



**Environmental
Consulting and
Testing Services**

October 14, 2016

Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

Attention: Mr. Jeff Aul

Subject: **Revised Corrective Action Plan
RNA with MEMEs
Spring Valley Market
2620 Ricks Lane
Leighton, Colbert County, Alabama
Facility I.D. Number: 15201-033-013348
UST Incident Number: UST 07-09-02
GeoService Project Number: GSU 38-15**

Dear Mr. Aul:

On behalf of Vulcan Oil Company, GeoService, Inc. is submitting this Revised Corrective Action Plan for the above referenced property. The Corrective Action Plan was prepared in accordance with ADEM Admin. Code R. 335-6-15-.29. Cost proposal #16 has been revised to reflect the addition of the recovery wells and is also attached.

If you have any questions, or if we can be of additional service, please call us at (205) 655-9090.

Respectfully submitted,
GeoService, Inc.

A handwritten signature in black ink, appearing to read "C. White".

Christopher J. White, P.G.
Senior Geologist

REVISED CORRECTIVE ACTION PLAN RNA WITH MEMES

for the

SPRING VALLEY MARKET
2620 RICKS LANE
LEIGHTON, COLBERT COUNTY, ALABAMA

FACILITY I. D. NO. 15201-033-013348
UST07-09-02

Prepared for

VULCAN OIL COMPANY
P.O. BOX 100
SHANNON, ALABAMA 35142

Prepared by

GeoService, Inc.
111 North Chalkville Road
Trussville, Alabama 35173
GeoService Project No. GSU 38-15

October 14, 2016



Christopher J. White, P.G.
Senior Geologist



Allen McLemore, P.E.
Professional Engineer

CERTIFICATION PAGE

I certify under penalty of law that this Corrective Action Plan and all plans, specifications, and technical data submitted within were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiring of the person or persons, who directly gathered the enclosed information, the information submitted. 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.



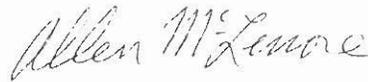
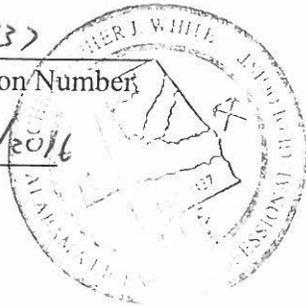
Christopher J. White, P.G.
Senior Geologist

437

Registration Number

10/18/2016

Date



Allen McLemore, P.E.
Professional Engineer

20698

Registration Number

10/18/2016

Date

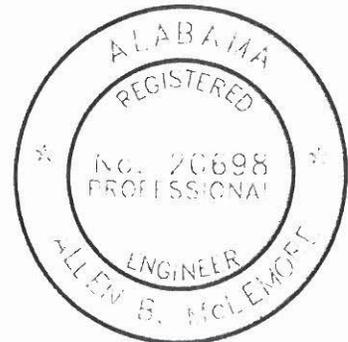


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Health and Safety Plan

1.0 ADEM UST SITE DOCUMENTS

1.1 UST Release Fact Sheet

A copy of the UST Release Fact Sheet is included on the following page.

UST RELEASE FACT SHEET

GENERAL INFORMATION:

SITE NAME: Spring Valley Market

ADDRESS: 2620 Ricks Lane, Leighton, Alabama

FACILITY I.D. NO.: 15201-033-013348

UST INCIDENT NO.: UST07-09-02

RESULTS OF EXPOSURE ASSESSMENT:

How many private drinking water wells are located within 1,000 ft. of site?	2
How many public water supply wells are located within 1 mile of the site?	0
Have any drinking water supply wells been impacted by contamination from this release?	No
Is there an imminent threat of contamination to any drinking water wells?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Have vapors or contaminated groundwater posed a threat to the public?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are any underground utilities impacted or imminently threatened by the release?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Have surface waters been impacted by the release?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is there an imminent threat of contamination to surface waters?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
What is the type of surrounding population?	Commercial/residential

CONTAMINATION DESCRIPTION:

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

Free product present in wells? Yes No Maximum thickness measured: Sheen

Maximum TPH concentrations measured in soil: 27.510 ppm

Maximum BTEX or PAH concentrations measured in groundwater: 5.620 ppm BTEX

1.2 UST Site Classification Form

A copy of the UST Site Classification Form is included on the following pages.

ADEM GROUNDWATER BRANCH
 UST SITE CLASSIFICATION SYSTEM

CHECKLIST

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

SITE NAME: Spring Valley Market
 SITE ADDRESS: 2620 Ricks Lane
Leighton, Alabama
 FACILITY I.D. NO.: 15201-033-013348
 UST INCIDENT NO.: UST07-09-02

OWNER NAME: Vulcan Oil Co.
 OWNER ADDRESS: 2042 Shannon Road
Shannon, AL 35042
 NAME & ADDRESS OF PERSON COMPLETING THIS FORM: Christopher J. White, P.G.
111 North Chalkville Road
Trussville, AL 35173

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

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

ADDITIONAL COMMENTS:

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

Enter the determined classification ranking:	C.2
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ADEM GROUNDWATER BRANCH
SITE CLASSIFICATION CHECKLIST
(5/8/95)

2.0 INTRODUCTION

The site located in Leighton, Alabama is currently a gasoline filling station and convenience store operated as the Spring Valley Market. The subject site was originally developed as a gasoline station and convenience store in the 1980s. The subject site was reportedly undeveloped land prior to its development as a gasoline station and convenience store. Vulcan Oil Company retained GeoService, Inc. to prepare this Corrective Action Plan for the subject site as required by the Alabama Department of Environmental Management (ADEM), and in accordance with ADEM Administrative Code R. 335-6-15-.29.

A Corrective Action Plan Evaluation dated April 13, 2016 was previously submitted to ADEM.

2.1 Authorization

Authorization to prepare this Corrective Action Plan Evaluation was given in the June 22, 2016 letter from ADEM, *Approval of Cost Proposal #15 for Corrective Action Development*.

2.2 Site Location

The subject site is located at 2620 Ricks Lane in Leighton, Colbert County, Alabama, Section 5, Township 5 South, Range 10 West on the U. S. Geological Survey "Leighton, AL." 7.5 Minute Series Topographic Quadrangle Map illustrated in Figure 1. The site is located at Latitude 34° 39' 23" and Longitude 87° 36' 58".
(Appendix – Figure 1).

3.0 SUMMARY OF PREVIOUS SITE ASSESSMENTS

3.1 Regional Geology and Hydrogeology

From research of the *Geologic Map of Alabama*, (1979), published by the Geological Survey of Alabama the subject site is underlain by the Tuscomb Limestone Formation. The Tuscomb Limestone Formation is described as a light gray limestone, which is partly oolitic near the top. The apparent thickness of the formation in this province (Interior Low Plateaus) varies due to differential dissolution of the carbonates in the unit. The depositional environments associated with the Tuscomb Limestone Formation are consistent with cyclic facies depositional environments ranging from medium-energy aquatic environments to low-energy aquatic environments. Cyclic facies depositional environments create situations where subsurface groundwater flow is highly dependent upon sub-surface structural geology. Some of these facies will allow the migration of water in a vertical direction and some facies will retard groundwater flow in a vertical direction.

3.2 Site-Specific Geology and Soil Information

The soil consisted of silty clay underlain by limestone. The uppermost aquifer for the region near the subject site was encountered soil/bedrock interface in MW-1 and MW-2 at depths of 14 feet and 8 feet respectively. The depth to bedrock at other locations ranged from 1 foot to 4 feet with no groundwater encountered above the top of rock. In these borings the groundwater was encountered in the limestone at depths ranging from approximately 10 feet to 20 feet below surface. The groundwater is under semi-confined conditions and equilibrates to levels 4 feet to 15 feet below surface.

3.3 Previously Conducted Site Activities

Two 4,000-gallon gasoline USTs, one 4,000-gallon diesel UST and two 1,000-gallon gasoline USTs are currently located onsite. The existing piping was replaced in June 2007. An ADEM UST Closure Site Assessment Report was completed by Karst Environmental. During the UST Closure Site Assessment Report soil samples were collected from the piping trench associated with the removed petroleum product piping. Results of the soil samples indicated total petroleum hydrocarbon concentrations to be below the initial screening level defined by ADEM. However, during the product piping removal activities petroleum impacted soil was observed. Based upon the results of the UST Closure Site Assessment Report the ADEM issued a Requirement to Conduct Investigative and Corrective Actions at the subject site.

A Preliminary Investigation Report was prepared in response to the "Notification of Requirement to Conduct Investigative and Corrective Actions" issued from ADEM, dated October 17, 2007.

Based upon the conclusions of the Preliminary Investigation Report the ADEM requested an on-site Secondary Investigation Report be prepared. A Secondary Investigation was

completed and submitted to ADEM on March 22, 2010. Based upon the results of the Secondary Investigation it was determined that the petroleum product plume at the subject site should be delineated offsite. The report on these activities was submitted on April 3, 2015. Four quarters of groundwater monitoring have been conducted since the additional delineation was performed.

The analytical data for benzene, MTBE, and naphthalene concentrations from the last sampling event (May 17, 2016) are shown on Figure 2, Figure 3 and Figure 4 respectively. The groundwater elevation data and general flow direction from the last sampling event is shown on Figure 5. A table of historical analytical results is attached in the appendix.

4.0 SUMMARY OF PREVIOUSLY CONDUCTED CORRECTIVE ACTION

No corrective action has been performed on the site.

5.0 SITE REMEDIAL GOALS

The site remedial goals are the Site Specific Target Levels (SSTLs) as established in the January 21, 2015 ARBCA. The wells designated as the source area wells are MW-1 and DW-1. The wells designated as the point of compliance (POC) wells are DW-3, DW-4, and DW-5. The point of exposure (POE) was designated as the South Well (private well). The well is located approximately 250 feet southwest of the source area. Table 1 below outlines the site remedial goals for this remediation program.

Table 1 Site Specific Target Levels Groundwater Resource Protection					
Chemical of Concern	Source Area Wells (MW-1, DW-1)	POC Well (DW-3)	POC Well (DW-4)	POC Well (DW-5)	POE South Well (private well)
Benzene	6.75E-02 ppm	6.75E-02 ppm	6.69E-02 ppm	1.08E-02 ppm	5.00E-03 ppm
Toluene	1.35E+01 ppm	1.35E+01 ppm	1.34E+01 ppm	2.16E+00 ppm	1.00E+00 ppm
Ethylbenzene	9.45E+00 ppm	9.45E+00 ppm	9.36E+00 ppm	1.51E+00 ppm	7.00E-01 ppm
Xylenes	1.35E+02 ppm	1.35E+02 ppm	1.34E+02 ppm	2.16E+01 ppm	1.00E+01 ppm
MTBE	2.70E-01 ppm	2.70E-01 ppm	2.68E-01 ppm	4.33E-02 ppm	2.00E-02 ppm
Naphthalene	2.70E-01 ppm	2.70E-01 ppm	2.68E-01 ppm	4.33E-02 ppm	2.00E-02 ppm

6.0 PROPOSED REMEDIATION METHODS

The predominant impact of COCs in groundwater at the site is in the area adjacent to the southeast of UST pit (MW-1 and DW-1). The well at the northeast corner of the site (DW-5) shows some impact to a lesser extent. The shallow groundwater is encountered at 10 feet to 20 feet below surface under semiconfined conditions and equilibrates to 3 feet to 15 feet below surface. We propose using active groundwater remediation consisting of mobile, enhanced, multiphase extraction (MEME).

6.1 Soil & Groundwater Remediation

MEME Events

Active groundwater remediation recommended in this case consists of free product (if encountered) and petroleum contaminated groundwater recovery through multiple MEME events. GeoService recommends two 24-hour MEME events per triannual period for one year followed by an evaluation period of groundwater monitoring. The vacuum fluid recovery method employs a high vacuum (<28 in Hg) and relatively high flow rates (<3000 ft³ / min) to remove multiple phase volatile organic compounds (VOCs) from the subsurface. The multiple phases include vapor, adsorbed, dissolved, and free phase petroleum or VOC product. The method volatilizes adsorbed and free phase VOCs through a process similar to soil vapor extraction remediation methods, but with a higher vacuum and subsequent radius of influence.

The high vacuum remediation method has also demonstrated effectiveness with adsorbed VOCs in the smear zone, the zone of the aquifer where seasonal water levels regularly fluctuate. Removal of the adsorbed phase then diminishes the opportunity for the smear zone to become a source of dissolved contamination. Lowering of the water level in the monitoring well(s) being addressed also introduces oxygen to the vadose and saturated zones, thereby encouraging aerobic biodegradation.

The proposed high vacuum remediation subcontractor will be Fruits and Associates, Inc. of Kennesaw, Georgia. The free phase, contaminated groundwater mixture will be extracted from new 4" ID recovery wells to be installed as described in the section below, and will be taken to a disposal facility such as Allied Energy in Birmingham, Alabama. The estimated range of gallons that can be collected over a 24-hour event range from 1000 to 3500 gallons. Vacuum influence will be measured in surrounding monitoring wells to determine the radius of influence.

Collected vapors and gases are treated either by burning in an internal combustion engine fueled by propane or by thermal oxidation destruction. Both air quality treatment subcontractors guarantee >99% VOC destruction rate.

Within 24 hours prior to the vacuum event, a round of preliminary water levels will be collected from the nine wells. GeoService will record the flow rates from the high vacuum

equipment, record the offgas influent and effluent concentrations, and the note the lateral extent of the vacuum radius of influence.

Recovery Well Installation

The extractions will be performed on RW-1, and DRW-1. MW-1 and DW-1 will be drilled out and reinstalled as 4" ID wells and designated as RW-1 and DRW-1 respectively. The proposed extraction locations are shown on Figure 6. The recovery well RW-1 will be advanced to a depth of approximately 14 feet bgs and completed at the soil/bedrock interface. The recovery well DRW-1 will be advanced to a depth of approximately 22 feet bgs. This well will be completed as a Type III well with the outer casing set at the top of rock which is approximately 10 feet bgs at that location. The recovery wells will be installed with 10-foot screen sections. Well construction will consist of schedule 40, 4-inch ID, 0.020-inch slotted PVC screen and schedule 40 PVC riser. The wells will be installed in 10-inch diameter boreholes. A sandpack will be installed in the annular space around the screen section extending to 1 foot above the slotted area. A 2-foot thick bentonite seal will be installed above the sandpack. The remaining annular space will be filled with grout, and steel flush-mount covers cemented in place at the surface. Well construction diagrams for the proposed wells are included in the Appendix. Soils generated during the drilling activities will be drummed, and stored on site until characterized for disposal at an appropriate landfill.

Groundwater Sampling

Once during each triannual period, GeoService will perform a round of groundwater sampling on a select series of wells. The sampling will include six monitoring wells, MW-1, DW-1, DW-2, DW-3, DW-4, and DW-5. The monitoring wells will be sampled for BTEX, MTBE and naphthalene using EPA Method 8260. Field parameters measured at the site will include temperature, pH, conductivity, and oxidation-reduction potential. Prior to sampling, the monitoring wells will be purged of three to five well volumes of water or until dry. Groundwater samples will be collected following the removal (purging) of the appropriate volume of groundwater from each groundwater-monitoring well. The groundwater samples will be collected using 36-inch polyethylene disposable bottom-filling bailers. Following removal of the groundwater from the monitoring well, the water in the disposable bailers will be carefully poured into three, laboratory provided, 40-milliliter glass vials, with screw caps, with the appropriate preservative (BTEX and MTBE). The glass vials will be tilted and the water will be carefully poured into the vial, from the bailer, down the side of the vial, being careful to not create any bubbles (i.e. disturbance of the sample). If any bubbles are observed in the vial then that vial, and the water in the bailer, will be discarded and another water sample collected using a new sample vial. The vial will be filled until a meniscus is observed. The vial will then be capped and the sample vial will be turned upside-down to visually inspect the sample for bubbles. If bubbles are observed in the vial then the sample will be discarded and the procedure repeated, with a new vial, until no bubbles are present in the sample vial. Samples will be placed on ice at approximately 4 Celsius packed into a cooler and shipped to the laboratory under chain-of-custody documentation. The sampling event will be

conducted prior to the last MEME for the triannual period. The purgwater will be stored on site, in a drum until the MEME event and then disposed of with the water collected from the MEME event.

The groundwater sampling is intended to quantify the effect of the high vacuum remediation method on groundwater contamination concentrations at the subject site. Cost proposals for the six MEME events and groundwater sampling are included with this CAP. A year of triannually monitoring (described in Section 7.0) will follow the six extraction events in order to evaluate its effectiveness and determine whether further action is necessary.

The goal of the extraction events and is to remove the free-product that is in contact with the water table and any product that may be in the soil along the soil/bedrock interface along with impacted groundwater.

7.0 GROUNDWATER MONITORING

In the year following the completion of the six MEME events and the associated post-MEME sampling, groundwater monitoring will be conducted tri-annually from onsite wells as described below. This monitoring program will determine the effectiveness of the remediation efforts and monitor for any rebound of COCs. Three times per year monitoring wells MW-1, DW-1, DW-2, DW-3, DW-4, and DW-5 will be sampled to monitor contaminant degradation and/or migration. Cost proposals for the year of groundwater monitoring following the year of MEME events will be submitted prior to performing the last MEME event. Any additional wells that may be added for plume delineation will be added to the sampling.

Prior to sampling, the monitoring wells will be purged of three to five well volumes of water or until dry. Groundwater samples will be collected following the removal (purging) of the appropriate volume of groundwater from each groundwater-monitoring well. The groundwater samples will be collected using 36-inch polyethylene disposable bottom-filling bailers. Following removal of the groundwater from the monitoring well, the water in the disposable bailers will be carefully poured into three, laboratory provided, 40-milliliter glass vials, with screw caps, with the appropriate preservative (BTEX and MTBE). The glass vials will be tilted and the water will be carefully poured into the vial, from the bailer, down the side of the vial, being careful to not create any bubbles (i.e. disturbance of the sample). If any bubbles are observed in the vial then that vial, and the water in the bailer, will be discarded and another water sample collected using a new sample vial. The vial will be filled until a meniscus is observed. The vial will then be capped and the sample vial will be turned upside-down to visually inspect the sample for bubbles. If bubbles are observed in the vial then the sample will be discarded and the procedure repeated, with a new vial, until no bubbles are present in the sample vial. Samples will be placed on ice at approximately 4 Celsius packed into a cooler and shipped to the laboratory under chain-of-custody documentation

Field parameters measured at the site will include temperature, pH, conductivity, and oxidation-reduction potential.

The samples will be analyzed at the laboratory for BTEX, MTBE, and naphthalene using EPA Method 8260.

Monitoring will continue for one year after the four proposed extraction events have been completed. During this period the data will be used to determine the effectiveness of the remediation. At the end of this period, recommendations for future activities, if necessary, will be made. Groundwater monitoring or other site activities as directed by the ADEM will continue until the site is released from further action by the ADEM.

8.0 PROPOSED REPORTING REQUIREMENTS

A report documenting each triannual period of MEME events and associated groundwater sampling results will be prepared upon completion of that activity. Tri-annual groundwater monitoring reports will be provided for the year of proposed monitoring following the MEME events. These reports will include an evaluation of plume migration, measurement and interpretation of groundwater flow, and COC concentrations. ADEM Natural Attenuation Monitoring Report (NAMR) forms will be prepared each triannual period. Information presented will consist of a site summary, site maps, a well inventory table, a history of sampling, a summary of sampling methodologies, a summary of historical analytical data, a summary of historical intrinsic groundwater data, a summary of historical groundwater levels, and monitoring costs over time.

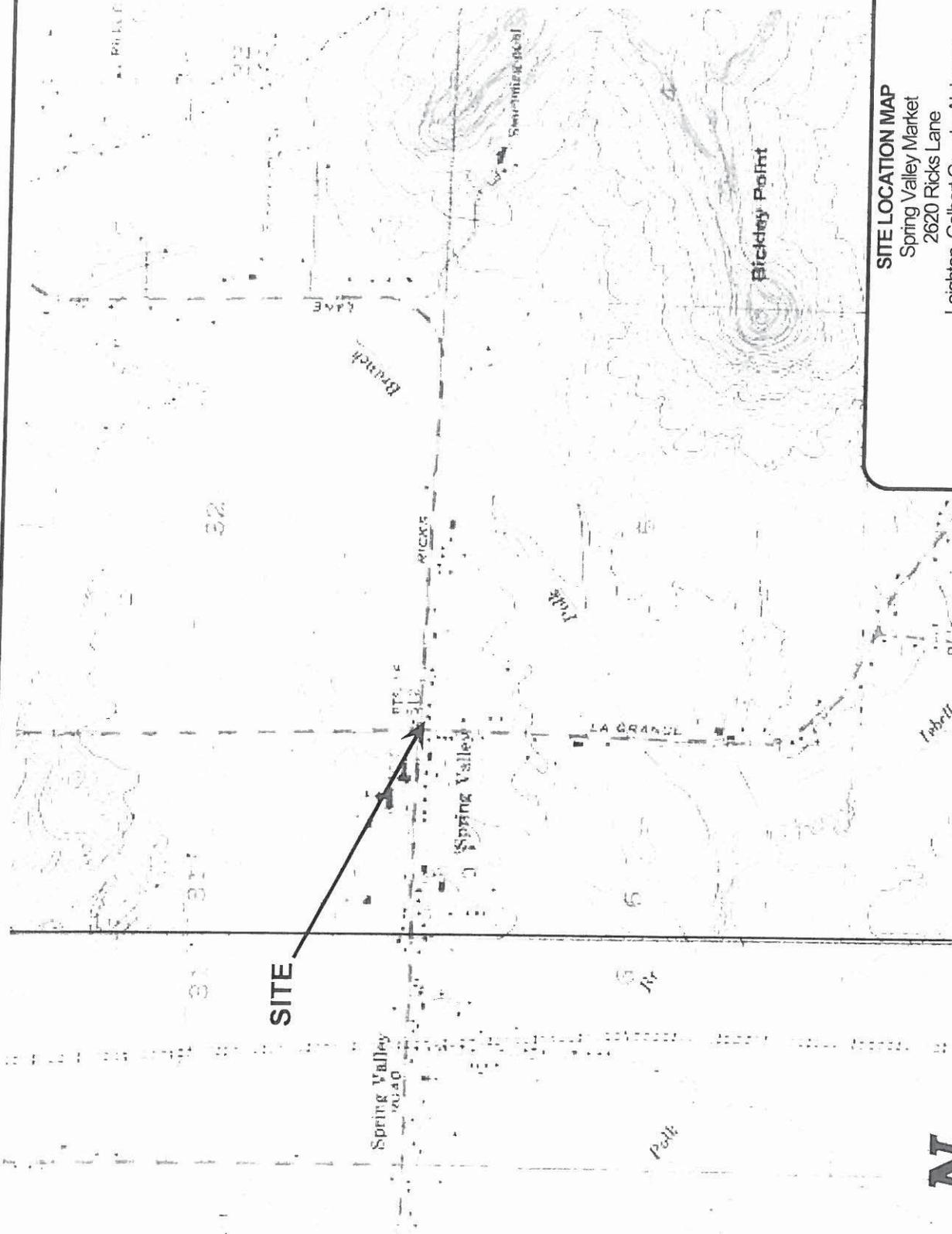
9.0 CONCLUSIONS AND RECOMMENDATIONS

The proposed recovery and sampling outlined in this plan consist of two years of activities. Based on prior experience, it is anticipated that these activities will significantly reduce the COC levels at the subject site. As described in EPA's *Elements for Effective Management of Operating Pump and Treat Systems*, conclusions and recommendations will be made after each sampling event as to whether the best course of action is to continue with treatment as designed, increase capacity of system, apply more aggressive source removal, implement additional remedial technology, consider alternate goals, or reduce extent and frequency of monitoring as clear pattern develops.

The options include the following:

1. Increasing or decreasing the frequency of the MEME events (triannually vs. monthly vs. weekly, etc.);
2. Increasing or decreasing the duration of the MEME events (8-hr vs. 24-hr vs. 48-hr,)
3. Installation of a permanent system or alternate corrective action methods;
4. Monitoring for remediation by natural attenuation.

These options and any others that may become available will be examined as treatment proceeds and recommendations will be submitted to the ADEM as needed.



SITE LOCATION MAP
 Spring Valley Market
 2620 Ricks Lane
 Leighton, Colbert County, Alabama

GeoService
 Environmental
 Consulting and
 Testing Services

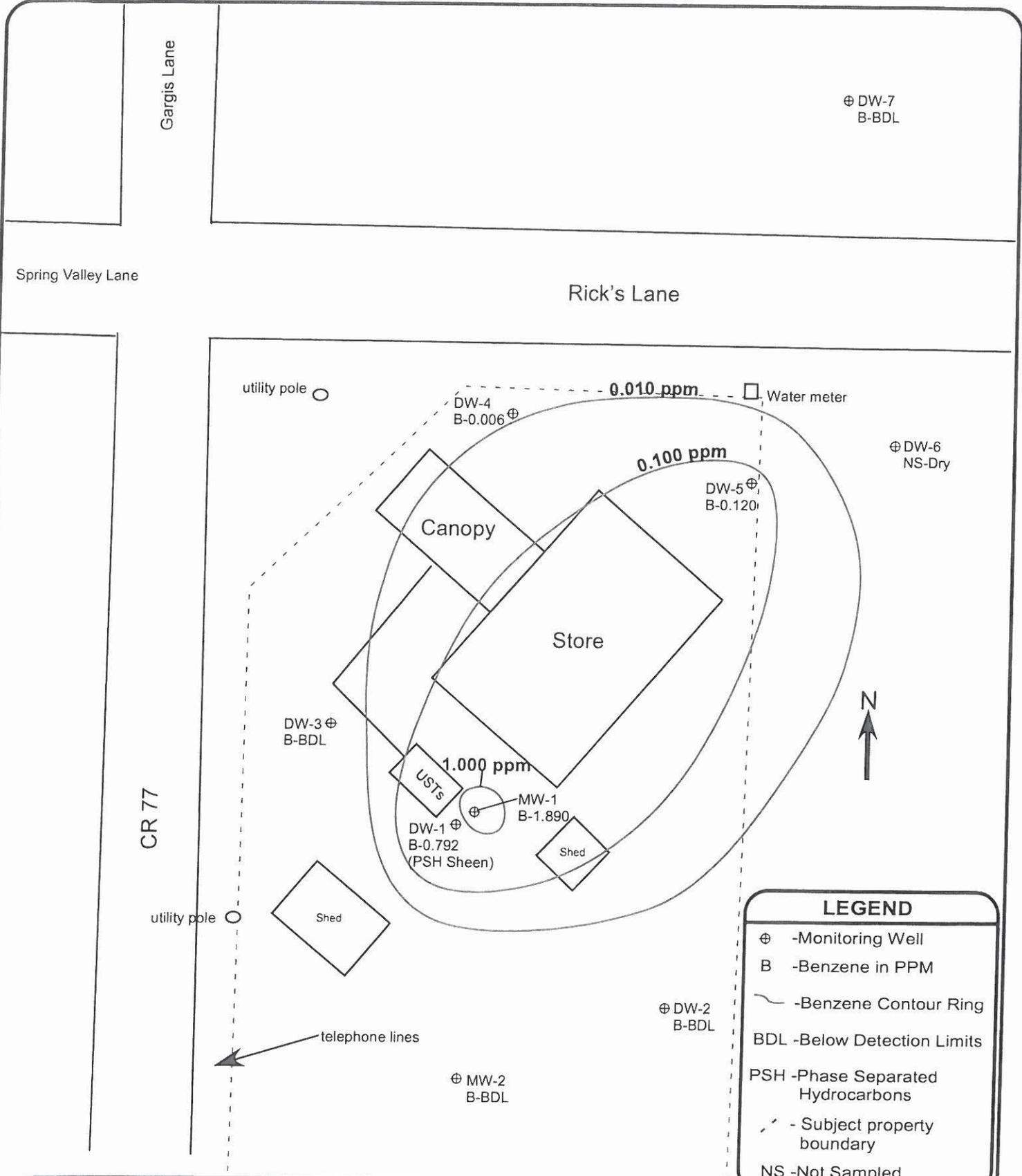
111 N. Chalkville Road
 Trussville, AL 35173

DRAWN:	N/A	SCALE:	1" = 2000'	PROJ. NO:	GS-U38-15
CHKD:	N/A	DATE:	February 12, 2008	FIGURE:	1

Leighton, AL USGS 7.5 Minute
 Topographic Quadrangle Map

Scale 1:24,000
 Contour Interval = 20 feet

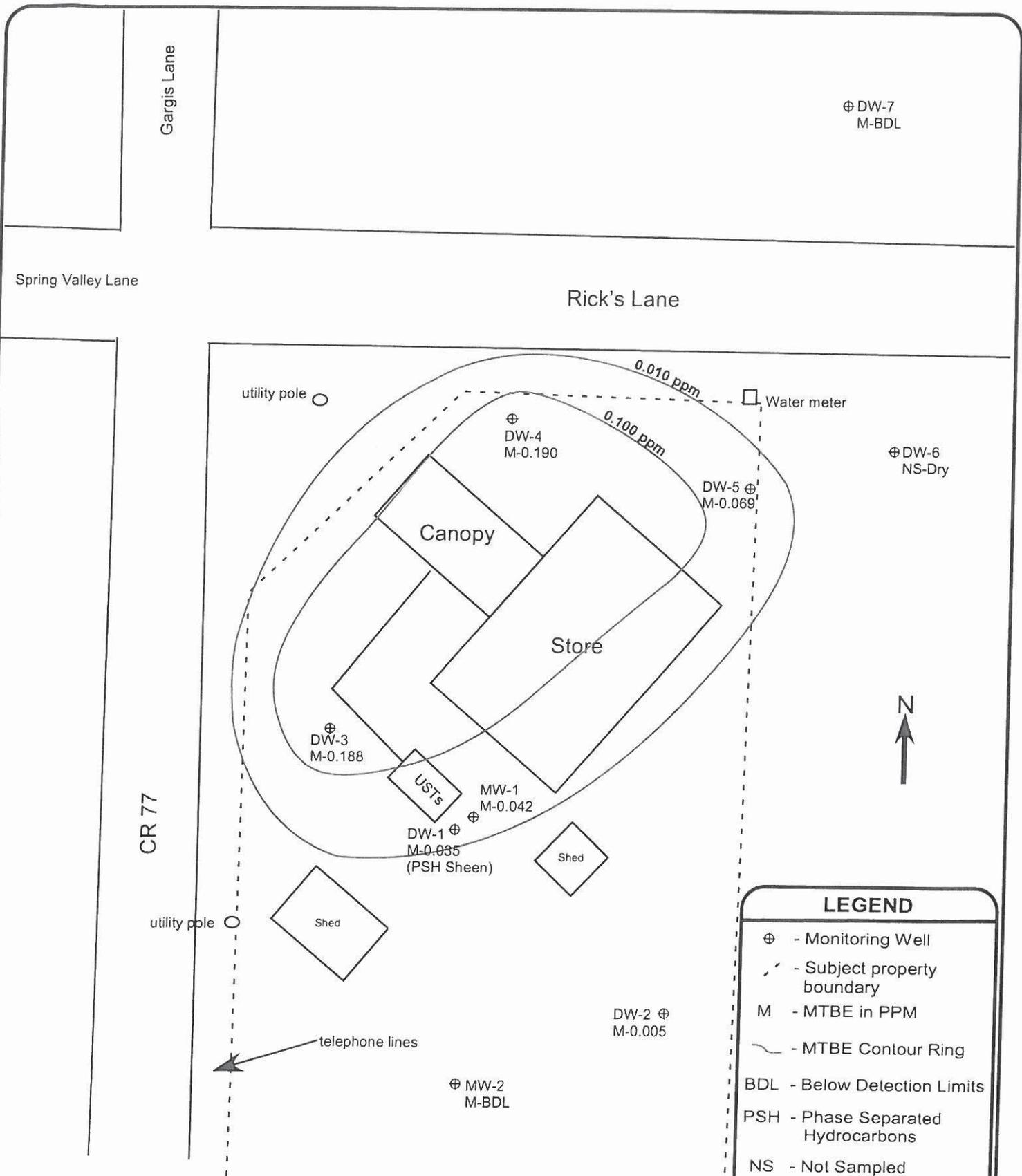




LEGEND	
⊕	-Monitoring Well
B	-Benzene in PPM
~	-Benzene Contour Ring
BDL	-Below Detection Limits
PSH	-Phase Separated Hydrocarbons
- - -	- Subject property boundary
NS	-Not Sampled

		Environmental Consulting and Testing Services 111 N. Chalkville Road Trussville, AL 35173
DRAWN: JAH	SCALE: Feet 0 20 40	PROJECT NO: GS-U38-15
CHKD: CJW	DATE: June 14, 2016	FIGURE NO: 2

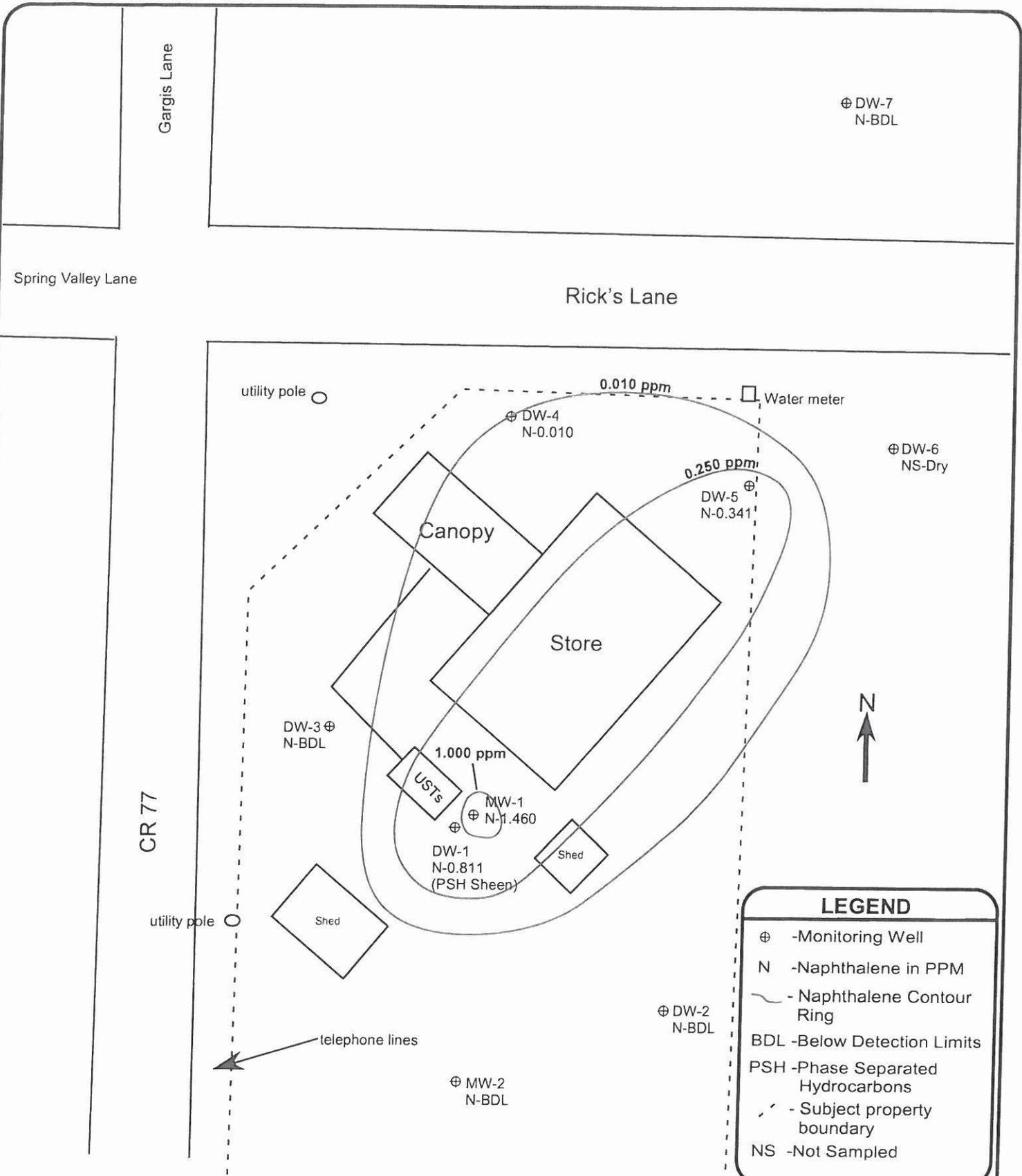
Benzene Isoconcentration Diagram
 May 17, 2016
 Spring Valley Market
 2620 Ricks Lane
 Leighton, Colbert County, Alabama



LEGEND	
⊕	- Monitoring Well
- - -	- Subject property boundary
M	- MTBE in PPM
— (solid)	- MTBE Contour Ring
BDL	- Below Detection Limits
PSH	- Phase Separated Hydrocarbons
NS	- Not Sampled

GeoService		Environmental Consulting and Testing Services	111 N. Chalkville Road Trussville, AL 35173
DRAWN: JAH	SCALE: Feet 0 20 40	PROJECT NO: GS-U38-15	
CHKD: CJW	DATE: June 14, 2016	FIGURE NO: 3	

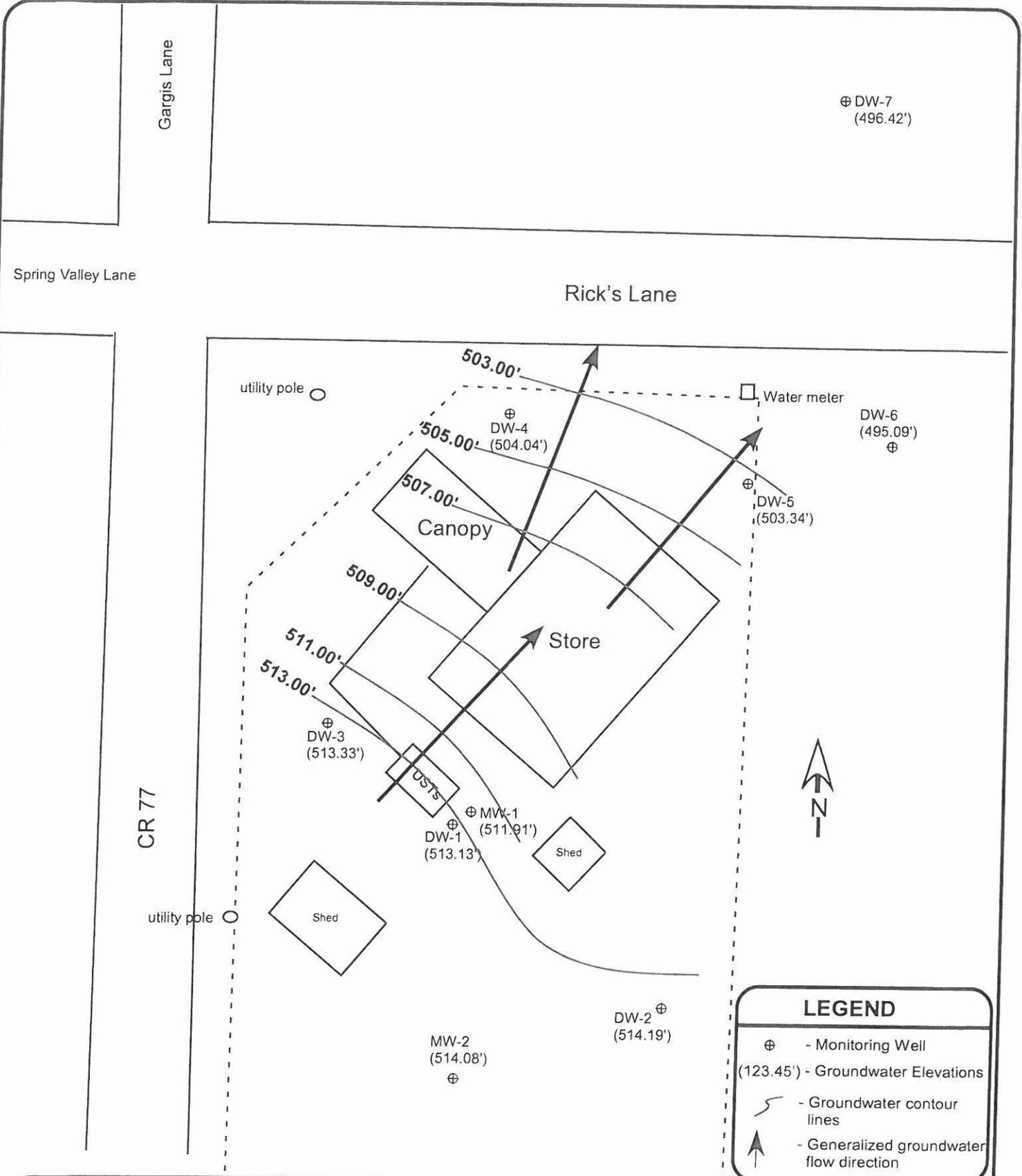
MTBE Isoconcentration Diagram
 May 17, 2016
 Spring Valley Market
 2620 Ricks Lane
 Leighton, Colbert County, Alabama



LEGEND	
⊕	-Monitoring Well
N	-Naphthalene in PPM
—	- Naphthalene Contour Ring
BDL	-Below Detection Limits
PSH	-Phase Separated Hydrocarbons
- - -	- Subject property boundary
NS	-Not Sampled

GeoService		Environmental Consulting and Testing Services	111 N. Chalkville Road Trussville, AL 35173
DRAWN: JAH	SCALE: Feet 0 20 40	PROJECT NO: GS-U38-15	
CHKD: CJW	DATE: June 14, 2016	FIGURE NO: 4	

Naphthalene Isoconcentration Diagram
May 17, 2016
 Spring Valley Market
 2620 Ricks Lane
 Leighton, Colbert County, Alabama



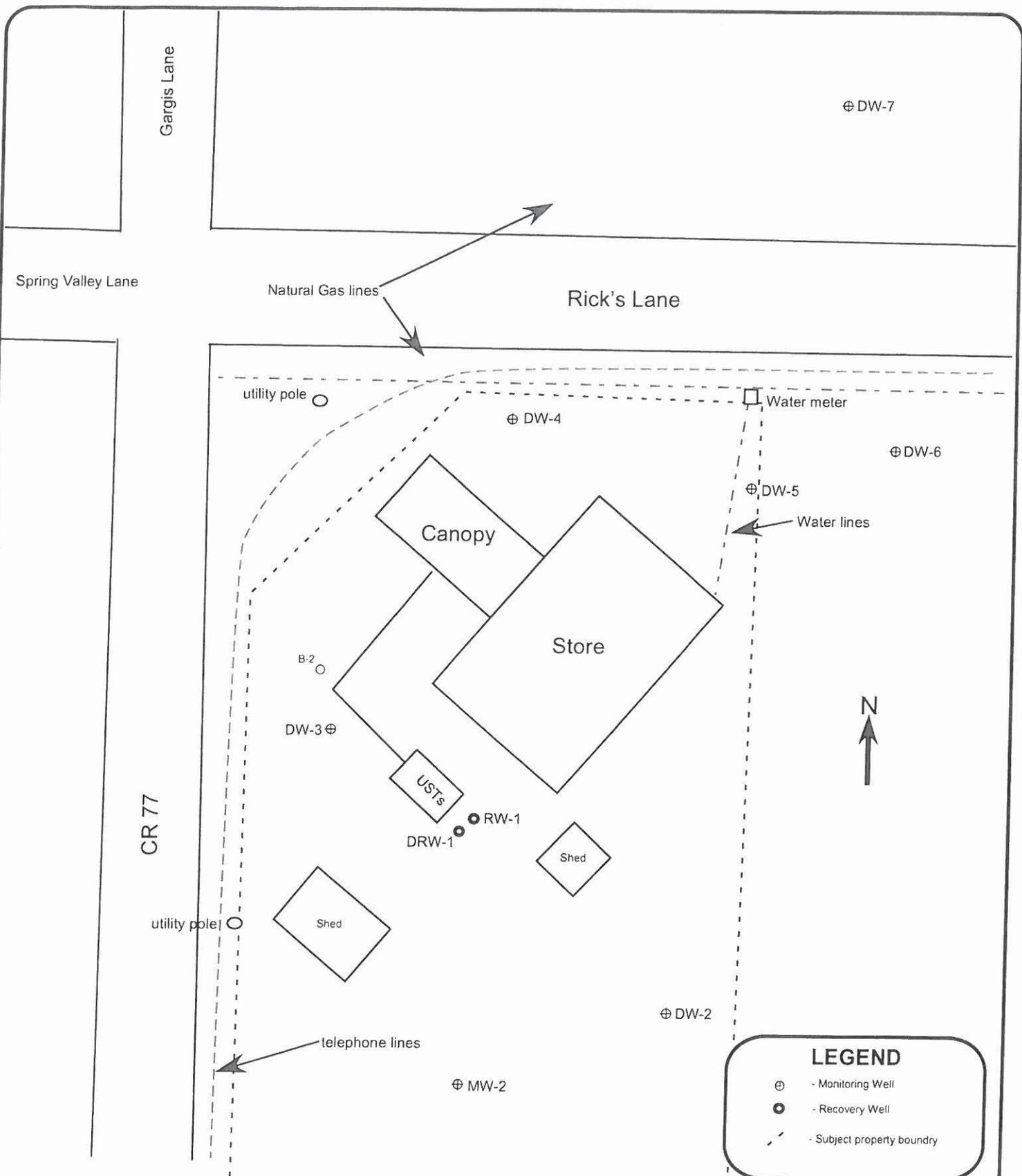
LEGEND

- ⊕ - Monitoring Well
- (123.45') - Groundwater Elevations
- - Groundwater contour lines
- ↗ - Generalized groundwater flow direction

GeoService Environmental Consulting and Testing Services
 111 N. Chalkville Road
 Trussville, AL 35173

DRAWN: JAH	SCALE: Feet 0 20 40	PROJECT. NO: GS-U38-15
CHKD: CJW	DATE: July 15, 2016	FIGURE. NO: 5

Groundwater Flow Diagram
 May 17, 2016
 Spring Valley Market
 2620 Ricks Lane
 Leighton, Colbert County, Alabama



LEGEND

- ⊕ - Monitoring Well
- - Recovery Well
- - - Subject property boundry

GeoService Environmental Consulting and Testing Services
 111 N. Chalkville Road
 Trussville, AL 35173

DRAWN: TDP	SCALE: Feet 0 20 40	PROJECT. NO: GS-U38-15
CHKD: CJW	DATE: March 30, 2015	FIGURE. NO: 6

Site Plan with Proposed Recovery Well Locations
 Spring Valley Market
 2620 Ricks Lane
 Leighton, Colbert County, Alabama

**Table 2
Groundwater Analytical Summary**

**Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348**

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Naphth (mg/l)
SSTL		0.068	13.500	9.450	135.000		0.270	0.270
MW-1	8/25/2009	Not Sampled - Free Product Present						
(FP Sheen)	1/31/2014	3.460	0.050	1.810	0.188	5.508	0.050	BDL
(FP Sheen)	4/17/2014	3.560	0.042	1.430	0.230	5.262	0.052	1.390
(FP Sheen)	7/22/2014	3.360	0.052	1.820	0.388	5.620	0.036	2.700
(FP Sheen)	10/23/2014	2.080	0.034	1.240	0.304	3.658	0.040	0.446
	3/23/2015	2.060	0.036	1.080	0.306	3.482	0.029	0.096
(FP Sheen)	8/21/2015	2.500	0.039	1.420	0.432	4.391	0.039	0.844
	11/4/2015	2.020	0.038	1.210	0.302	3.570	BDL	0.544
(FP Sheen)	2/3/2016	2.000	0.035	1.120	0.310	3.465	0.026	0.860
	5/17/2016	1.890	0.030	1.120	0.288	3.328	0.042	1.460

**Table 2
Groundwater Analytical Summary**

**Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348**

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Naphth (mg/l)
SSTL		0.068	13.500	9.450	135.000		0.270	0.270
DW-1	8/25/2009	Not Sampled - Free Product						
(FP Sheen)	1/31/2014	1.810	0.038	0.492	0.086	2.426	0.036	0.344
(FP Sheen)	4/17/2014	2.390	0.043	0.550	0.169	3.152	0.041	0.799
(FP Sheen)	7/22/2014	2.010	0.048	0.608	0.250	2.916	0.027	1.910
(FP Sheen)	10/23/2014	1.510	0.033	0.440	0.109	2.092	0.029	0.936
	3/23/2015	1.200	0.030	0.477	0.174	1.881	0.019	0.078
(FP Sheen)	8/21/2015	1.200	0.034	0.457	0.129	1.820	0.026	0.640
(FP Sheen)	11/4/2015	1.210	0.034	0.450	0.122	1.816	BDL	1.080
(FP Sheen)	2/3/2016	0.916	0.027	0.370	0.097	1.410	0.018*	0.722
(FP Sheen)	5/17/2016	0.792	0.032	0.342	0.089	1.255	0.035	0.811

* Result is above method detection limit and below reporting limit

**Table 2
Groundwater Analytical Summary**

**Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348**

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Naphth (mg/l)
SSTL		0.011	2.160	1.510	21.600		0.043	0.043
DW-2	8/25/2009	BDL	BDL	BDL	BDL	BDL	0.032	BDL
	1/31/2014	BDL	BDL	BDL	BDL	BDL	0.024	BDL
	4/17/2014	BDL	BDL	BDL	BDL	BDL	0.014	BDL
	7/22/2014	BDL	BDL	BDL	BDL	BDL	0.010	BDL
	10/23/2014	BDL	BDL	BDL	BDL	BDL	0.015	BDL
	3/23/2015	BDL	BDL	BDL	BDL	BDL	0.010	BDL
	8/21/2015	BDL	BDL	BDL	BDL	BDL	0.005	BDL
	11/4/2015	BDL	BDL	BDL	BDL	BDL	0.008	BDL
	2/3/2016	BDL	0.002	BDL	BDL	0.002	BDL	BDL
5/17/2016	BDL	BDL	BDL	BDL	BDL	0.005	BDL	

**Table 2
Groundwater Analytical Summary**

**Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348**

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Naphthaline (mg/l)
SSTL		0.068	13.500	9.450	135.000		0.270	0.270
DW-3	8/25/2009	0.002	BDL	BDL	BDL	0.002	0.293	BDL
	1/31/2014	BDL	BDL	BDL	BDL	BDL	0.168	0.002
	4/17/2014	0.007	BDL	0.002	BDL	0.009	0.144	BDL
	7/22/2014	0.001	BDL	BDL	BDL	0.001	0.114	0.006
	10/23/2014	BDL	BDL	BDL	BDL	BDL	0.130	BDL
	3/23/2015	0.001	BDL	BDL	BDL	0.001	0.142	BDL
	8/21/2015	BDL	BDL	BDL	BDL	BDL	0.166	BDL
	11/4/2015	BDL	BDL	BDL	BDL	BDL	0.067	BDL
	2/3/2016	BDL	BDL	BDL	BDL	BDL	0.161	BDL
	5/17/2016	BDL	BDL	BDL	BDL	BDL	0.188	BDL

**Table 2
Groundwater Analytical Summary**

**Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348**

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Naphthalene (mg/l)
SSTL		0.067	13.400	9.360	134.000		0.268	0.268
DW-4	8/25/2009	0.018	BDL	BDL	BDL	0.018	0.176	BDL
	1/31/2014	0.099	0.005	0.004	0.008	0.116	0.143	0.116
	4/17/2014	0.062	0.002	0.001	BDL	0.065	0.167	0.021
	7/22/2014	0.216	0.005	0.006	0.012	0.239	0.104	0.157
	10/23/2014	BDL	BDL	BDL	BDL	BDL	0.198	BDL
	3/23/2015	0.023	BDL	0.001	BDL	0.024	0.085	0.011
	8/21/2015	0.014	0.001	0.002	BDL	0.017	0.117	0.011
	11/4/2015	0.004	0.001	0.002	BDL	0.007	0.101	0.032
	2/3/2016	0.008	BDL	0.001	BDL	0.009	0.090	0.014
	5/17/2016	0.006	BDL	BDL	BDL	0.006	0.190	0.010

**Table 2
Groundwater Analytical Summary**

**Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348**

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Napthaline (mg/l)
SSTL		0.011	2.160	1.510	21.600		0.043	0.043
DW-5	8/25/2009	0.129	0.003	0.005	0.008	0.145	0.093	0.011
	1/31/2014	0.130	0.005	0.019	0.008	0.162	0.050	0.106
	4/17/2014	0.214	0.006	0.019	0.013	0.252	0.047	0.119
	7/22/2014	0.276	0.007	0.012	0.022	0.317	0.052	0.230
	10/23/2014	0.144	0.004	0.012	0.010	0.170	0.072	0.167
	3/23/2015	0.196	0.007	0.035	0.022	0.260	0.049	0.020*
	8/21/2015	0.137	0.006	0.010	0.016	0.169	0.060	0.214
	11/4/2015	0.096	0.004	0.008	0.012	0.120	0.034	0.375
	2/3/2016	0.060	0.004	0.010	0.011	0.085	0.038	0.299
	5/17/2016	0.120	0.006	0.010	0.012	0.148	0.069	0.341

* Result is above method detection limit and below reporting limit

Table 2
Groundwater Analytical Summary

Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Naphthaline (mg/l)
SSTL		0.011	2.160	1.510	21.600		0.043	0.043
DW-6	3/23/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/21/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/4/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/3/2016	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/17/2016	Not Sampled - Well Dry						

Table 2
Groundwater Analytical Summary

Spring Valley Market
Leighton, Alabama
Facility #15201-033-013348

Historical Hydrocarbon Constituent Concentrations

Well ID	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	MTBE (mg/l)	Napthaline (mg/l)
SSTL		0.011	2.160	1.510	21.600		0.043	0.043
DW-7	3/23/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/21/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/4/2015	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2/3/2016	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	5/17/2016	BDL	0.003	BDL	BDL	0.003	BDL	BDL

MONITORING WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITORING WELL I.D.: Proposed RW-1

SITE: Spring Valley Market
 Corrective Action
 Leighton, Alabama

GeoService Inc.
 111 North Chalkville Road
 Trussville, Alabama 35173
 TEL: (205) 655-9090

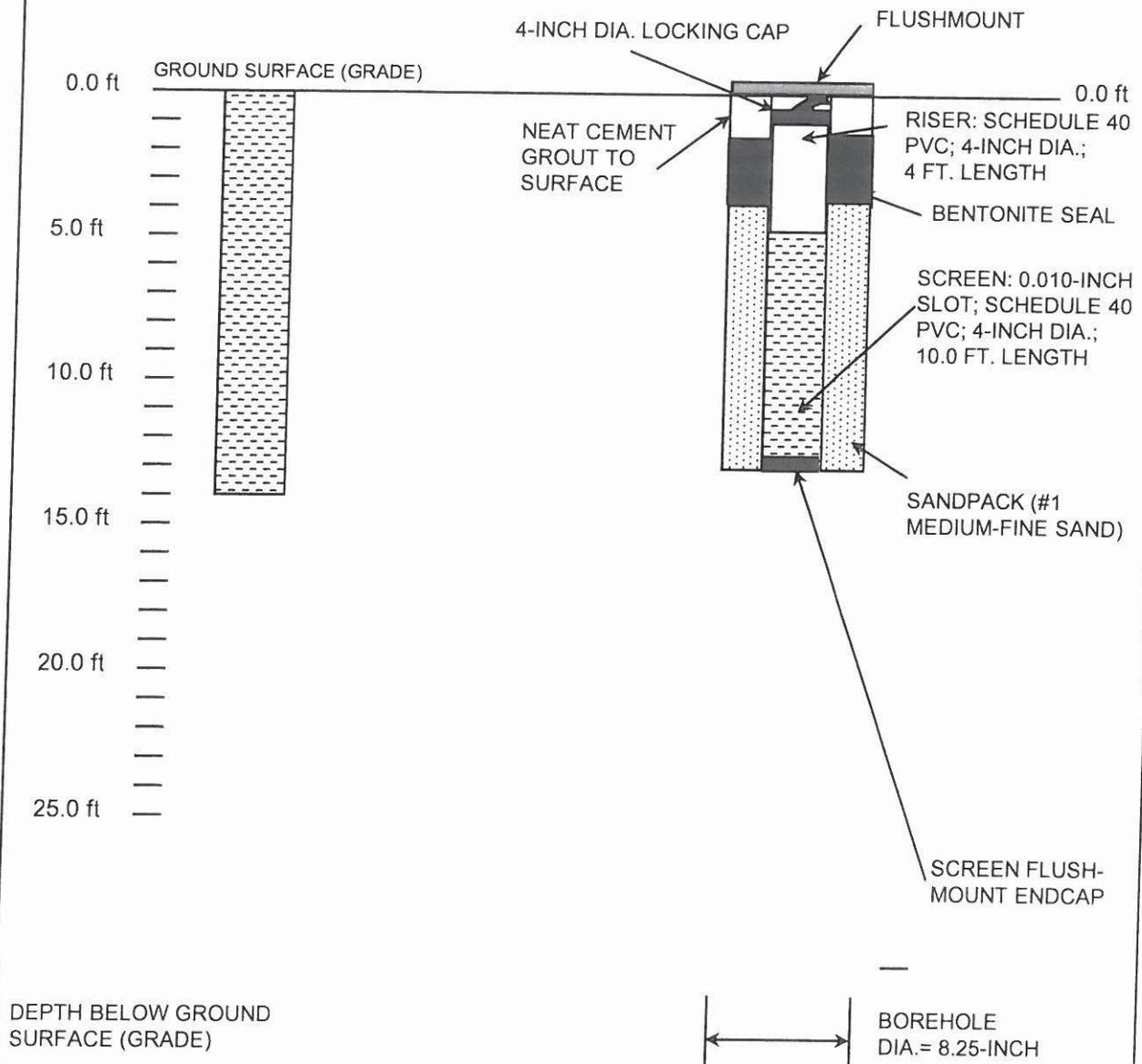
GeoService Project I.D.:

TOP OF CASING ELEVATION: 000.00 ft
 DEPTH TO WATER: 00.00 ft BELOW TOC (00/00/00)
 GEOLOGIST
 DRILLING CONTRACTOR:
 SOIL SAMPLING METHOD: Split Spoon
 DRILLING METHOD: Auger

GROUNDWATER ELEVATION: 000.00 ft
 WELL DEVELOPMENT DATE:
 DRILLER:
 DRILLING DATE:
 DRILL RIG MODEL:

BORING LOG

MONITORING WELL LOG



MONITORING WELL AND BORING LOG

LOG DEPTHS TO SCALE

MONITORING WELL I.D.: Proposed DRW-1

SITE: Spring Valley Market
Corrective Action
Leighton, Alabama

GeoService Inc.
111 North Chalkville Road
Trussville, Alabama 35173
TEL: (205) 655-9090

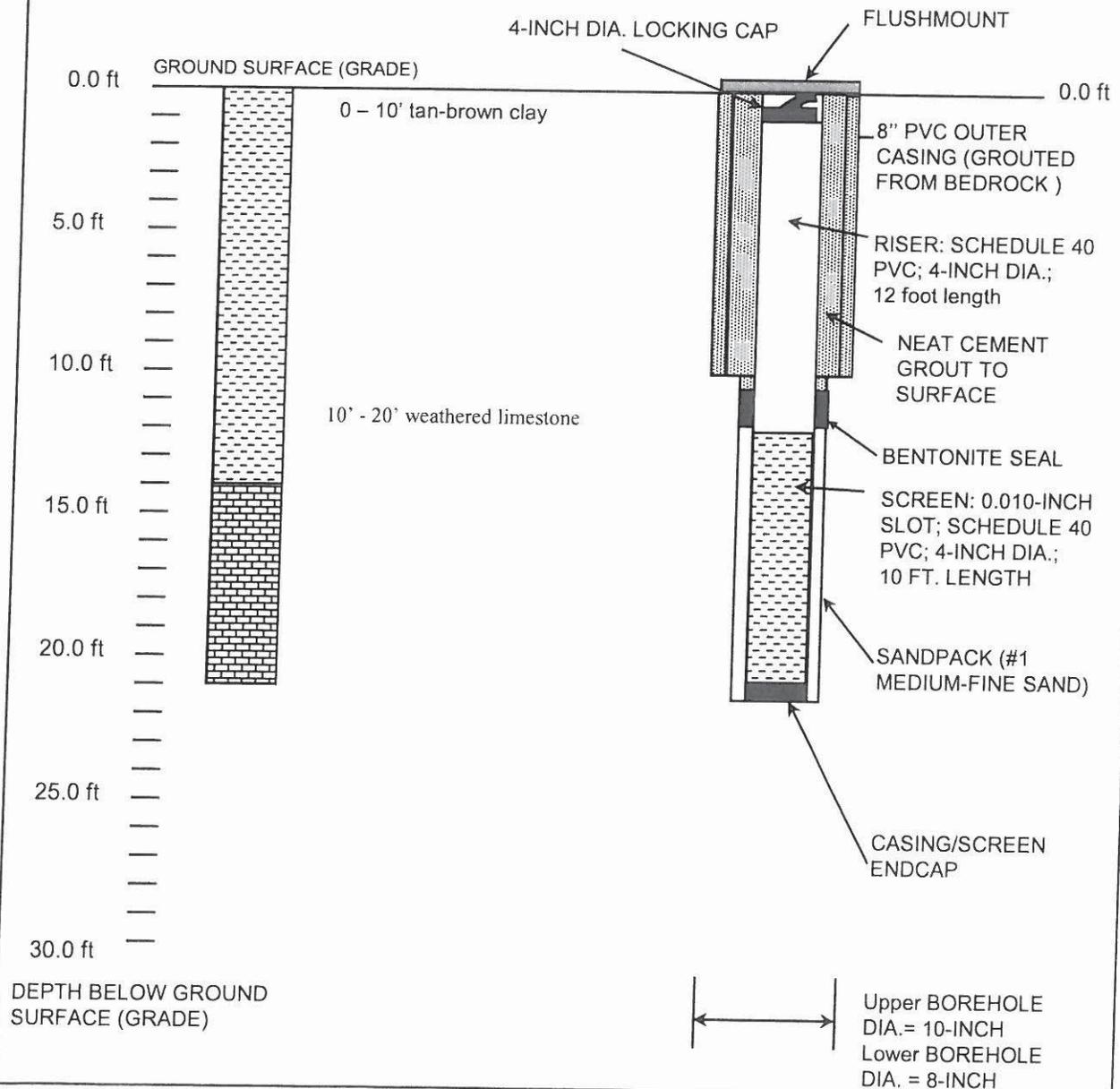
GeoService Project I.D.:

TOP OF CASING ELEVATION: 000.00 ft
DEPTH TO WATER: 00.00 ft BELOW TOC (00/00/00)
GEOLOGIST
DRILLING CONTRACTOR:
SOIL SAMPLING METHOD: Split Spoon
DRILLING METHOD: Auger

GROUNDWATER ELEVATION: 000.00 ft
WELL DEVELOPMENT DATE:
DRILLER:
DRILLING DATE:
DRILL RIG MODEL:

BORING LOG

MONITORING WELL LOG



**SITE HEALTH AND SAFETY PLAN
for
Corrective Action
at
Spring Valley Market**

Leighton, Alabama

Facility ID No. 15201-033-013348
Incident No. UST07-09-02

October 17, 2016

Prepared By:

GeoService, Inc.
111 N Chalkville Rd
Trussville, Alabama 35173

SECTION 1 PURPOSE

This Health and Safety Plan (HASP) has been prepared specifically for the field activities to be conducted by GeoService, Inc. during the course of this project. The document describes the personal protection and safety procedures to be followed by GeoService, Inc. personnel and subcontractors during all field activities. The HASP has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response, Interim Final Rule, 29 CFR 1910, 120; OSHA Standards 29 CFR 1910 (General Industry) and 1926 (construction); the joint NIOSH/OSHA/USCG/EPA, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, dated October 1985; and, NFPA Safety Guidelines. The HASP has been developed for typical conditions encountered during field activities of this nature. Should any unexpected conditions arise; the HASP will be amended to accommodate site-specific conditions.

The project will consist of conducting Clean-up activities at Spring Valley Market facility in Leighton, Alabama, in accordance with the Work Plan approved by the Alabama Department of Environmental Management (ADEM). Personnel assigned to this project include:

Name	Title
Christopher J. White, P.G.	Project Manager, Project Geologist, Site Health and Safety Officer (HSO)
Josh Harris	Technician

In the event of a scheduling conflict, other qualified personnel may be substituted for the specific personnel listed above.

SECTION 2 SCOPE OF WORK

Activities to be completed during the project and covered by the HASP include:

- < Conduct Mobile, enhanced, multiphase extraction (MEME) events and groundwater sampling.

SECTION 3 SAFETY REQUIREMENTS

The safety protocols listed in this section are to be considered the minimum requirements to be met by GeoService, Inc. personnel engaging in subsurface assessment operations.

3.1 PRE-OPERATION EVALUATION

- < Establish and meet any permitting and/or code requirements.
- < Obtain drawings or locate any existing underground utilities, pipelines, etc., prior to drilling.
- < Check for machinery obstructions (overhead utilities, signs, equipment, etc.).
- < Contact local utility companies and request a job-site inspection.
- < Determine the dispensation of excess sample material that results from site activities.
- < Organize contingencies for emergency situations.

3.2 SITE OPERATIONS PREREQUISITES

- < Personnel must have completed the 40-Hour Health and Safety Training Course for Hazardous Waste Site Investigations and required annual update training within twelve months prior to this activity.
- < The area must meet the requirements of the pre-operation evaluation.

3.3 PROTECTIVE CLOTHING

The Level D protective clothing indicated below shall be considered the minimum for site operations.

- < Non-permeable gloves
- < Tyvek suits
- < Splash gear
- < Steel-toe, non-permeable boots
- < Hearing protection
- < Safety goggles (chemical) - OSHA 29 CFR 1910.133
- < Hard hat where appropriate

Equipment may be upgraded to Level C depending on the site conditions and/or monitoring results.

3.4 GENERAL SAFETY

- < Utilize barricades to protect workers, pedestrians and vehicles from work activities.
- < Post area for "NO SMOKING."
- < No smoking, tobacco products, eating, drinking, chewing gum, etc. (activities which require hand-to-mouth contact) during site operations.
- < Maintain a supply of fresh water on-site during all operations.
- < Change any product-contaminated clothing immediately.
- < Wash any contaminated skin surfaces immediately with soap and water.

3.5 SECURITY

- < Post "NO SMOKING/FLAMMABLE" signs on all equipment.
- < Secure operations area.

3.6 SPILLS

- < Eliminate ALL ignition sources in the vicinity of the spill
- < Dilute with a large volume of fresh water and hold in diked area until hydrogen peroxide decomposes.
- < Follow prescribed procedures for reporting and responding to large releases. (National Response Center 1-800-424-8802).

SECTION 4 FIRST AID PROCEDURES

4.1 FIRST AID FOR COMMON OVEREXPOSURES

The following paragraphs describe the First Aid procedures for overexposures to oxidizing materials which are able to affect a person through inhalation, dermal, or ingestion exposure.

4.1.1 Inhalation

Symptoms: Breathing difficulty or discomfort.

- Treatment:
- 1) Bring victim to fresh air. Rinse eyes or throat, if irritated.
 - 2) If symptoms persist, evacuate to hospital.

4.1.2 Dermal

Symptoms: Irritation, rash, or burning.

- Treatment:
- 1) Flush affected area with water for at least 15 minutes.
 - 2) Apply clean dressing and get medical aid.

4.1.3 Ingestion

Symptoms: Burning/irritation.

- Treatment:
- 1) Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting
 - 2) Evacuate victim to hospital.

4.1.4 Eye

Symptoms: Redness, irritation, pain, impaired vision.

- Treatment:
- 1) Flush with copious amounts of water for at least 15 min.
 - 2) If severe, get medical attention immediately.

4.2 HEAT STRESS

Heat stress is a major hazard, especially for workers wearing protective clothing.

Depending on the ambient conditions and the work being performed, heat stress can occur very rapidly – within as little as 15 minutes. The key to preventing excessive heat stress is educating personnel on the hazards associated with working in heat and the benefits of implementing proper controls and work practices.

4.2.1 Heat Rash

Heat rash (prickly heat) may result from continuous exposure to heat or humid air where the skin remains wet due to lack of evaporation, sweat ducts become plugged, and a skin rash appears. This uncomfortable rash can be prevented by resting in a cool place during breaks and by good daily personal hygiene.

4.2.2 Heat Cramps

Heat cramps are muscular spasms, usually in abdomen or limbs due to loss of salt following profuse sweating. Drinking large quantities of water tends to dilute the body's fluids, while the body continues to lose salt.

- Treatment:
- 1) Apply warm moist heat and pressure to reduce pain.
 - 2) Give electrolyte drinks by mouth.

4.2.3 Heat Exhaustion

Heat exhaustion is a result of overexertion in hot or warm weather. It is possible for an on-site worker to experience heat exhaustion due to the use of worker-protective coveralls, boots, gloves, and respiratory protection, even if ambient temperatures are mild.

Caution: Individuals with heart problems or on a "low sodium" diet who work in hot environments should consult a physician about what to do under these conditions.

Symptoms: Pale, clammy skin, profuse perspiration, weakness, headaches, and nausea

Treatment:

- 1) Get victim into shade or cooler place, outside the Exclusion Zone.
- 2) Immediately remove any protective clothing.
- 3) Victim should drink plenty of fluids.
- 4) Victim should lie down with feet raised.
- 5) Fan and cool victim with wet compresses.
- 6) If vomiting occurs, transport to hospital.
- 7) Victim should rest for a few days.

Prevention:

- 1) If possible, schedule work for early morning or evening during warm weather.
- 2) Work in shifts; limit downrange time of personnel and follow with frequent breaks.
- 3) Have cool liquids at Exclusion Zones border for downrange personnel to continuously replace body fluids.
- 4) The HSO or designee should continually monitor personnel for signs of heat stress.

4.2.4 Heat Stroke

The body's temperature control system that causes sweating stops functioning correctly in the case of heat stroke. Brain damage and death may occur as body core temperature is extremely elevated and is not reduced.

Symptoms: Flushed, hot dry skin; high body core temperature (>105°F); dizziness, nausea, headache, rapid pulse, and unconsciousness.

Treatment: Immediately take precautions to cool body core temperature by removing clothing and sponging body with alcohol, or cool water, or placing in tub of cold water until temperature is lowered sufficiently (102°F). Stop cooling and observe victim for 10 minutes. Once temperature remains lowered, dry person off. Use fans or air conditioning, if available. Do not give the victim stimulants. Transfer to medical facility.

SECTION 5 EMERGENCY CONTINGENCY PLAN

If an incident occurs that requires declaring an emergency, all personnel will assemble at a designated emergency meeting location for further instruction. Arrangement for decontamination, evacuation and/or transport will be made at that time. The client and the appropriate GeoService, Inc. personnel will be notified of the incident as soon as possible.

5.1 NOTIFICATION/REPORTING PROCEDURES

In the event of an emergency, the GeoService, Inc. Project Manager will be notified as soon as possible regarding the nature of the incident and emergency service contacts will be notified as needed (see *Contingency Contacts*).

5.2 UNEXPECTED HAZARDOUS SUBSTANCE RELEASE

In the event that potentially hazardous substances migrate from the work area and potentially endanger unprotected personnel or the community, all on-site activities will cease until the release is brought under control.

5.3 PERSONNEL INJURY

In the event of an injury, all personnel will assemble at the designated emergency meeting location. If the injured person is immobile, one or more persons should remain nearby to provide any necessary First Aid. If medical help is needed, the site HSO will summon the appropriate assistance as outlined below, or transport as necessary.

While on-site activity is in progress, it is recommended that at least one qualified person be available at all times to administer First Aid, including CPR.

5.4 EVACUATION PLAN

In the event of an on-site evacuation (i.e., fire, explosion), the following plan will be implemented:

1. A signal consisting of five one-second blasts of vehicle or air horn will be used
2. All personnel will immediately evacuate downwind areas and report to the designated emergency meeting location for further instruction.

5.5 SPILL PREVENTION AND RESPONSE

In the event of a leak or a spill, the area will be cordoned off and the spill contained and cleaned up by authorized personnel. All materials will be disposed of in a proper manner.

5.6 ON-SITE COMMUNICATIONS FOR EMERGENCY SITUATIONS

The following standard hand signals will be used on-site as a means of communications:

Hand gripping throat - (cannot breath)

Grip partner's wrists or both hands around waist - (leave area immediately)

Hands on top of head - (need assistance)

Thumbs up - (OK, I am all right, I understand)

Thumbs down - (No, negative)

5.7 CONTINGENCY CONTACTS

<u>Agency</u>	<u>Contact</u>	<u>Telephone Number</u>
Fire Department		911
Police Department		911
Ambulance		911
Hospital – Shoals Hospital		(256) 386-1600
GeoService, Project Manager, Christopher White		(205)915-7020

SECTION 6 HEALTH AND SAFETY PLAN APPROVAL/SIGN-OFF FORMAT

I have read, understood, and agreed with the information set forth in this HASP and discussed in the Personnel Health and Safety briefing.

Name Signature Date

ISBELL Project Manager Signature Date

Personnel Safety and Health Briefing Conducted By:

Site Safety and Health Officer Signature Date