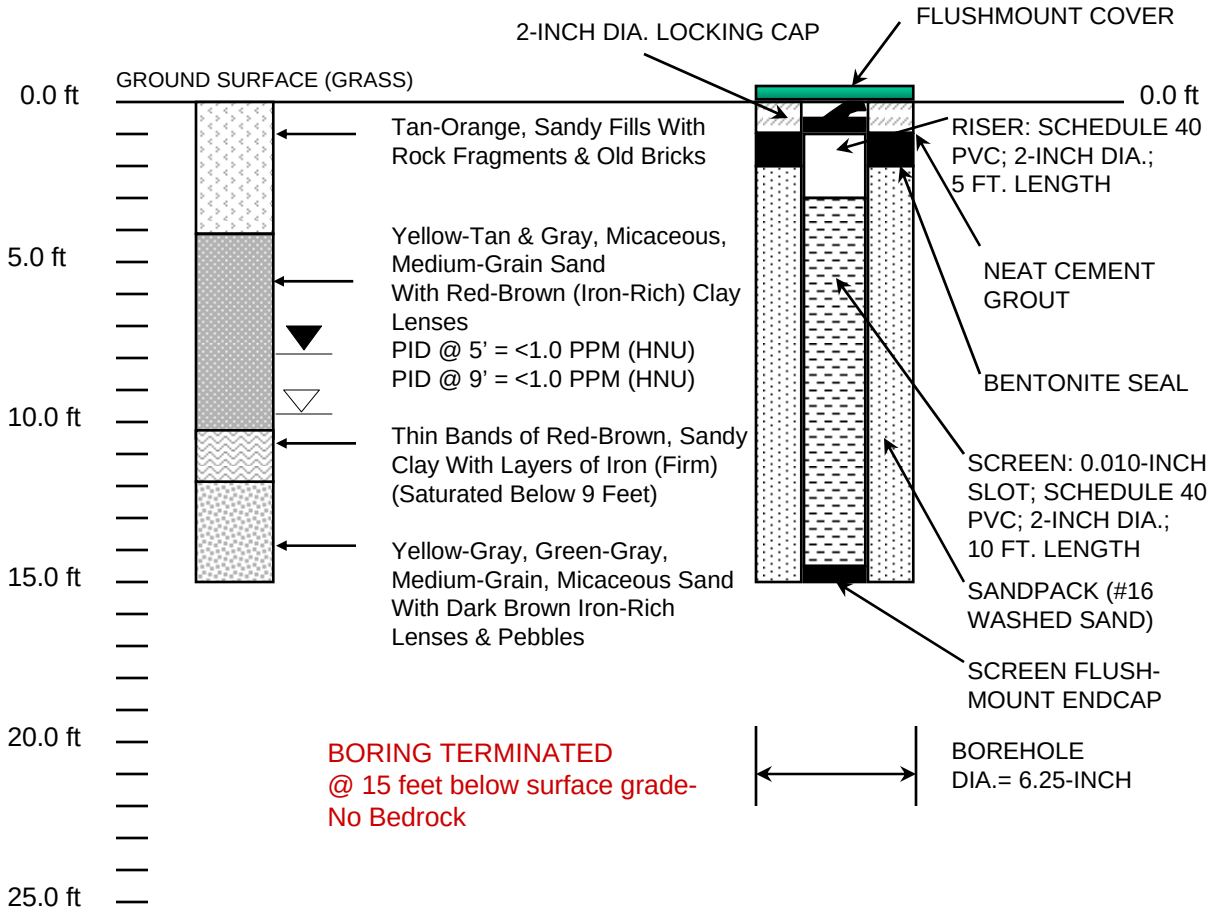
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 128.23 ft
DEPTH TO WATER: 7.69 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.54 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-11**

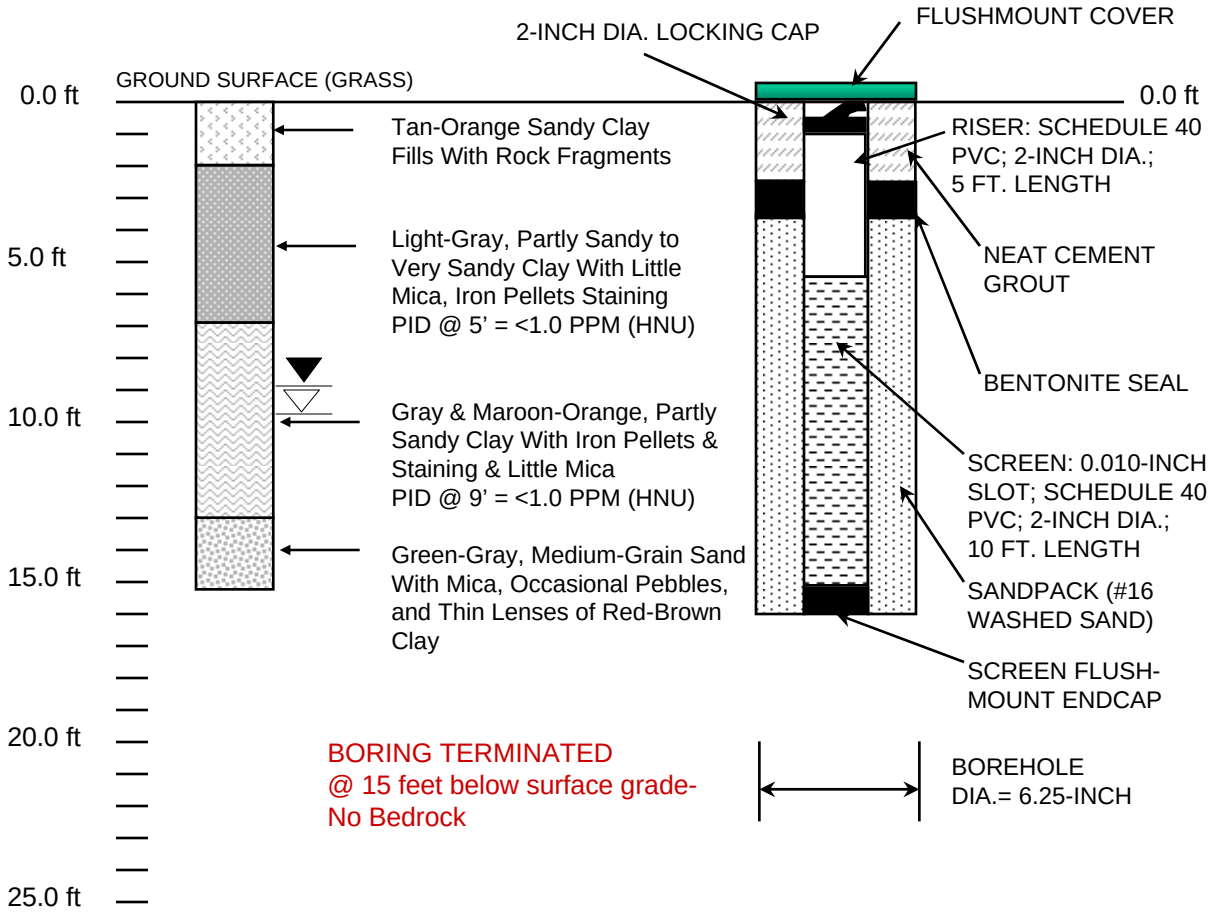
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 129.16 ft
DEPTH TO WATER: 8.67 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 120.49 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-12**

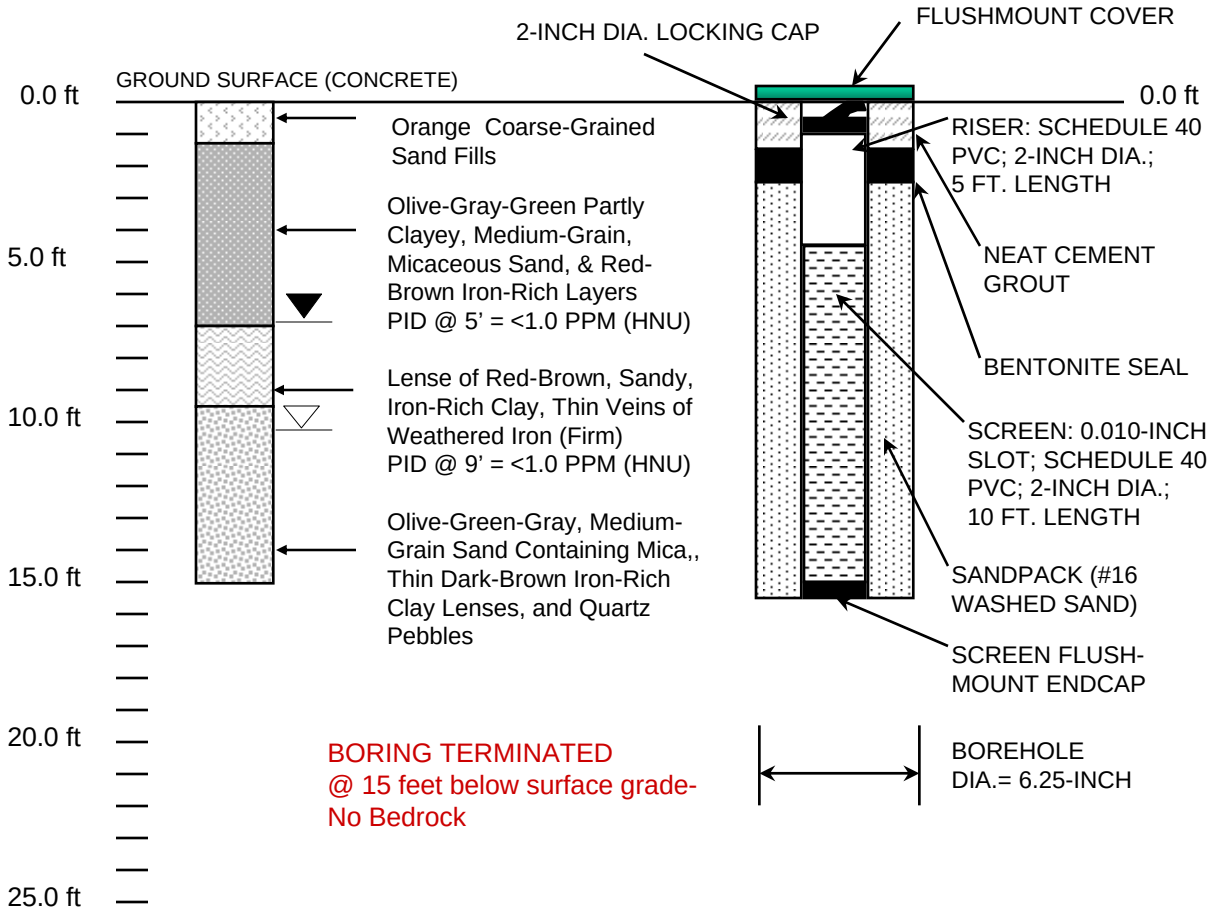
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
TOP OF CASING ELEVATION: 127.53 ft
DEPTH TO WATER: 6.47 ft BELOW TOC (6/25/2014)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 121.06 ft
WELL DEVELOPMENT DATE: 6/18/2014
DRILLER: Jim Smith
DRILLING DATE: 6/18/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG — LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-13**

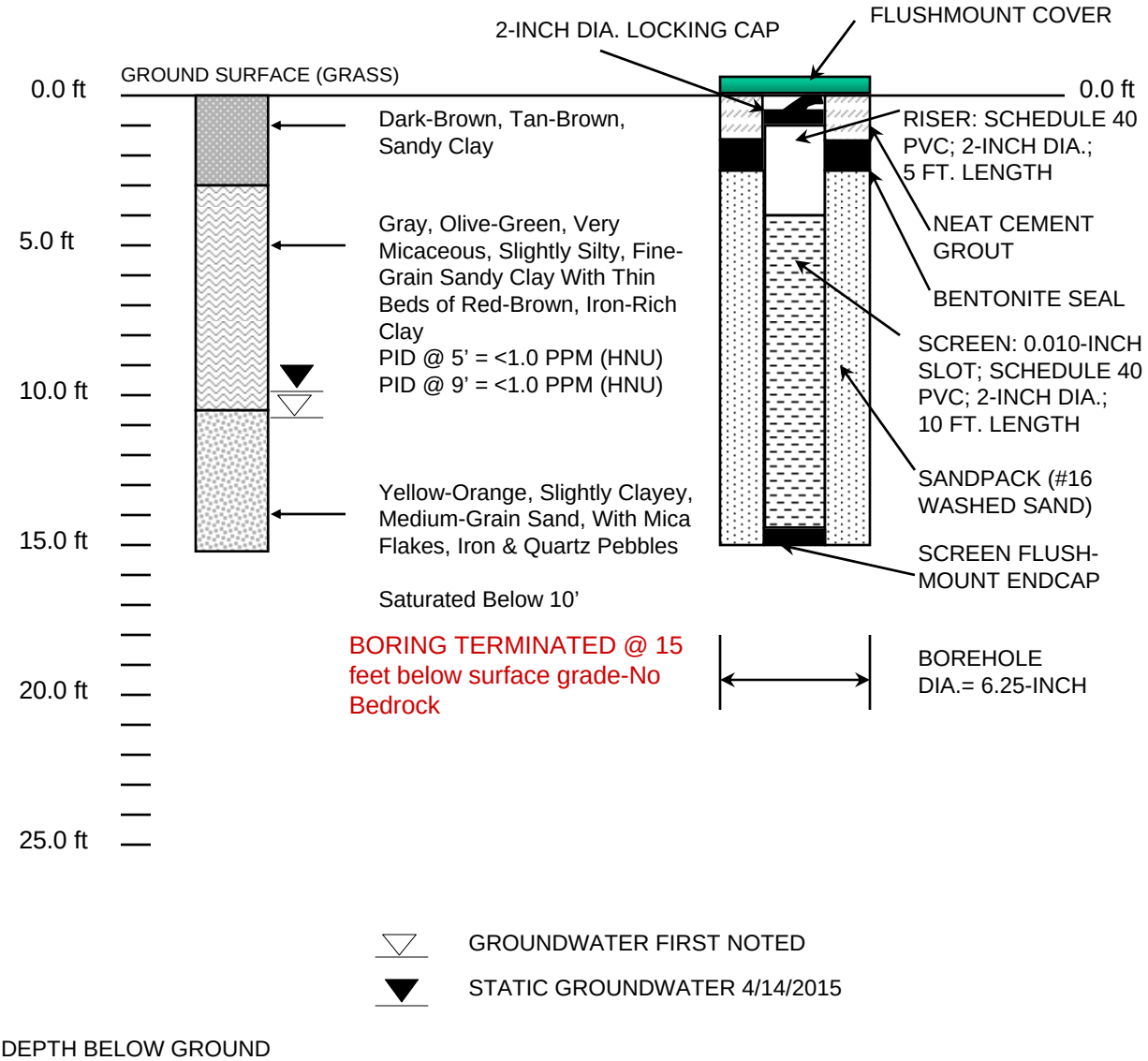
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.03
TOP OF CASING ELEVATION: 128.53 ft
DEPTH TO WATER: 9.96 ft BELOW TOC (4/14/2015)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 118.57 ft
WELL DEVELOPMENT DATE: 4/1/2015
DRILLER: Jim Smith
DRILLING DATE: 3/31/2015
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG — LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-14**

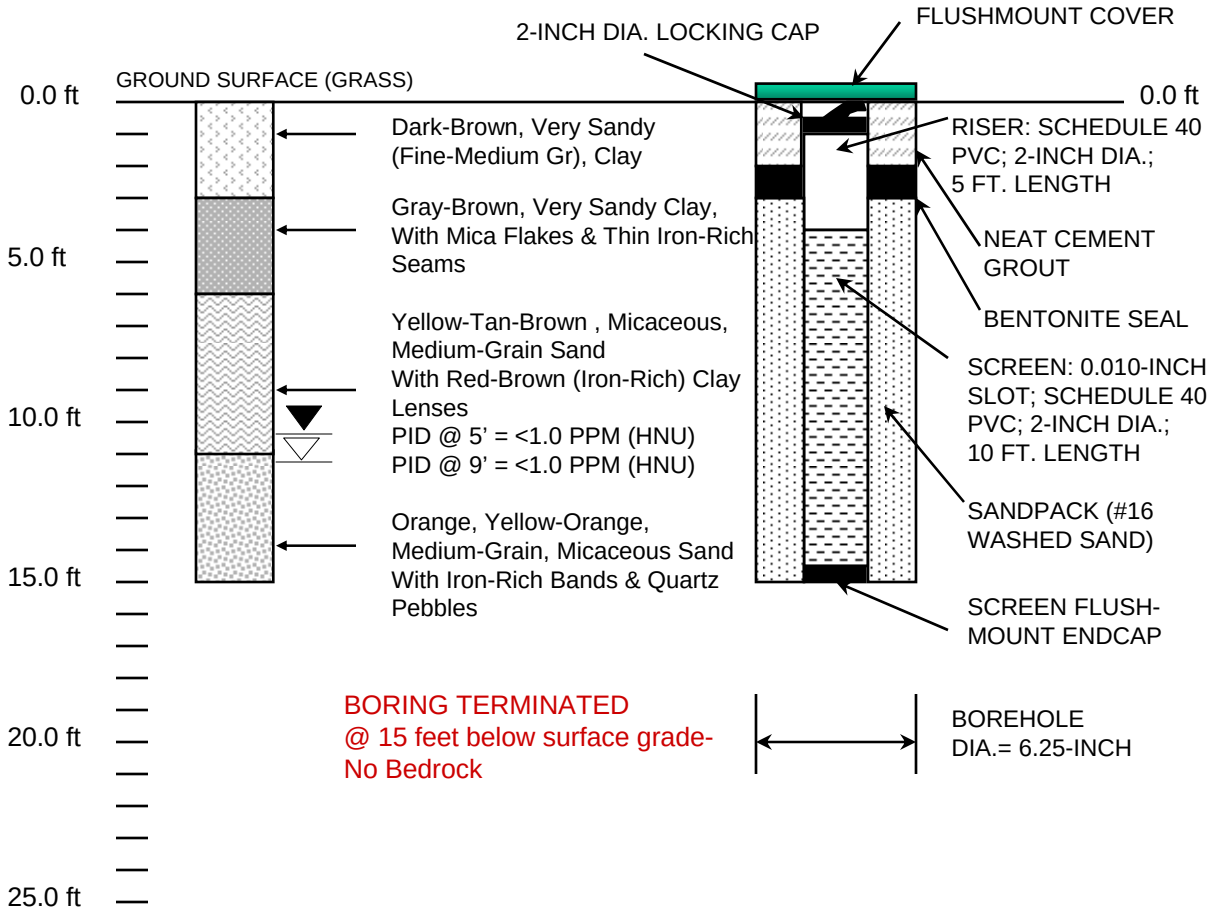
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.03
TOP OF CASING ELEVATION: 129.13 ft
DEPTH TO WATER: 10.39 ft BELOW TOC (4/14/2015)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 118.74 ft
WELL DEVELOPMENT DATE: 4/1/2015
DRILLER: Jim Smith
DRILLING DATE: 3/31/2015
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-15**

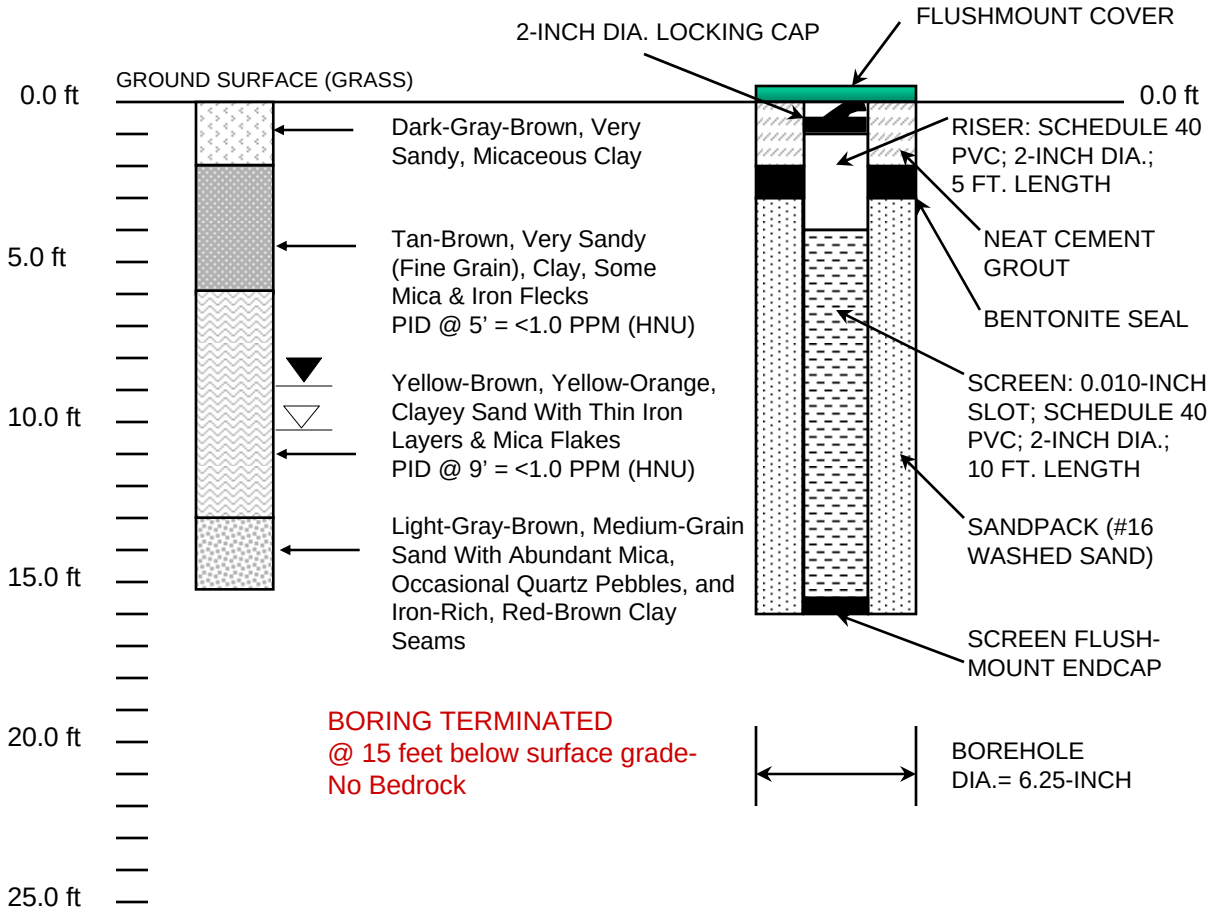
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.03
TOP OF CASING ELEVATION: 128.90 ft
DEPTH TO WATER: 7.83 ft BELOW TOC (4/14/2015)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 121.07 ft
WELL DEVELOPMENT DATE: 4/1/2015
DRILLER: Jim Smith
DRILLING DATE: 3/31/2015
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **MW-16**

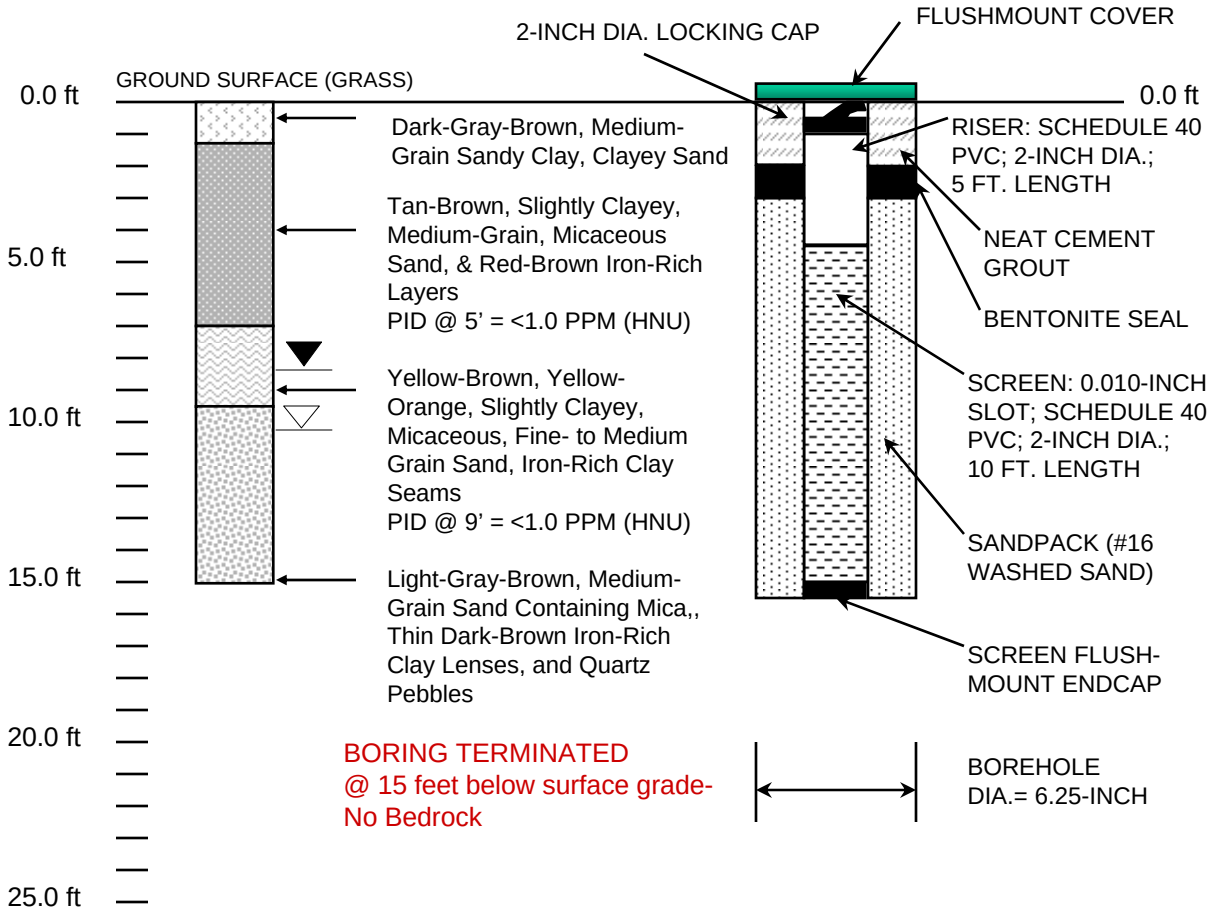
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.03
TOP OF CASING ELEVATION: 128.90 ft
DEPTH TO WATER: 7.83 ft BELOW TOC (4/14/2015)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Auger

GROUNDWATER ELEVATION: 121.07 ft
WELL DEVELOPMENT DATE: 4/1/2015
DRILLER: Jim Smith
DRILLING DATE: 3/31/2015
DRILL RIG MODEL: CME-45

BORING LOG (USCS) *MONITOR WELL LOG*



DEPTH BELOW GROUND SURFACE (GRADE)

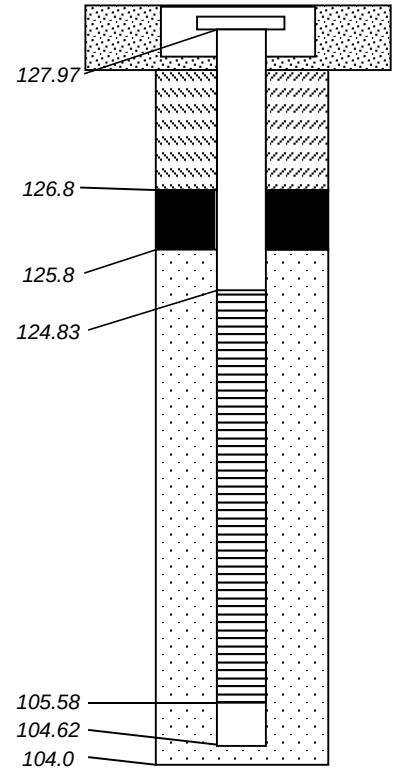
SPHERE 3 ENGINEERING, INC — BORING LOG/MONITOR WELL CROSS SECTION

CLIENT:	Mr. John Cosby	**Date:**	1/22/2018	**Casing Elev.:**	127.97 ft.
LOCATION:	Petro (UST13-09-02)	**Drilling Co.:**	TDS	**Surface Elev.:**	129.03 ft.
	907 Broad Street	**Rig Type:**	CME-75	**Screen Elev.:**	124.83 - 105.58 ft.
	Selma, Alabama 36701	**Boring Dia.:**	10.5 in.	**Well Depth:**	23.35 ft.
Project No.:	JC.PET.12	**Logged By:**	JAH/HTB		

B-17/RW-17

Depth (feet)	Sample	Water Level	Headspace Reading (ppm)	Standard Penetration Test	Description of Materials
					Asphalt at surface. Post-hole to 4 ft.
5	X		94.5		Clayey sand, light olive, well sorted, moist, strong odor
10	X	▼	77.7		Same as above, scattered gravel, increasing moisture, strong odor
15	X	▽	45.0		Sand, tan, well sorted, saturated at 15.5 feet bgs, strong odor
20	X		14.5		Sand, coarse grained, poorly sorted, moderate odor
25	X		0.0		Same as above to 24 feet bgs; clay below 24 feet bgs, no odor
					Terminated at 25 feet bgs and completed as Type II recovery well RW-17.
30					
35					
40					
45					
50					
55					
60					

Monitor Well Construction Data
4" Diameter Sch. 40 PVC Slot Size 0.01"



- Concrete
- Cement/Bentonite Mixture
- Western Bentonite Pellets
- 20/40 Sand Pack

- Shelby Tube
- Std. Penetration
- Auger Cuttings
- No Recovery
- Water First Noted
- Static Water Level

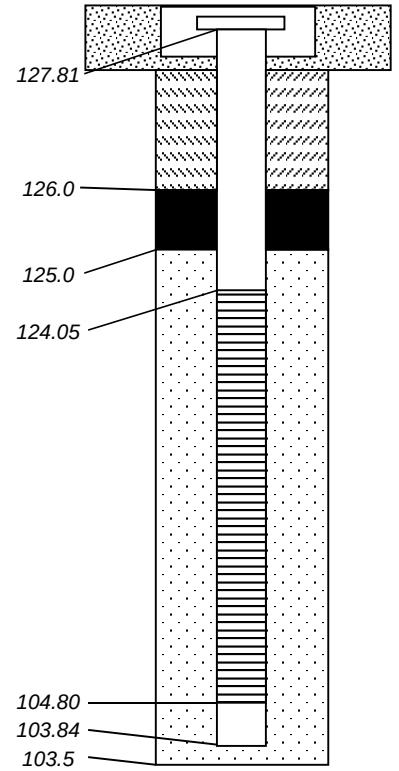
SPHERE 3 ENGINEERING, INC — BORING LOG/MONITOR WELL CROSS SECTION

CLIENT:	Mr. John Cosby	**Date:**	1/22/2018	**Casing Elev.:**	127.81 ft.
LOCATION:	Petro (UST13-09-02)	**Drilling Co.:**	TDS	**Surface Elev.:**	128.98 ft.
	907 Broad Street	**Rig Type:**	CME-75	**Screen Elev.:**	124.05 - 104.80 ft.
	Selma, Alabama 36701	**Boring Dia.:**	10.5 in.	**Well Depth:**	23.97 ft.
Project No.:	JC.PET.12	**Logged By:**	JAH/HTB		

B-18/RW-18

Depth (feet)	Sample	Water Level	Headspace Reading (ppm)	Standard Penetration Test	Description of Materials
					Asphalt at surface. Post-hole to 4 ft.
5	X		6.5		Clayey sand, tan to brown, well sorted, slightly moist, slight odor
10	X	▼	5.0		Same lithology as above, olive to gray, slight odor
15	X	▽	2.1		Same lithology as above, coarse grained, saturated at 14.8 feet bgs
20	X		0.6		Same as above, no odor
25	X		0.0		Same as above to 24.5 feet bgs; gray clay below 24.5 feet bgs, no odor
					Terminated at 25 feet bgs and completed as Type II recovery well RW-18.
30					
35					
40					
45					
50					
55					
60					

Monitor Well Construction Data
4" Diameter Sch. 40 PVC Slot Size 0.01"



- Concrete
- Cement/Bentonite Mixture
- Western Bentonite Pellets
- 20/40 Sand Pack

- Shelby Tube
- Std. Penetration
- Auger Cuttings
- No Recovery
- Water First Noted
- Static Water Level

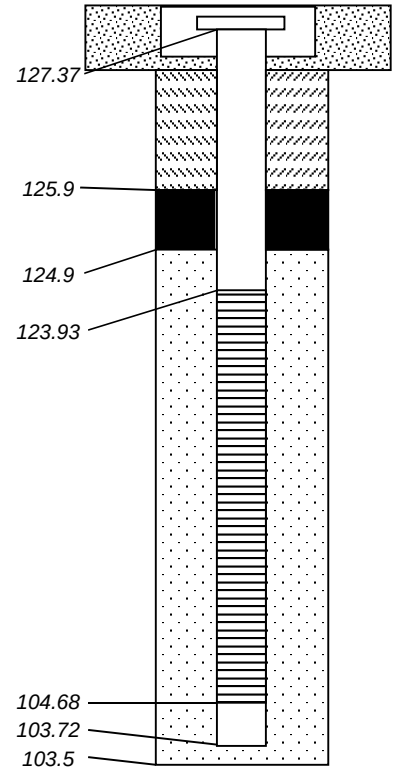
SPHERE 3 ENGINEERING, INC — BORING LOG/MONITOR WELL CROSS SECTION

CLIENT:	Mr. John Cosby	**Date:**	1/23/2018	**Casing Elev.:**	127.37 ft.
LOCATION:	Petro (UST13-09-02)	**Drilling Co.:**	TDS	**Surface Elev.:**	128.50 ft.
	907 Broad Street	**Rig Type:**	CME-75	**Screen Elev.:**	123.93 - 104.68 ft.
	Selma, Alabama 36701	**Boring Dia.:**	10.5 in.	**Well Depth:**	23.65 ft.
Project No.:	JC.PET.12	**Logged By:**	JAH/HTB		

B-19/RW-19

Depth (feet)	Sample	Water Level	Headspace Reading (ppm)	Standard Penetration Test	Description of Materials
					Asphalt at surface. Post-hole to 4 ft.
5	X		145		Sand, tan to brown, very fine grained, well sorted, slightly moist, strong odor
10	X	▼	126		Clayey sand, scattered gravels, moist, strong odor
15	X	▽	38.0		Same lithology as above, coarse grained, saturated at 15 feet bgs
20	X		17.5		Same as above, increasing gravels, slight odor
25	X		0.6		Silty clay, light gray, no odor
					Terminated at 25 feet bgs and completed as Type II recovery well RW-19.
30					
35					
40					
45					
50					
55					
60					

Monitor Well Construction Data
4" Diameter Sch. 40 PVC Slot Size 0.01"



- Concrete
- Cement/Bentonite Mixture
- Western Bentonite Pellets
- 20/40 Sand Pack

- Shelby Tube
- Std. Penetration
- Auger Cuttings
- No Recovery
- Water First Noted
- Static Water Level

MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **RW-20**

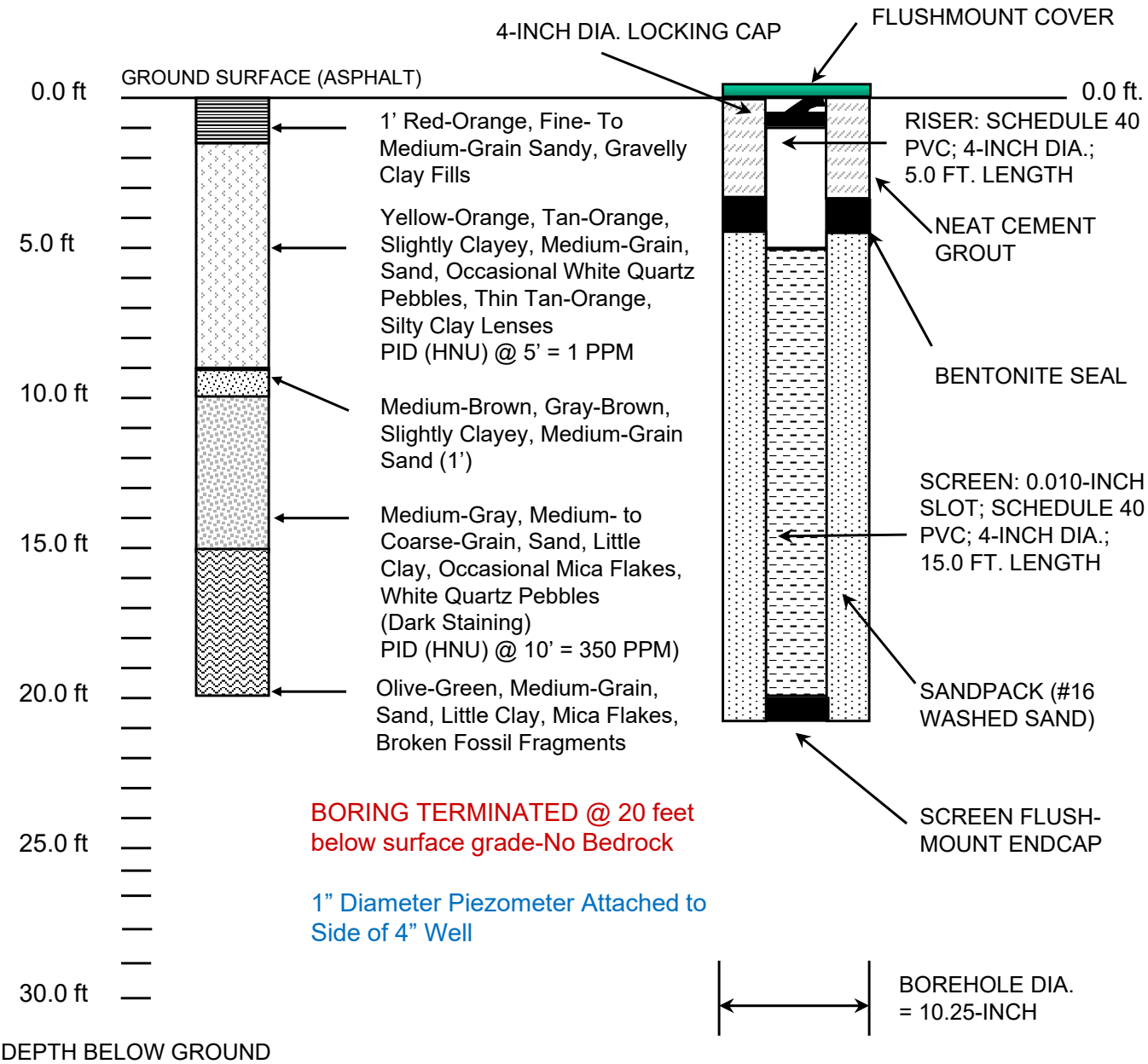
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.33
TOP OF CASING ELEVATION: 127.93 ft.
DEPTH TO WATER: 9.30 ft. BELOW TOC (1/11/2022)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Technical Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: 10-1/4" Hollow-Stem Auger

GROUNDWATER ELEVATION: 118.63 ft.
WELL DEVELOPMENT DATE: 12/16/2021
DRILLER: Curtis Lee
DRILLING DATE: 12/16/2021
DRILL RIG MODEL: CME-75

BORING LOG (USCS) *MONITOR WELL LOG*



MONITOR WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITOR WELL I.D: **RW-21**

SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

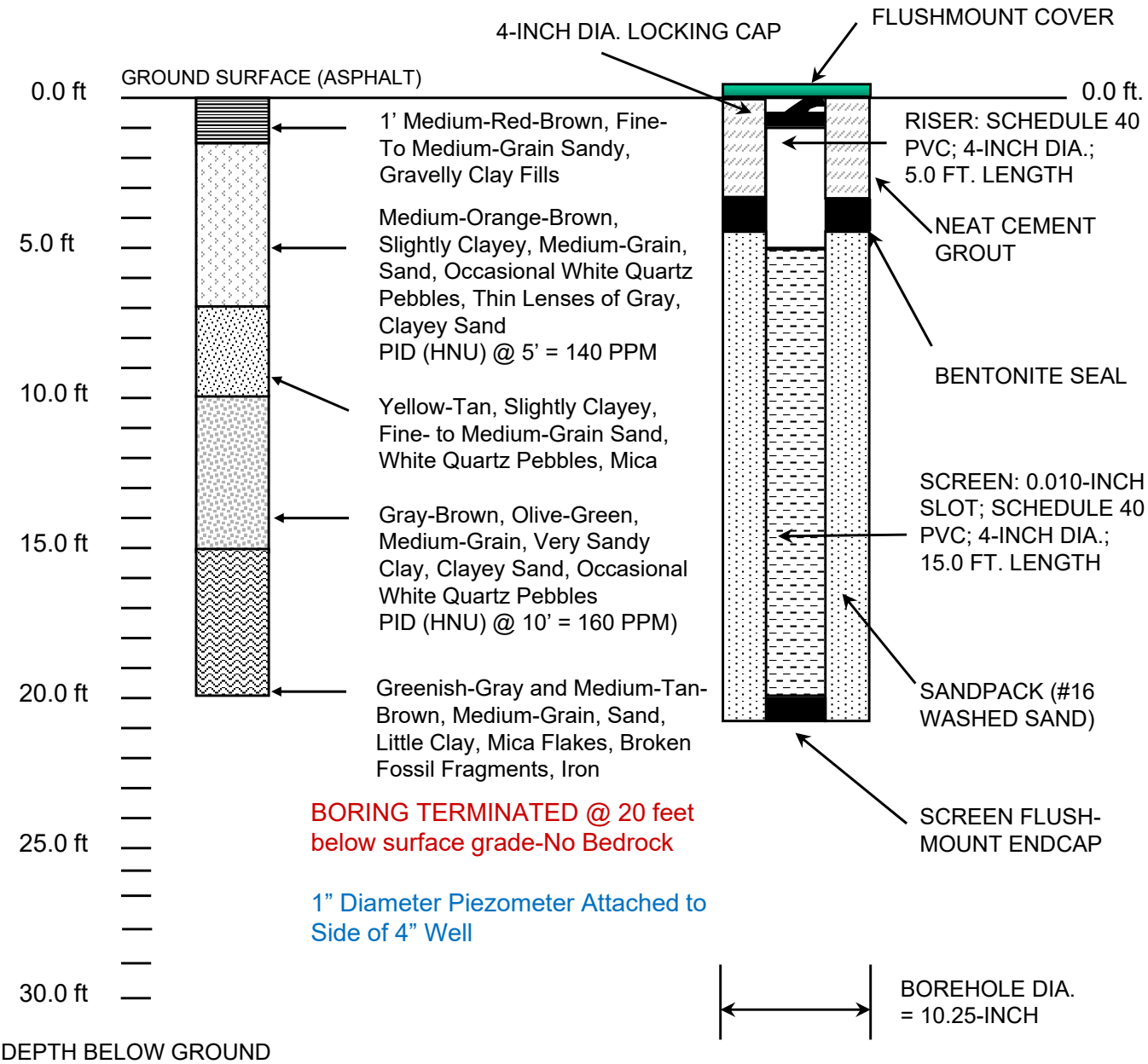
SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.33
TOP OF CASING ELEVATION: 128.78 ft.
DEPTH TO WATER: 10.31 ft. BELOW TOC (1/11/2022)
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Technical Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: 10-1/4" Hollow-Stem Auger

GROUNDWATER ELEVATION: 118.47 ft.
WELL DEVELOPMENT DATE: 12/16/2021
DRILLER: Curtis Lee
DRILLING DATE: 12/16/2021
DRILL RIG MODEL: CME-75

BORING LOG (USCS)

MONITOR WELL LOG



BORING LOG

LOG DEPTHS TO SCALE

SOIL BORING I.D: **SB-DW1**

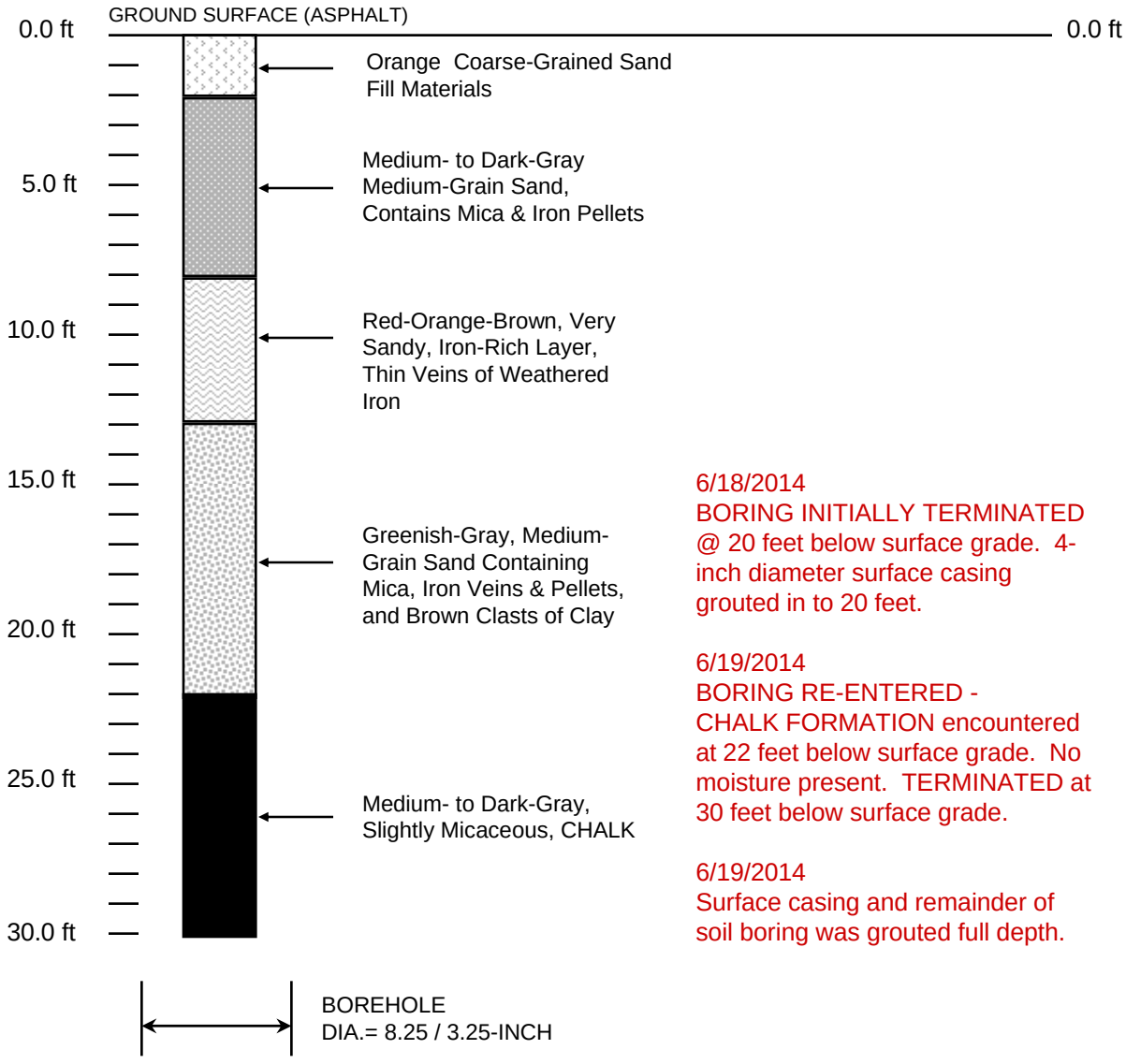
SITE: Petro (UST13-09-02)
907 Broad Street
Selma, Alabama 36701

SPHERE 3 Engineering, Inc.
3433 Sierra Drive
Hoover, Alabama 35216

SPHERE 3 Project I.D.: JC.PET.02
GEOLOGIST: Greg Karstens (AL. P.G. #875)
DRILLING CONTRACTOR: Smith Drilling Services
SOIL SAMPLING METHOD: Split-Spoon
DRILLING METHOD: Flight Augers

DRILLER: Jim Smith
DRILLING DATE: 6/18-19/2014
DRILL RIG MODEL: CME-45

BORING LOG (USCS)



6/18/2014
BORING INITIALLY TERMINATED @ 20 feet below surface grade. 4-inch diameter surface casing grouted in to 20 feet.

6/19/2014
BORING RE-ENTERED - CHALK FORMATION encountered at 22 feet below surface grade. No moisture present. TERMINATED at 30 feet below surface grade.

6/19/2014
Surface casing and remainder of soil boring was grouted full depth.

SPHERE 3
ENGINEERING, INC

Product Specifications

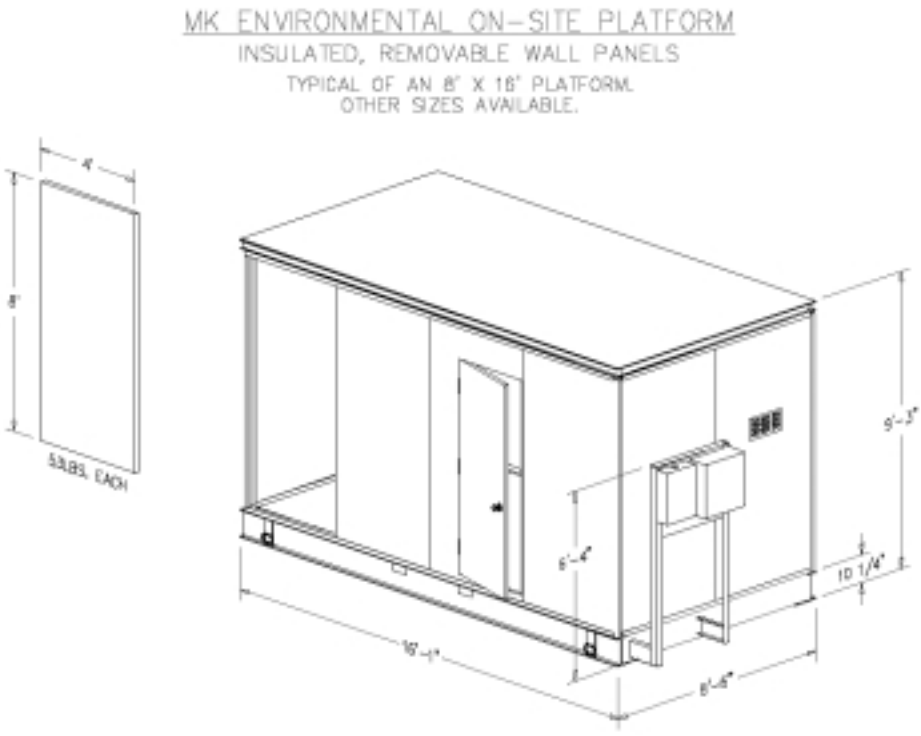
MK Environmental Inc.
7150 South Madison Street
Willowbrook, IL 60527
630-920-1104 Phone
630-920-8013 Fax

ON SITE PLATFORM

SYSTEM DESCRIPTION

The On-Site Platform integrates all the remedial technologies necessary to provide a total site-specific clean-up solution in one complete package. The platform saves time, space and money. All the room needed for maintenance, without taking up a lot of room

- All equipment fully piped, wired and factory tested
- Factory built equipment enclosure
- Structural Steel construction with aluminum exterior for low maintenance
- Removable sliding wall panels fully insulated and faced inside and out with aluminum sheeting
- All panels removable for full accessibility and maintenance to all equipment within
- MK Environmental manufactures all process components
- Dimensions: 8, 12, 16, 20, 24 or 28’ long x 8.5’ wide x 9.5’ high
- Can be trailer mounted
- Easily transportable to second site
- All piping enters building through a floor hatch for weather protection and security
- All panels fully lockable
- NEMA 4 Control panel is standard with Blank Front Cover
- Both Fork pockets and crane lifting rings included as standard
- Multitude of Colors to match station canopies
- Over 100 different equipment combinations available



Standard Specifications

- 10” structural steel I beam base, 4” steel corner posts, 2” steel roof frame
- 100 MPH rated construction. PE stamped design. 150 MPH available
- Roof constructed of a single sheet of aluminum for watertight construction
- Roof and walls are insulated with minimum 1.5” urethane insulation (R10)
- Removable 4’x 8’ sliding aluminum wall panels (53 lbs/ea) for ease of maintenance
- Class 1, Division 2, Group D XP electrical interior
- ¾” plywood flooring with I beams on 12” centers
- Man door and 100 watt interior explosion-proof light fixture is standard
- White interior and exterior
- Single source for equipment, service and support

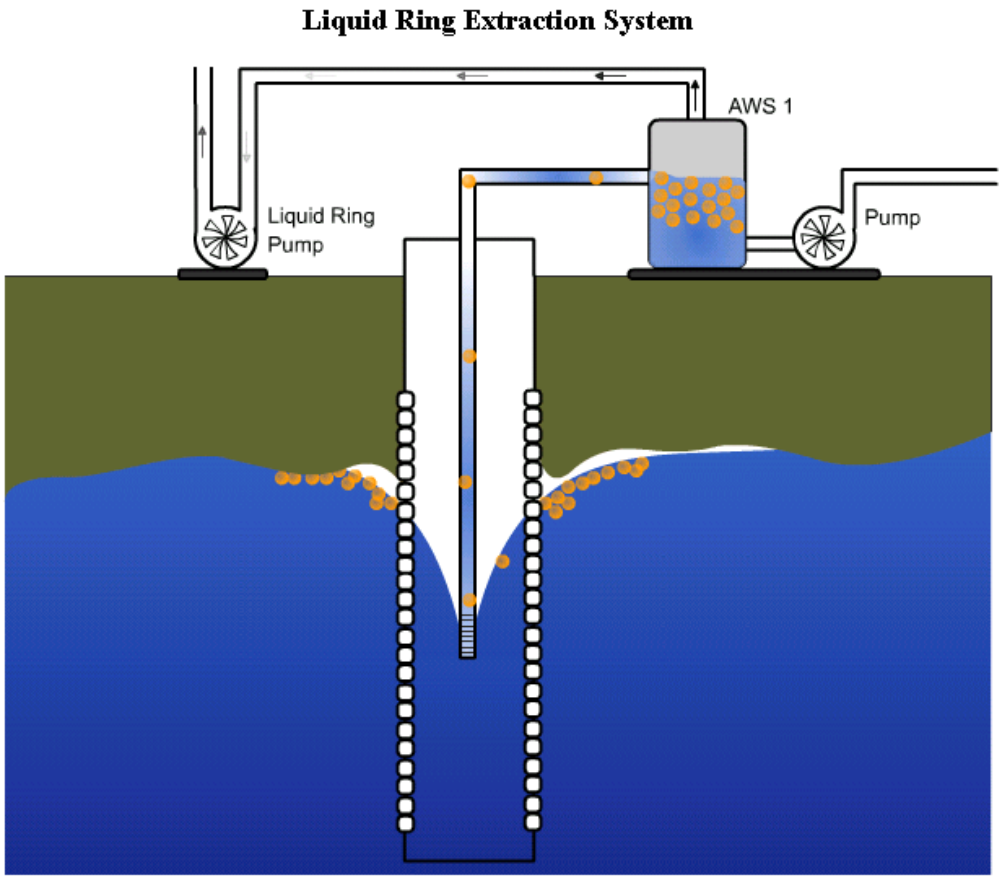
Optional Building Features:

- Enclosed mobile trailer unit
- XP heater with thermostat
- XP ventilation fan
- Sound Insulation Package for <70 dB operation
- UL listed control panel
- Factory installed Fused Main Disconnect with Meter Base and Weatherhead

MK Environmental Inc.
7150 South Madison Street Willowbrook, IL 60527
630-920-1104 Phone; 630-920-8013 Fax mkenv.com

MK Environmental Inc.
7150 S. Madison Street
Willowbrook, IL. 60527
630-920-1104 Phone
630-920-8013 Fax

OIL SEAL DUAL EXTRACTION SYSTEM



HOW IT WORKS

Dual extraction is a method by which both groundwater and vapors can be extracted from the same well with a single vacuum pump located in the equipment compound. The recovered groundwater is then typically treated with an oil/water separator and air stripper, and the air discharged to atmosphere. The typical limit for dual extraction is from wells less than 25' deep. Extraction from deeper wells is possible, but requires some additional fittings. Most systems utilize a liquid ring vacuum pump as the vacuum source because they can achieve the high levels of vacuum required, typically 18-22 inches of mercury.

25 HP

DIAGRAMMA DI FUNZIONAMENTO
Performance curves
POMPA PER VUOTO AD ANELLO DI LIQUIDO
Liquid ring vacuum pump

TIPO
Type

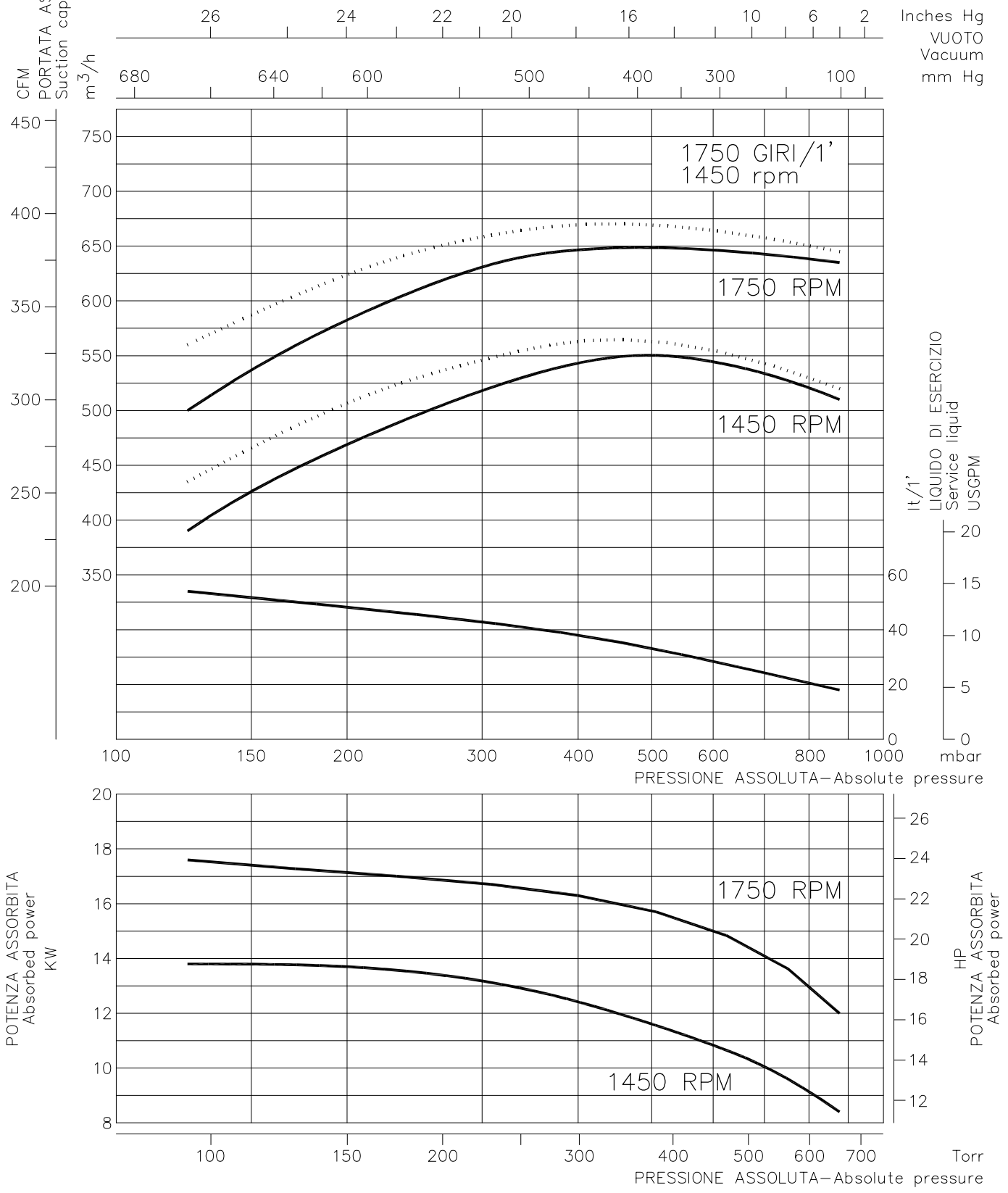
TRSC 100–550

TRAVAINI PUMPS® USA
Liquid Ring & Rotary Vane Vacuum Pumps and Systems

200 Newsome Drive
Yorktown, VA 23693
1-800-535-4243
www.Travaini.com

I DATI RIPORTATI SONO RIFERITI A :
Data refers to :

ARIA SECCA A 20 °C	———	Dry air at 20 °C (68 °F)
ARIA SATURA A 20 °C	·····	Saturated air at 20 °C (68 °F)
LIQUIDO DI ESERCIZIO	ACQUA / Water	Service liquid
TEMPERATURA LIQUIDO DI ESERCIZIO	15 °C (59 °F)	Service liquid temperature
PRESSIONE DI SCARICO	1013 mbar	Discharge pressure
TOLLERANZE	10%	Tolerance



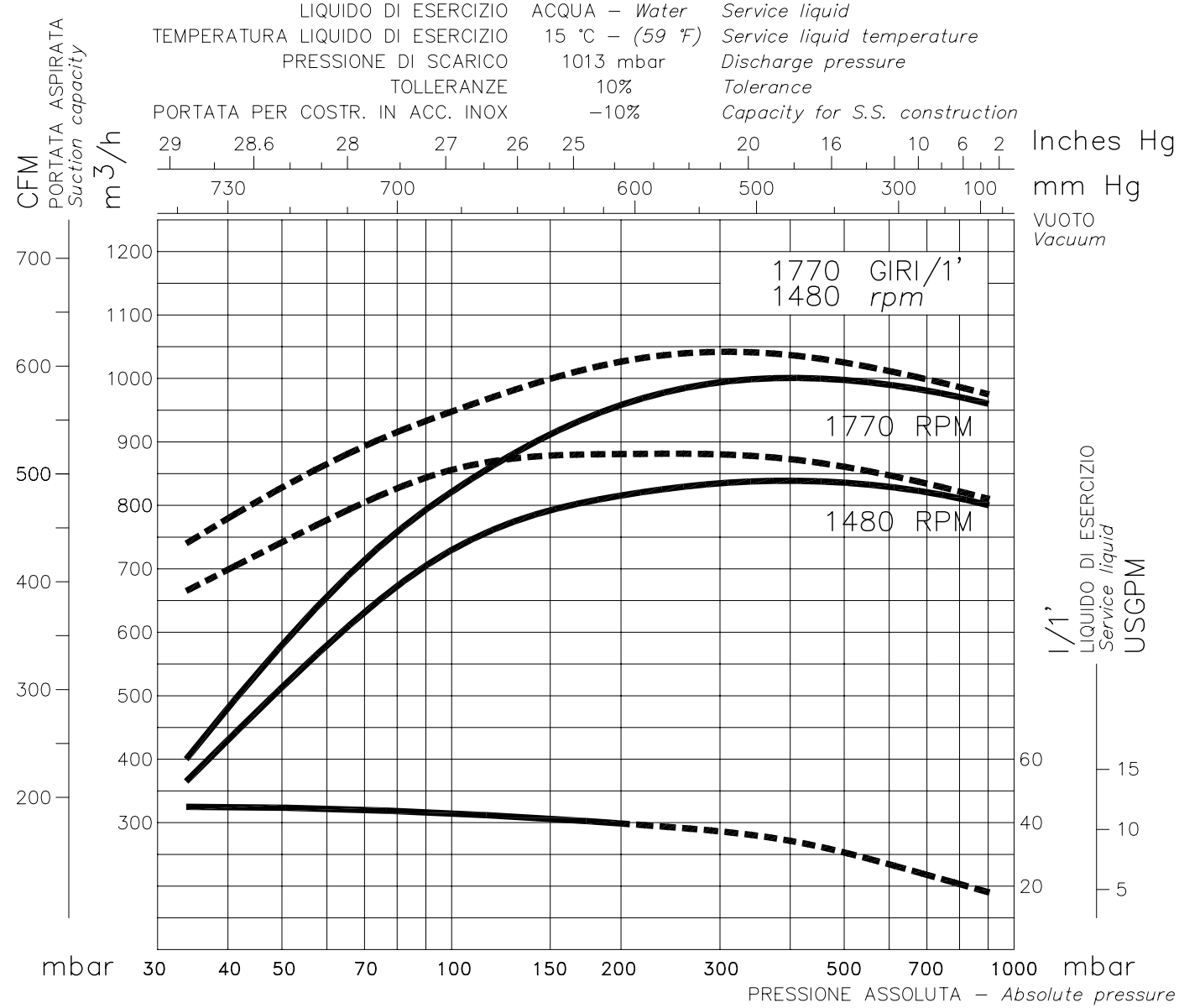
RIF.–Ref.: E.C./C.T.	DATA–Date: 12–95	SOST.–Repl.: 6070.150.02.05–06	N°.: 6070.150.03.05–06

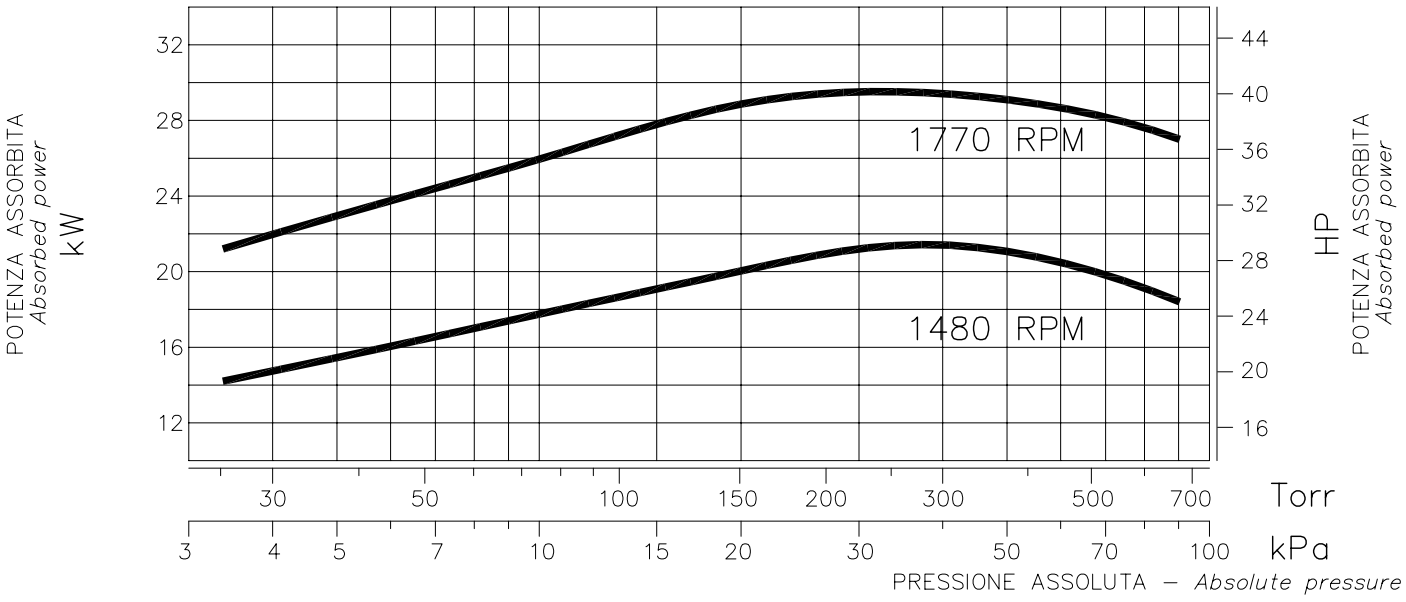
40 HP

DIAGRAMMA DI FUNZIONAMENTO
Performance curves
POMPA PER VUOTO AD ANELLO DI LIQUIDO
Liquid ring vacuum pump
TIPO *Type* **TRVX 1007**

TRAVAINI PUMPS® USA
Liquid Ring & Rotary Vane Vacuum Pumps and Systems
200 Newsome Drive
Yorktown, VA 23693
1-800-535-4243
www.Travaini.com

I DATI RIPORTATI SONO RIFERITI A –		*Data refers to :*
ARIA SECCA A 20 °C	———	*Dry air at 20 °C (68 °F)*
ARIA SATURA A 20 °C	- - - -	*Saturated air at 20 °C (68 °F)*
LIQUIDO DI ESERCIZIO	ACQUA – *Water*	*Service liquid*
TEMPERATURA LIQUIDO DI ESERCIZIO	15 °C – *(59 °F)*	*Service liquid temperature*
PRESSIONE DI SCARICO	1013 mbar	*Discharge pressure*
TOLLERANZE	10%	*Tolerance*
PORTATA PER COSTR. IN ACC. INOX	–10%	*Capacity for S.S. construction*



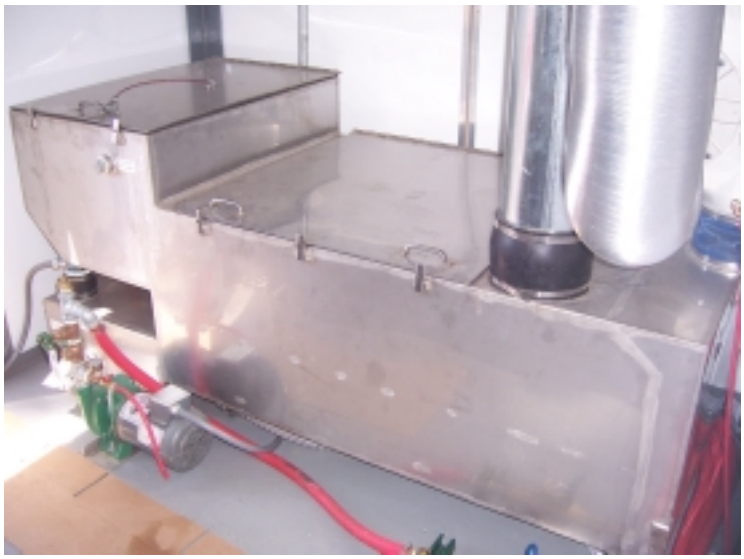


RIF.–*Ref.:* F.P./C.T.	DATA–*Date:* 04–2007	SOST.–*Repl.:* 7267.150.01.01–02	N°.: 7267.150.02.01–02

Product Specifications

MK Environmental Inc.
7150 S. Madison Street
Willowbrook, IL. 60527
630-920-1104 Phone
630-920-8013 Fax

STRIPPERATOR SA20



The Stripperator SA20 is a complete process treatment unit for hydrocarbon-contaminated water. It integrates both coalescing oil/water separator and the Cascade low profile Air Stripper into one component. The unit will separate free product, coalesce suspended or colloidal hydrocarbons and settle solids.

- Integrates a coalescing oil/water separator and cascade low profile air stripper and effluent sump into a single component (3 tanks built into1)
- Gravity flow from oil/water separator to the air stripper (NO PUMP REQUIRED)
- Fully gasketed lids with quick release adjustable latches
- Small footprint
- Fits through a double door – minimal space required
- Easy access to separator and air stripper as well as simple to maintain
- Allows quick inspection and viewing of operation
- Field upgradeable to 2 tray for twice the stripping efficiency
- 20 GPM capacity

CT Series

High Pressure Centrifugal Pumps
½ - 2½ HP
Heads to 140 Feet
Capacities to 95 GPM

MYERS CT SERIES LINE OF HIGH PRESSURE CENTRIFUGAL PUMPS PROVIDES QUALITY AT A COMPETITIVE PRICE. The complete line of ½ to 2½ HP units provide strong pressures up to 140 feet and flows up to 95 gpm.

The rugged cast iron body construction is available with either a corrosion resistant composite or brass impeller. The brass impeller unit is equipped with a high temperature, viton seal for more demanding applications. The heavy duty motor features a double ball bearing, 50° C ambient, dual voltage design for dependable service. The compact, back pullout design provides easy installation and serviceability.

The quality features of the CT series will provide dependable service for a wide variety of applications.

SPECIFICATIONS

HP	Catalog No. Composite Impeller	Catalog No. Brass Impeller	Pipe Tapping Sizes Suction (NPT)	Pipe Tapping Sizes Discharge (NPT)	Motor Voltage	Phase	Approx. Wt. Lbs.
½	CT05	CT05B	1¼"	1"	115/230	1	30
	CT053	CT05B3	1¼"	1"	208/230/460	3	30
¾	CT07	CT07B	1¼"	1"	115/230	1	32
	CT073	CT07B3	1¼"	1"	208/230/460	3	32
1	CT10	CT10B	1¼"	1"	115/230	1	35
	CT103	CT10B3	1¼"	1"	208/230/460	3	35
1½	CT15	CT15B	1¼"	1"	115/230	1	40
	CT153	CT15B3	1¼"	1"	208/230/460	3	40
2	CT20	CT20B	1½"	1¼"	115/230	1	57
	CT203	CT20B3	1½"	1¼"	208/230/460	3	57
2½	CT25	CT25B	2"	1½"	115/230	1	62
	CT253	CT25B3	2"	1½"	208/230/460	3	62

ADVANTAGES BY DESIGN

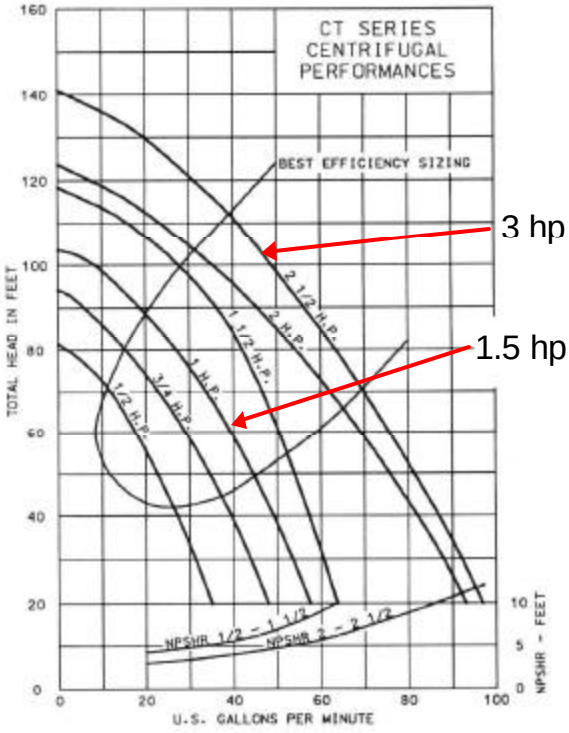
- Heavy duty cast iron construction.
- Back pull-out design.
- Dependable double ball bearing motor
- Continuous duty rating motor.
- Choice of brass or composite impeller.
- Brass impeller pumps rated 212° F.
- Composite impeller pumps rated 140° F.
- Maximum working pressure of 125 psi.
- CSA listed.

Applications

- Booster service
- Irrigation
- Circulating
- Cooling towers
- Air conditioning
- Liquid transfer
- Sprinkling systems
- General industrial service

Note: MK Environmental uses oversized pump motors. See below

PUMP PERFORMANCE



3 hp (MK)

1.5 hp (MK)

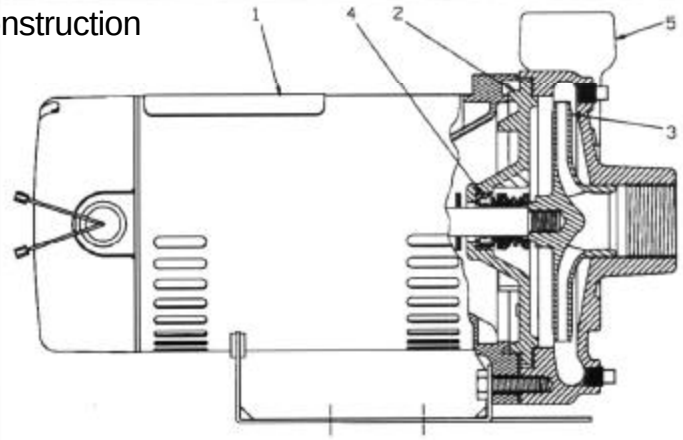
WHERE INNOVATION MEETS TRADITION

Myers
ISO 9001 Certified Company

CT Series

High Pressure Centrifugal Pumps
½ - 2½ HP
Heads to 140 Feet
Capacities to 95 GPM

1. MOTOR MK standard is TEFC construction
- NEMA standard
- Double ball bearing
- Open drip proof
- 60 Hz, 3450 rpm
- Stainless steel shaft
- Single phase with built-in overload protection
- Three phase require overload protection in starter unit
- Non-overloading
- Continuous duty
- Strong capacitor start design

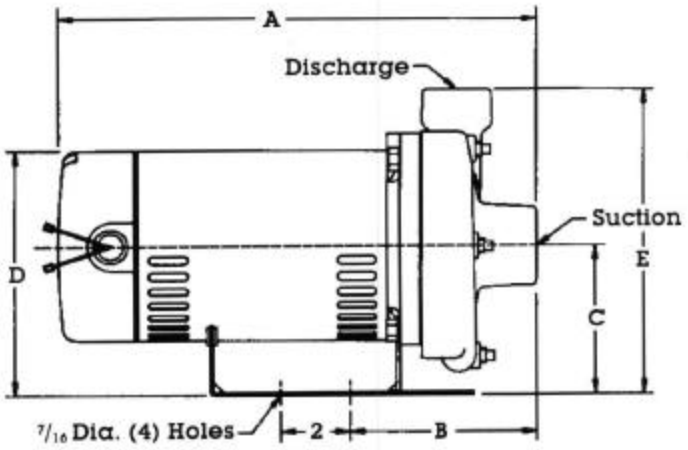


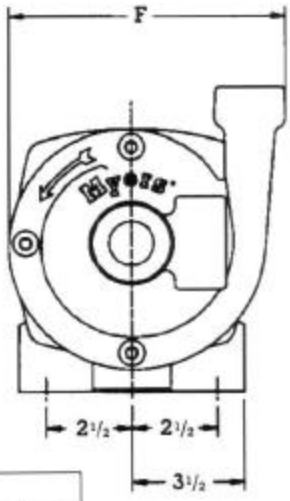
2. SEAL PLATE
- Heavy duty cast iron for dependable service and long life

3. IMPELLER
- Reinforced composite for applications to 140° F.
- Threaded SST insert on composite impellers
- Brass for applications to 212° F.
- Enclosed design for high efficiencies
- Balanced for smooth operation

4. MECHANICAL SEAL
- Standard carbon/ceramic faces, Buna elastomers, 300 series SST components (standard for pumps with composite impellers)
- High temperature carbon/ceramic faces, viton elastomers, 300 series SST components (standard for pumps with brass impellers)

5. CASING
- Heavy duty cast iron construction
- Back pull-out design
- Discharge can be rotated in four positions
- Tapped openings for priming, venting and draining.
- Vertical discharge standard





HP	Dimensions, inches							
	A	B	C	D	E	F	Suct.	Disch.
½	13⅞	5½	4⅜	7¼	9	8	1¼	1
¾	14⅜	5½	4⅜	7¼	9	8	1¼	1
1	15⅛	5½	4⅜	7¼	9	8	1¼	1
1½	15⅛	5½	4⅜	7¼	9	8	1¼	1
2	16½	6¼	4½	7½	9½	8⅞	1½	1¼
2½	16½	6¼	4½	7½	9½	8⅞	2	1½

SPHERE 3
ENGINEERING, INC

CURTIS SERVICE, INC.
45180 US HWY
ONEONTA, AL 35121 US
+12052128868
curtis_service@hotmail.com

Estimate

CURTIS SERVICE INC.
ONEONTA, AL

ADDRESS
Sphere 3 Engineering, Inc. 3433 Siera Drive Attn: Greg Hogeland greg@sphere3.com Hoover, AL 35216

ESTIMATE #	DATE	
10162	12/27/2024	

P.O. NUMBER:
Petro

JOB LOCATION
907 Broad Street Selma, AL

DESCRIPTION	AMOUNT
Job: Installation of a multiphase extraction system. This will be to cut and expose roughly 250 LF of existing trenching and excavate a ditch for installing: 430 feet of 1.5-inch schedule 40 PVC pipe 105 feet of 3-inch schedule 40 pipe (280) 1.5-inch schedule 40 45's 1- Uncover and expose all exisitng ditches. 2- All debris and soils will be hauled off to the appropriate disposal site by others. 3- We will back fill the ditches with gravel. Then pour and finish the 3,500 psi concrete. 4- A 24'x24'x6' gauge chain link fence with brown privacy slats, perimeter razor wire, and two 4' walks gates will be installed prior to the installation of the building. Once the building is to be set, we will have a crane delivered to offload and set the building on 8x8 blocks. 5- Lay 100' of Water line from meter to building	
Crane	2,900.00
Fence	9,000.00
Concrete	12,000.00
Gravel	2,000.00
Machinery	6,500.00

DESCRIPTION	AMOUNT
Materials	3,800.00
Travel	2,500.00
Labor	30,000.00

Any unforeseen issues that arise on the job, will result in a change order.

TOTAL **$68,700.00**

PAYMENT TERMS:

-50% down payment

-50% at the moment of finish the job.

Accepted By

Accepted Date

ALL STAR
a pillsi company
CONSTRUCTION CO.

Address: 25299 Canal Road
Suite A2/1
Orange Beach, AL 36561
Voice/SMS: (251) 403-2165
email: strewnstars@gmail.com

Proposal ☑ Invoice ☐

CUSTOMER	DOCUMENT	DATE
Greg Hoagland SPHERE 3 Engineering, Inc. 3433 Sierra Drive Hoover, AL 35216	EST35-2299	12/28/2024
	PROJECT	**LOCATION**
	Petro	Selma, AL

DESCRIPTION	AMOUNT
beglist	
Sawcut approximately 230 feet of existing trench to expose piping	$6,500.00
Extend 120' 1.5" piping to two new wells and 80' of drain line.	$25,500.00
Load all debris in rolloffs provided by others	$3,000.00
Fill trenches with crushed stone to 6 inches below surface	$3,500.00
Cap trenches with reinforced, doweled, 3,500 psi concrete (min 6 inches)	$14,000.00
Construct 20'x24'x6' chainlink fence compound with razor wire perimeter, privacy slats, and a double 4-foot access gate	$9,400.00
Provide crane to offload and place system container onto 8"x8" timbers	$3,000.00
Install 2 each 24"x 24" steel vaults (customer to provide).	$1,500.00
Construct potable water service line (upto 200')	$3,000.00
endlist	
TOTAL	**$69,400.00**

Customer Acceptance _____ Date _____

MK ENVIRONMENTAL INC.

765 Springer Drive
Lombard, IL. 60148-6412
615-392-7737 (direct)

jgiltz@mkenv.com

QUOTATION

Date	12/19/2024
Quote No.	224018B
Reference	Petro
Page No.	1 of 2
Freight	Included
Terms	PWP/Net 180
Ship Via	Flatbed
F.O.B.	Factory

Quotation valid for 30 days

SOLD TO:	SHIP TO:
Greg Hoagland	UST 13-09-02
Sphere 3 Engineering, Inc.	Petro
3433 Sierra Drive	907 Broad Street
Hoover, AL. 35216	Selma, AL.
205-403-3317 205-403-3317 (fax)	

QUANTITY		UNIT PRICE	AMOUNT
	200 amp 3/60/230 volt 4 wire plus ground electrical service Brought to NEMA 3R control Panel Interior electrical will comply with NEC requirements for Class 1, Division 2, Group D Hazardous locations Motors will be TEFC construction		
1	Dual Extraction System - Water Seal Unit or Equal ~ 375 ACFM @ 18"Hg. Vacuum 25 hp liquid ring blower, cast iron construction Pre & post blower air/water separators Intrinsically safe high temperature switch Temperature gauge, 0-300 F NEMA 4 valve for tap water control Epoxy coated structural steel base and exterior water/water heat exchangers Sight glass and stilling wells Automatic vacuum relief and dilution valve with muffler Full re-circulation seal water package	133,684.00	$133,684.00
1	200 gallon air/water separator (AWS-1) with conductivity probe level switches 10" diameter clean out port with vacuum rated quick release lid Liquid filled vacuum gauge Vacuum assist hose 2" drain valves Vacuum relief valve Dilution valve with filter/silencer Inlet screen		
1	85 gallon Air/water separator (AWS-2) seal water tank (stainless steel construction) Conductivity probe electronic tap water controls for seal water system Automatic filling low seal water level switch and valve 6" diameter clean out port with pressure rated quick release cap Site glass for center line inspection 2" tank drain valve Tap water flow meter assembly with shut off valve & hose barb connection		
1	1.5 hp transfer pump, 3450 rpm, TEFC motor (AWS-1 Location) Cast Iron housing with composite impeller, anti air lock design manual "Pump ON" button inside building for sampling		
1	MKE Model SA15b Stripperator 15 GPM capacity Oil/Water Separator and air stripper treatment system Coalescing separator with product skimming weir Polyethylene coalescing pack with reduced spacing for efficient oil removal Low profile air stripper with 2 hp AMCA Type B spark resistant aluminum blower Nylon tube aeration air stripper for high mass removal rates with low maintenance Low, high, and high-high sump conductivity probes 12" clean out hatch Low blower pressure alarm 304 stainless steel construction Air stripper blower silencer to reduce noise level of the stripper blower Air/water heat exchanger built into the stripping tray		
1	1.5 hp transfer pump, 3450 rpm, TEFC motor (Sump Location) Cast Iron housing with composite impeller, anti air lock design manual "Pump ON" button inside building for sampling		
1	Groundwater flow totalizer with pulse output for remote totalization. Flow calibration button.		
1	Master Control Panel System, Including: NEMA 3R control panel with blank front cover Swing out sub panel for gauges, control operators, and switches IEC Magnetic motor starters, safety switches, H-O-A controls Control transformer (8) intrinsically safe relays, (8) alarm indicator LED's, (16) output channels Hard wired relay logic (1) exterior GFCI utility outlet System run time totalizing hour meter Blower low pressure alarm Anti-falsing alarm circuit to prevent nuisance tripping Auto-release restart timer for remote restarts via telemetry Three phase voltage and phase monitor Emergency E-stop LED red indicator light located on swing out sub panel		

MK ENVIRONMENTAL INC.

Greg Hoagland
Sphere 3 Engineering, Inc.

Date 12/19/2024
Quote No. 224018B
Reference Petro
Page No. 2 of 2

QUANTITY		UNIT PRICE	AMOUNT
	Liquid ring automatic shut down upon: AWS1 high liquid level AWS2 high liquid level Air stripper blower low pressure and high sump alarm Interior Emergency Stop Mushroom button with twist to release detent and phase fault condition.		
1	200 Amp Fused Main Disconnect Weatherhead with extension pole and bracket support Electric meter socket base installed		
1	MK Site Optimization Software (SOS) - Wireless Monitoring Unit. MK Cloud based monitoring capabilities with Email & SMS alarming notification Includes: Cellular antenna, wiring diagrams, setup forms. Digital Inputs, Analog inputs, and Digital Outputs for remote operation capabilities Flow and Vacuum graphing and data export capabilities Alarm counters for increased troublshooting efficiency Wireless service will be supported and billed through MKE @ $145/mo. (subject to change) Billed monthly on the first of the month following successful factory wet testing.		
1	Vacuum transducer integrated into telemetry system for real time monitoring, 4-20mA		
1	System building (refurbished) 8.5'W x 12' x 9.5'H aluminum/steel enclosure, or equal Fully insulated with removable sliding wall panels for ease of maintenance Exterior grade plywood floor, structural steel frame Includes 100 watt XP interior light, and removable center grate for ease of maintenance The breaker panel and control panel will be mounted on a vertical steel bracket attached to platform end. The bracket, panels and all conduits will allow for the removal of the enclosure panels by one person. 10" structural steel base with 4" steel cross members Steel corner posts and roof frame Continuous sheet aluminum roof for superior protection		
1	12,000 BTU XP heater with XP thermostat. All components fully piped, wired and factory tested		
1	Equipment Electrical Installation Includes XP wiring, XP seal off connectors, liquid tight flexible conduit		
1	Equipment Mechanical Installation Includes mounting, piping and connectors Brass fittings, sample ports, pressure gauges and sight glasses		
1	200 Amp Fused Main Disconnect Weatherhead with extension pole and bracket support Electric meter socket base installed		
	Notes: 1. Wireless monitoring unit will be supported and billed through MK Environmental. $105 per month + tax via recurring MK ACH Collection or $110 per/mo + tax via recurring credit card or $145 per month + tax customer check due upon receipt Billed monthly on the first of the month following successful factory wet testing Monthly service rate subject to change.		

EQUIP. SUB TOTAL		$133,684.00
FREIGHT SERVICES		$2,500.00
STARTUP SERVICES		$2,500.00
NET TOTAL		$138,684.00

Does not include permits, fees, etc…
Offloading & placement by others.

Jerry Giltz,
MK Environmental, Inc.

Southeastern Environmental Products, Inc.

832 Pickford Point Madison, MS 39110 601-421-4258 sepco@att.net

Sphere 3 Engineering, Inc. 3433 Sierra Drive Hoover, AL 35216 Greg Hoagland 205-403-3317 greg@sphere3.com	Petro Selma, Alabama	December 23, 2024 Page 1 of 3

We are pleased to offer the following:

LIQUID RING EXTRACTION SYSTEM……$ 140,445.00

- High Vacuum Recovery Pump LR Water Seal Design or equal pump
- 475 - 500 ACFM @ 20" Hg. Capacity
- 30 hp TEFC Motor
- Minimum 180 Gallon groundwater Knock out tank
- Seal water drum with fittings
- Seal water recirculation
- Knock out tank clean out port
- Transfer pump 1.5 hp groundwater transfer pump, TEFC motor
- Transfer pump level controls
- Seal water solenoid valve and flow meter for tap water source.

CONTROL SYSTEM

- NEMA 4 EXTERIOR MOUNTED CONTROLS
- breaker panel with individual branch breakers for all major components
- control panel with magnetic starters, groundwater pump controls, high level shut off system controls, and all additional control circuits required for the system

- INTERLOCK CONTROL PANEL
- latching pump shut-off relay w/manual reset
- GFCI Utility outlet with breaker for hand tools
- Incoming power monitor and Emergency kill switch
- Soft Starter for liquid ring pump circuit, installed in its own NEMA 4 enclosure

TELEMETRY SYSTEM

- RACO Model Verbatim Modular Series VSS
- The RACO Verbatim is the most technologically advanced Alarm Autodialing and Remote Monitoring System available, offering operational and programming features unavailable in any other system. Speech messages digitally recorded by user. Large selection of modular options. Remotely programmable via any touch-tone phone over a standard telephone line. It lets the operator turn equipment on or off from any phone- anywhere. Can function as an RTU. Up to 32 contact channels and up to 16 analog channels.
- 1 Vacuum readings
- 7 Alarm monitoring
- Restart/shutdown
- Additional inputs, 16 total

OIL WATER SEPARATOR SYSTEM – 30 GPM

- Coalescing pack
- Effluent sump
- Transfer pump 1.5 hp groundwater transfer pump, TEFC motor
- Transfer pump level controls
- Product high level float switch. Drum provided by others

LOW PROFILE AIR STRIPPER – 30 GPM

- 1-tray stripping unit
- Transfer pump 3.0 hp groundwater transfer pump, TEFC motor
- Transfer pump level controls
- High/Low Air Supply Switch
- High Sump Level Switch
- aluminum blower
- air pressure gauge
- Integral Effluent Sump, 80 gallon capacity
- inspection/clean out hatch
- Stainless Steel Construction
- latched and gasketed lid

- epoxy coated carbon steel construction
- Final effluent flow meter, 4-20 mA via telemetry
- Blower silencer
- Final effluent totalizing flow meter

MISCELLANEOUS ITEMS

- Third party certification of the building and control panel included.
- Includes system startup assistance with 3 weeks prior notice
- Includes freight to jobsite. Off loading and placement by others.
- Skid mounted system. All piping and wiring provided by the site contractor.

SYSTEM PRICE .....$ 140,445.00

Payment terms: 30% down payment with order, 30% prior to shipping, remainder Net 30 days.
Delivery: 10-12 weeks

FOB: FACTORY
Total does not include taxes, permits, fees, etc.

Dale Woodall
Southeastern Environmental Products, Inc.
Madison MS
601.421.4258
sepco@att.net

Tortorice Electrical Service, Inc.
PO Box 695
Trussville, AL 35173 US
tracilet5@gmail.com

Estimate

ADDRESS
Sphere 3 Engineering
3433 Sierra Drive
Hoover, Alabama 35216

ESTIMATE # 1117
DATE 12/10/2024

ACTIVITY	DESCRIPTION	QTY	RATE	AMOUNT
	Petro; Selma, AL			
Services	Construct new 200-amp service with new pole. Wire new gas system up to 70'. Labor & Materials	0	9,500.00	9,500.00

TOTAL **$9,500.00**

Accepted By

Accepted Date

MK Environmental Inc.

Please remit payment to:
765 Springer Dr.
Lombard, IL 60148
630-920-1104 Phone
866-306-8977 Fax

Invoice

Date	Invoice #
1/1/2025	35474

Bill To	Ship To
Sphere3 Engineering Inc 3433 Sierra Drive Hoover, AL 35216 karen@sphere3.com	Sphere 3 Supermart #195 2030 U.S Hwy 78 East Oxford AL 36203 Attn: Greg Hoagland

EXAMPLE

PO #	Terms	Rep
SOS CO	Due on receipt	JG

~~SM195~~

Quantity	Item Code	Description	Price Each	Amount
1	SOS	Site Optimization Software (SOS) Service - January, 2025	100.00	100.00T
		Caldwell Parish and State Sales Tax	9.45%	9.45

Thank you for your business.

Total $109.45