SHOP-N-FILL #4

CAP DEVELOPMENT REPORT

ATTF CP-09

Shop-N-Fill #4
75304 Highway 77
Lincoln, Talladega County, AL
Fac ID 10642-121-011302
UST20-07-03

PREPARED FOR
Bowden Oil Company, Inc.
P.O. Box 145
Sylacauga, AL 35150

DATE
August 19, 2022

PREPARED BY
CDG, Inc.
700 Southgate Drive, Suite A
Pelham, AL 35124

CERTIFICATION PAGE

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

This document has been prepared based on historical site assessment data and has been prepared to address soil and groundwater contamination at the Shop-N-Fill #4 site (Facility Identification Number 10642-121-011302) in Lincoln, Talladega County, Alabama. The recommended action should not be construed to apply to any other site.

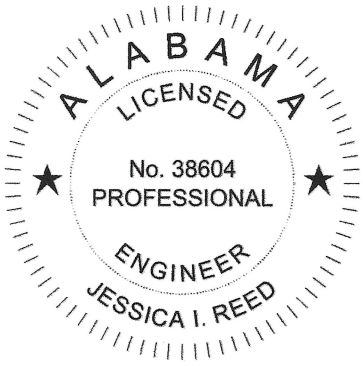
Jessica Reed

Signature

8/19/22

Date

Jessica Reed
Registered Engineer in the State of Alabama
Registration No. 38604



INTRODUCTION

The Shop-N-Fill #4 site is located at 75304 Highway 77 in Lincoln, Talladega County, Alabama, and currently operates as a retail gasoline station and convenience store. The site is in the Northwestern ¼ of the Northwestern ¼ of Section 4, Township 17 North, Range 5 East. More specifically, the site is located at 33° 35' 15.75" north latitude, 86° 07' 28.88" west longitude. Currently, there are four Underground Storage Tanks (USTs) located at the facility. One 8,000-gallon tank, located on the eastern side of the canopy, is in temporary closure. Two 6,000-gallon USTs and one 10,000-gallon UST are located west of the canopy in a separate tank hold. These three tanks contain various grades of gasoline and are currently in use. The Alabama Tank Trust Fund (ATTF) responsible party for the Shop-N-Fill #4 site is Bowden Oil Company (Bowden).

On June 18, 2020, Karst Environmental (Karst) mobilized to the site to conduct a Phase II Environmental Site Assessment (ESA). During the assessment, Karst installed five soil borings in the vicinity of the gasoline and diesel tank holds and fueling dispensers. Soil samples collected from soil boring GP-4 exhibited concentrations of chemicals of concern (COC) in excess of the Alabama Department of Environmental Management (ADEM) Initial Screening Levels (ISLs) for a commercial site.

On July 1, 2020, CDG, Inc. (CDG) submitted an UST Release Report on behalf of Bowden summarizing the findings of the Phase II ESA conducted by Karst. Upon review of the UST Release Report and Phase II ESA, ADEM issued a Pre-Approval of ATTF Cost Proposal CP-01 for Preliminary Investigation and Secondary Plan Development in correspondence dated July 17, 2020. In a letter dated July 21, 2020, ADEM also issued a Notice of Requirement (NOR) to conduct investigative and corrective action. ADEM issued a Notice of Alabama Tank Trust Fund Eligibility letter dated July 22, 2020.

To date, a Preliminary Investigation, Secondary Investigation, Mobile Enhanced Multi-Phase Extraction (MEME) events, groundwater monitoring events, Alabama Risk Based Corrective Action (ARBCA) Tier I/Tier II Evaluation, and Corrective Action Plan (CAP) Evaluation have been conducted at the site. Currently, there are a total of ten Type II monitoring wells and one Type III vertical delineation well at the site.

Topographically, the site is in an area of moderate relief in northern Talladega County. The subject property is located at an elevation of approximately 560 feet above mean sea level (MSL). The terrain in the immediate vicinity of the site slopes moderately downward toward the west. The regional

topography generally slopes to the north toward Interstate 20 and rises to the southeast of the site. The site is located within a primarily commercial use area. A topographic map identifying the general location of the site and a site diagram are located in Appendix B.

The majority of the property is paved with concrete. The UST and fuel dispenser areas are paved with concrete. Storm water in the area is conveyed by stormwater drains. Utility service in the general vicinity of the site includes overhead electric lines and buried fiber optic, water, and sanitary sewer lines. Underground lines are located approximately 3-8 feet below land surface (ft-bls). The depth to groundwater at the site indicates underground utilities should not be directly affected by the contamination in this area.

A water well inventory has been completed for the area surrounding the site. CDG contacted The City of Lincoln Water & Sewer Department and inquired about any public water wells within one mile of the site. There are no public water supply wells within one mile of the site. CDG also conducted a visual survey of the surrounding area and did not identify any private wells within 1,000 feet of the site.

SUMMARY OF PREVIOUS SITE INVESTIGATIONS

On June 18, 2020, Karst mobilized to the site to conduct a Phase II ESA. During the assessment, Karst installed five soil borings in the vicinity of the gasoline and diesel tank holds and fueling dispensers. Soil samples collected from soil boring GP-4 exhibited concentrations of COCs in excess of the ADEM Initial ISLs for a commercial site.

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CDG mobilized personnel and equipment to the site to conduct the Preliminary Investigation activities on October 1, 2020 through November 3, 2020. CDG completed four soil borings at the site and permanent groundwater monitoring wells were constructed in each boring. Soil samples were collected from two intervals in each soil boring. Groundwater sampling was conducted on November 5, 2020 following the installation of the monitoring wells.

Based on the results of the Preliminary Investigation, CDG recommended that a Secondary Investigation be initiated at the site. Seven soil borings were drilled at the site during the Secondary Investigation on June 1, 2021 through June 8, 2021. Six soil borings were converted into Type II groundwater monitoring wells and one soil boring was converted into a Type III vertical delineation well. The Type II borings were drilled with a 4 ¾-inch diameter sonic core barrel to approximate depths of 65 to 70 ft-bls. The Type III boring was drilled with 8-inch diameter casing and 7-inch diameter core barrel to a total depth of 80 ft-bls. As the borings were advanced, soil cores were collected using continuous sampling techniques to accurately characterize the subsurface geology within the area of study. Two soil samples were collected from each of the borings for analysis of COC. Laboratory results indicated that contaminant concentrations were not present at the site in excess of the ADEM ISLs.

Groundwater samples were collected from each of the newly installed monitoring wells on June 17, 2021 and were analyzed for COCs in accordance with EPA Method 8260 and 8270. One (MW-6) of the five groundwater samples collected for analysis contained concentrations in excess of its respective ISL. A measurable accumulation of free product was encountered in MW-3 at a thickness of 0.78 feet and in VW-1 at a thickness of 0.57 feet during the groundwater monitoring activities.

Undisturbed soil samples were collected for analysis of soil geotechnical parameters from two locations at the site. The Shelby tube samples were obtained from monitoring well VW-1 at 1-3 ft-bls and from MW-8 at 3-5 ft-bls. An upgradient soil sample was taken for the analysis of fractional organic carbon and submitted to the Waypoint Analytical laboratory.

To date, four additional groundwater monitoring events and ten MEME events have been conducted since the Secondary Investigation. A CAP Evaluation Report and ARBCA Tier I/Tier II Evaluation have also been prepared for the site.

SUMMARY OF PREVIOUSLY CONDUCTED CORRECTIVE ACTION

To date, ten 12-hour MEME events have been conducted at the Shop-N-Fill #4 site. A summary of the results is included in the table below.

Summary of MEME Results

Date	Duration	Carbon (lbs)	Methane (lbs)	Hydrocarbons (lbs)	Equivalent Gallons of Gasoline	Total Liquid (gallons)
10/05/21	12-hour	1.96	0.30	6.54	1.06	0
11/04/21	12-hour	2.60	0.42	8.67	1.40	0
12/07/21	12-hour	2.86	0.46	9.53	1.54	0
01/26/22	12-hour	2.13	0.45	7.10	1.15	125
02/19/22	12-hour	2.52	0.49	8.40	1.36	130
03/17/22	12-hour	2.65	0.47	8.84	1.44	200
04/20/22	12-hour	2.73	0.51	9.11	1.48	150
05/15/22	12-hour	2.57	0.51	8.57	1.39	200
06/22/22	12-hour	2.59	0.56	8.64	1.40	150
07/31/22	12-hour	25.88	0.57	86.43	14.03	280
Totals		**48.49**	**4.74**	**161.83**	**26.25**	**1,235**

Free product was observed prior to the MEME events in six of the ten events. Thicknesses are tabulated below.

FP Observations Prior to MEME Events

Date	Well	Thickness (feet)
10/05/21	VW-1	0.38
11/04/21	VW-1	0.45
12/07/21	VW-1	0.79
02/19/22	VW-1	0.30
03/17/22	VW-1	0.30
04/20/22	VW-1	0.03

Free product was observed in VW-1 at the conclusion of the 11/4/21, 2/19/22, and 3/17/22 MEME events at a thickness of 0.41 feet, 0.20 feet, and 0.01 feet, respectively.

REMEDIAL OBJECTIVES AND EXPOSURE ASSESSMENT

General Remedial Objectives

The general objectives of this corrective action plan and the remedial efforts for the facility are as follows:

- Ensure that the health and safety of all project personnel is maintained during remediation activities.
- Prevent hydrocarbon contaminant migration to sensitive receptors.
- Reduce adsorbed phase petroleum hydrocarbons from soils within the vadose and saturated zone, to below approved Site Specific Target Levels (SSTLs).
- Reduce dissolved petroleum hydrocarbons from groundwater to below approved SSTLs.
- Accomplish these objectives within the proposed period of operation.

Exposure Assessment

An exposure assessment was conducted by CDG during the ARBCA evaluation. The current land use site conceptual exposure model indicates that complete exposure pathways exist on-site for indoor and outdoor vapor inhalation from soil and groundwater for commercial and construction workers and for dermal contact with affected soil by construction workers. Complete exposure pathways also exist for dermal contact for construction workers and indoor and outdoor vapor inhalation from impacted soil and groundwater for off-site commercial workers and construction workers.

Free product is present at the site, and multiple wells have been observed to be dry. Multiple wells also contain MTBE concentrations above the approved SSTLs. The lateral extent of the dissolved hydrocarbon plume has not been defined. The presence of dissolved hydrocarbon concentrations above the SSTLs will require remediation.

Future land use of the site and the surrounding area is expected to remain the same. There are no public water supply wells located within one mile of the site. No domestic water supply wells have been identified within 1,000 feet of the site.

Site Specific Target Levels

To assess the risk to human health and the environment of the dissolved hydrocarbon plume associated with the Shop-N-Fill #4 site, an ARBCA Tier I/Tier II evaluation was completed for the site. Details of this evaluation are contained in a report submitted to ADEM on October 25, 2021 and were approved by ADEM on November 9, 2021. Based on the ARBCA Tier II evaluation, SSTLs were calculated for the various media (soil and groundwater) at the site. The SSTLs developed during this process are petroleum hydrocarbon levels that would not pose a significant risk to any recognized actual or potential receptors. The individual Groundwater Resource Protection (GRP) SSTLs generated for each of the site monitoring wells are presented on the attached Monitoring Point Data Summary

Tables located in Appendix A and are summarized in Appendix C.

RECENT MONITORING ACTIVITIES, RESULTS, AND COMPARISONS TO SSTLS

As part of CAP development, current representative concentrations for the COC are needed in the evaluation and design of a plan to effectively treat and reduce contaminants. The site has had multiple approved groundwater monitoring events conducted. The most recent groundwater monitoring event was completed on June 27, 2022.

Groundwater Monitoring Activities

Personnel from CDG mobilized to the Shop-N-Fill #4 site on June 27, 2022 to collect groundwater samples for BTEX/MTBE/Naphthalene and PAH analyses. Upon arriving at the site, the technician removed the well caps from a total of eleven monitoring wells. The water levels in the wells were allowed to stabilize. Water levels were then measured with an electronic water level indicator and recorded in the site field book. Monitoring wells MW-1, MW-4, MW-5, MW-10, and MW-11 were observed to be dry and free product was observed in VW-1. After all measurements were completed, the wells were sufficiently purged by the removal of approximately 8.0 gallons of purge water which was treated using a portable carbon unit and released on-site.

Groundwater samples were collected and analyzed from five monitoring wells using new, disposable bailers and transferred to 40 mL glass VOA vials preserved with HCl for BTEX, MTBE, and naphthalene analysis and unpreserved for PAH analysis. The samples were placed on ice and transported under chain of custody protocol to Waypoint Analytical where they were analyzed by EPA Method 8260B for the presence of BTEX/MTBE/Naphthalene constituents and by EPA Method 8270D for the presence of PAH constituents.

Laboratory Analytical Results

The BTEX/MTBE/Naphthalene and PAH analyses for this event indicate that COC concentrations were present at the site at levels above the GRP SSTLs in one (MW-3) of the five sampled monitoring wells. All COC concentrations were reported to be below the established SSTLs for Indoor Air Inhalation. The concentrations above the approved SSTLs are as follows:

	Chemical of Concern	GRP SSTLs	Indoor Inhalation SSTLs	Concentration
MW-3	Benzene	**0.307 mg/L**	213 mg/L	**10.9 mg/L**

REMEDIATION RATIONALE AND APPROACH

Based upon current constituent concentrations and the risk assessment results, there are exceedances in the SSTL COCs. The proposed corrective action, which was requested by ADEM in a letter dated February 8, 2022, involves use of quarterly remediation by natural attenuation (RNA) in addition to monthly MEME events. This corrective action would provide the most economical use of resources and allow natural attenuation to continue to reduce contaminant concentrations.

Natural attenuation is a passive remediation process by which dilution, volatilization, biodegradation, adsorption, and chemical reactivity are allowed to reduce contaminant concentrations to acceptable levels. As a general rule, decreasing trends indicate these natural attenuation processes are occurring and will likely continue to reduce the contaminant concentrations to below acceptable levels, when used in conjunction with MEME events. If COC concentrations increase based on future monitoring results, the CAP approach should be re-evaluated.

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

REMEDIATION RECOMMENDATION PLAN

The proposed corrective action at the Shop-N-Fill #4 site involves the application of monthly MEME events in conjunction with quarterly natural attenuation monitoring. CDG recommends the installation of six recovery wells. Proposed locations are shown in Appendix B. The MEME events will be conducted by Brown Remediation, Inc. (Brown) or equivalent. CDG recommends using the newly installed recovery wells for the extraction. The MEME events would be anticipated to reduce the residual COC concentrations within the source area to levels below the approved SSTLs.

Due to site constrictions and as requested by the site manager, CDG recommends installing a single manifold that would be located at the northeast corner of the site to allow the MEME vehicles a place to connect to the recovery wells without causing congestion around the pump islands and convenience store. Additionally, this single manifold connection would allow for daytime MEME events since the MEME vehicles would be able to park out of the way of the business. CDG recommends a combination of trenching and directional boring to connect the six recovery wells to the manifold network. Proposed locations are included on the Site Map in Appendix B.

CDG recommends the installation of six 4-inch recovery wells (RW-1 through RW-6). The wells will be drilled to a depth of approximately 75 ft-bls using a track-mounted hollow-stem auger drilling rig or a track-mounted sonic drilling rig using hollow core barrels. The wells will be constructed with 60 feet of 4-inch diameter schedule 40 PVC casing and 15 feet of 0.020" slotted PVC screen with an attached silt trap. The annular space of each borehole will be filled with coarse graded 6/10 filter sand from the bottom of the borehole to a level of approximately two feet above the top of the screened interval. A two-foot granular bentonite seal will be placed above the sand pack and hydrated for at least two hours. The wells will then be grouted to a level just below the ground surface. Each recovery well will be completed at the surface with a 2-foot by 2-foot man way with bolt-down steel covers. A Typical Recovery Well Construction Detail is included in Appendix B.

Soil samples will be collected during installation of the six proposed recovery wells (RW-1 and RW-6). As the soil borings are advanced, soil core samples will be collected using either a 5-foot continuous core-barrel sampler advanced along with the hollow-stem augers or by 10-foot continuous core-barrel sampler advanced along with the outer core barrel. Samples will be selected based on the Photo Ionization Detector (PID) field screening method. During soil boring advancement, representative portions of the soil from each sample interval will be retained for further analysis. One portion will be placed in a cooler on ice, for possible submission to the laboratory for analysis. The other portion will be allowed to volatilize for approximately one hour prior to head space analysis for organic vapors using a PID. The headspace of the samples will be analyzed with the PID, the values recorded, and the two samples with the highest levels of VOCs from the boring will be submitted for laboratory analysis.

Samples submitted for analysis will be placed into laboratory-supplied containers (4-ounce, unpreserved jars with Teflon-lined lids), placed on ice maintaining chain of custody protocol. Samples will be analyzed for BTEX/MTBE/Naphthalene using EPA Method 8260B and PAH using EPA Method 8270D.

Soil cuttings and construction debris will be placed in a roll-off container and disposed of at a permitted landfill. CDG will obtain a Solid Waste Disposal Permit prior to initiating drilling activities.

CDG will survey the location of each well referenced to site structures and measure the elevation of the wells referenced to a USGS Topographic map of the location. Each of the newly installed wells will be properly developed using new disposable plastic bailers. Approximately five well volumes will be removed from each well. Purge water generated from well development activities will be treated using a granular activated carbon filtration system prior to being discharged on-site. A sample of the treated water will be collected and analyzed for BTEX/MTBE/Naphthalene analysis by EPA Method 8260B and PAH analysis by EPA Method 8270D to ensure breakthrough has not occurred. If evidence of free product is observed, purge water will be containerized and disposed of at an approved disposal facility.

MEME Events

CDG recommends that monthly 8-hour duration MEME events be conducted at the site in order to reduce dissolved hydrocarbon concentrations in the vicinity of MW-2, MW-3, MW-4, and VW-1. Each 8-hour MEME event will be conducted using Brown, or equivalent. The primary objective will be vapor recovery and petroleum contact water (PCW) removal, utilizing total fluids extraction from the wells.

Manifold Installation

CDG recommends that six recovery wells be connected to a single manifold located near the northeast corner of the site. On-site preparation will include concrete trenching, directional boring, saw cutting, and backfilling of material. Recovery wells RW-1 through RW-6 will be plumbed to the manifold station with 2-inch diameter PVC below grade piping. Both vapor and liquid phase hydrocarbons will be removed with the same drop tube by applying a high vacuum using the MEME equipment. The locations of the extraction wells and piping are attached. A 1-inch diameter flexible Spiralite ® drop tube, extending approximately one foot below the static groundwater level, will be installed in each extraction well. The groundwater, along with vapors, will travel up the drop tube, out of the well head, and into a 2-inch diameter PVC conduit connected to a common manifold. Each of the six recovery wells will be completed with a 2-foot by 2-foot well vault. Excavated material, construction debris, and any other material generated during the manifold installation process will be placed in a roll-off container and disposed of at a permitted landfill. CDG will obtain a Solid Waste Certification prior to site activities.

Natural Attenuation

Groundwater sampling will be conducted on a quarterly basis. The eleven existing wells and six proposed recovery wells will be sampled and gaged during each quarterly event.

The groundwater samples will be collected from the wells using new clean plastic bailers and transferred to 40 milliliter (mL) glass volatile organic analysis (VOA) vials preserved with hydrochloric acid (HCl) for BTEX, MTBE, and naphthalene analysis using EPA Method 8260B and unpreserved for PAH analysis using EPA Method 8270D. During each groundwater sampling event, all monitoring wells sampled will also be monitored for natural attenuation parameters (DO, pH, and ORP).

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

PROPOSED REPORTING REQUIREMENTS

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

Reporting of CAP Implementation

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

Reporting of Natural Attenuation with MEME Events Effectiveness

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

Request for Closure Evaluation of Corrective Action

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

Well Abandonment

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

SCHEDULE OF IMPLEMENTATION

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

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

PROPOSED SAMPLING AND MONITORING ACTIVITIES

CDG will submit cost proposals for well and manifold installation in addition to cost proposals for RNA/MEME events under separate cover.

Following the approval of the CAP and installation of the manifold system, monthly 8-hour duration MEME events will be conducted at the site in order to reduce dissolved hydrocarbon concentrations in the source areas. During the events, groundwater and soil vapor will be extracted from designated recovery wells. The MEME events will be conducted using a mobile liquid ring Multi-Phase Extraction

(MPE) system operated by Brown, or equivalent. The MEME system has been approved by ADEM for use at numerous locations in Alabama for free product recovery, emergency response, and pilot testing activities. The unit operates with continuously monitored off-gas treatment (thermal destruction).

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

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

The groundwater samples will be collected from the monitoring and recovery wells using new clean plastic bailers. Samples will be transferred to 40 mL glass VOA vials preserved with HCl for BTEX, MTBE, and naphthalene analysis in accordance with EPA Method 8260B and unpreserved for PAH analysis in accordance with EPA Method 8270D. During each groundwater sampling event, all sampled wells will also be sampled for natural attenuation parameters (DO, pH, and ORP). The natural attenuation parameters will provide information concerning the recovery of the shallow aquifer down gradient of the release area.

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

APPENDICES

Appendices

TABLES

APPENDIX A

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-1**		
INSTALLATION DATE:	10/07/20	WELL DEPTH (FT BTOC):	65.5	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.61	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
11/05/20	60.43	500.18	-	2.5
06/17/21	DRY			
09/28/21	DRY			
12/07/21	DRY			
03/22/22	DRY			
06/27/22	DRY			

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
11/05/20	3.08	6.73	44.7
06/17/21	DRY		
09/28/21	DRY		
12/07/21	DRY		
03/22/22	DRY		
06/27/22	DRY		

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-1**	
INSTALLATION DATE:	10/07/20	WELL DEPTH (FT BTOC):	65.5	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.61	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
11/05/20	0.001	0.138	0.115	0.024	0.103	0.380	<0.005
06/17/21	NOT SAMPLED (DRY)						
09/28/21	NOT SAMPLED (DRY)						
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	NOT SAMPLED (DRY)						
GRP SSTLs:	**1.03**	**0.258**	**51.5**	**36.1**	**175**	**-**	**1.03**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
11/05/20	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/17/21	NOT SAMPLED (DRY)										
09/28/21	NOT SAMPLED (DRY)										
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	NOT SAMPLED (DRY)										
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-2**		
INSTALLATION DATE:	10/08/20	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	559.87	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
11/05/20	55.39	504.48	-	4.5
06/17/21	DRY			
09/28/21	DRY			
12/07/21	DRY			
03/22/22	DRY			
06/27/22	64.32	495.55	-	0.5

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
11/05/20	2.47	6.89	-61.5
06/17/21	DRY		
09/28/21	DRY		
12/07/21	DRY		
03/22/22	DRY		
06/27/22	1.76	7.03	140.2

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-2**	
INSTALLATION DATE:	10/08/20	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	559.87	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
11/05/20	0.096	**0.386**	0.429	0.071	0.300	1.186	<0.050
06/17/21	NOT SAMPLED (DRY)						
09/28/21	NOT SAMPLED (DRY)						
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	0.158	0.112	0.005	0.014	0.034	0.1650	<0.005
GRP SSTLs:	**1.14**	**0.285**	**57**	**39.9**	**175**	**-**	**1.14**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-2**	
INSTALLATION DATE:	10/08/20	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	559.87	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
11/05/20	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
06/17/21	NOT SAMPLED (DRY)										
09/28/21	NOT SAMPLED (DRY)										
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	0.000482	<0.000170
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-3**		
INSTALLATION DATE:	10/08/20	WELL DEPTH (FT BTOC):	54.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.51	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
11/05/20	52.48	509.16	1.50	-
06/17/21	52.23	508.87	0.78	-
09/28/21	DRY			
12/07/21	DRY			
03/22/22	DRY			
06/27/22	52.98	507.53	-	0.5

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
11/05/20	FREE PRODUCT (1.50 FT)		
06/17/21	FREE PRODUCT (0.78 FT)		
09/28/21	DRY		
12/07/21	DRY		
03/22/22	DRY		
06/27/22	1.21	6.93	131.2

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-3**	
INSTALLATION DATE:	10/08/20	WELL DEPTH (FT BTOC):	54.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.51	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
11/05/20	NOT SAMPLED - FREE PRODUCT (1.50 FT)						
06/17/21	NOT SAMPLED - FREE PRODUCT (0.78 FT)						
09/28/21	NOT SAMPLED (DRY)						
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	<0.500	**10.9**	32.0	5.10	30.3	78.30	<2.50
GRP SSTLs:	**1.23**	**0.307**	**61.4**	**43**	**175**	**-**	**1.23**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-3**	
INSTALLATION DATE:	10/08/20	WELL DEPTH (FT BTOC):	54.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.51	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
11/05/20	NOT SAMPLED - FREE PRODUCT (1.50 FT)										
06/17/21	NOT SAMPLED - FREE PRODUCT (0.78 FT)										
09/28/21	NOT SAMPLED (DRY)										
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	<0.00850	<0.00850	<0.00850	<0.00850	<0.00850	<0.00850	<0.00850	<0.00850	0.00958	0.0111	<0.00850
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-4**		
INSTALLATION DATE:	10/13/20	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.51	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
11/05/20	63.29	497.22	-	1.0
06/17/21	DRY			
09/28/21	63.13	497.38	-	1.0
12/07/21	DRY			
03/22/22	DRY			
06/27/22	DRY			

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
11/05/20	3.02	6.83	43.8
06/17/21	DRY		
09/28/21	1.84	5.90	86.1
12/07/21	DRY		
03/22/22	DRY		
06/27/22	DRY		

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-4**	
INSTALLATION DATE:	10/13/20	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.51	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
11/05/20	0.754	**3.250**	10.4	1.23	6.97	21.85	<0.500
06/17/21	NOT SAMPLED (DRY)						
09/28/21	0.248	**5.620**	15.9	1.77	10.2	33.49	<0.250
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	NOT SAMPLED (DRY)						
GRP SSTLs:	**1.23**	**0.307**	**61.4**	**43**	**175**	**-**	**1.23**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-4**	
INSTALLATION DATE:	10/13/20	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	560.51	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
11/05/20	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340
06/17/21	NOT SAMPLED (DRY)										
09/28/21	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	NOT SAMPLED (DRY)										
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-5**		
INSTALLATION DATE:	06/02/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.86	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	DRY			
09/28/21	DRY			
12/07/21	DRY			
03/22/22	DRY			
06/27/22	DRY			

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	DRY		
09/28/21	DRY		
12/07/21	DRY		
03/22/22	DRY		
06/27/22	DRY		

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-5**	
INSTALLATION DATE:	06/02/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.86	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	NOT SAMPLED (DRY)						
09/28/21	NOT SAMPLED (DRY)						
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	NOT SAMPLED (DRY)						
GRP SSTLs:	**1.23**	**0.307**	**61.4**	**43**	**175**	**-**	**1.23**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-5**	
INSTALLATION DATE:	06/02/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.86	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	NOT SAMPLED (DRY)										
09/28/21	NOT SAMPLED (DRY)										
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	NOT SAMPLED (DRY)										
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-6**		
INSTALLATION DATE:	06/02/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.22	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	50.04	510.18	-	7.0
09/28/21	55.74	504.48	-	7.0
12/07/21	57.86	502.36	-	3.5
03/22/22	58.62	501.60	-	3.0
06/27/22	56.91	503.31	-	3.0

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	-	-	-
09/28/21	1.47	6.67	9.8
12/07/21	1.63	6.71	8.2
03/22/22	1.55	5.99	190.6
06/27/22	0.93	6.57	104.7

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-6**	
INSTALLATION DATE:	06/02/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.22	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	0.230	0.076	0.009	0.001	0.081	0.167	0.017
09/28/21	0.058	0.070	<0.002	<0.001	0.004	0.074	<0.005
12/07/21	0.012	0.045	<0.002	<0.001	0.001	0.046	0.006
03/22/22	0.006	0.008	<0.002	<0.001	0.002	0.010	<0.005
06/27/22	0.007	0.045	<0.002	<0.001	0.003	0.048	<0.005
GRP SSTLs:	**1.23**	**0.307**	**61.4**	**43**	**175**	**-**	**1.23**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-6**	
INSTALLATION DATE:	06/02/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.22	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	**0.000363**	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	<0.000170	**0.000247**	**0.00589**	0.00460	**0.00120**
09/28/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	**0.000102**	**0.000024**	<0.000020
12/07/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	**0.000039**	<0.000020	<0.000020
03/22/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/27/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000026	<0.000020	<0.000020
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-8**		
INSTALLATION DATE:	06/08/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	559.46	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	50.54	508.92	-	6.5
09/28/21	54.05	505.41	-	6.5
12/07/21	DRY			
03/22/22	60.40	499.06	-	2.0
06/27/22	61.91	497.55	-	1.0

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	-	-	-
09/28/21	1.58	6.46	9.1
12/07/21	DRY		
03/22/22	2.49	6.61	249.4
06/27/22	1.05	7.52	135.3

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-8**	
INSTALLATION DATE:	06/08/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	559.46	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
09/28/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
12/07/21	NOT SAMPLED (DRY)						
03/22/22	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/27/22	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
GRP SSTLs:	**0.697**	**0.174**	**34.9**	**24.4**	**175**	**-**	**0.697**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-8**	
INSTALLATION DATE:	06/08/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	559.46	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000063	0.000070	0.000029
09/28/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
12/07/21	NOT SAMPLED (DRY)										
03/22/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/27/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-9**		
INSTALLATION DATE:	06/01/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.34	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	55.45	504.89	-	4.5
09/28/21	57.46	502.88	-	4.5
12/07/21	DRY			
03/22/22	58.47	501.87	-	4.5
06/27/22	57.82	502.52	-	3.0

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	-	-	-
09/28/21	1.49	6.57	1.9
12/07/21	DRY		
03/22/22	1.68	5.57	246.9
06/27/22	1.07	6.70	128.0

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-9**	
INSTALLATION DATE:	06/01/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.34	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	<0.001	<0.001	<0.002	0.001	0.030	0.031	<0.005
09/28/21	<0.001	<0.001	0.002	<0.001	<0.001	0.002	<0.005
12/07/21	NOT SAMPLED (DRY)						
03/22/22	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/27/22	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
GRP SSTLs:	**1.22**	**0.304**	**60.8**	**42.6**	**175**	**-**	**1.22**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-9**	
INSTALLATION DATE:	06/01/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.34	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
09/28/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
12/07/21	NOT SAMPLED (DRY)										
03/22/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/27/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000046	<0.000020	<0.000020
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-10**		
INSTALLATION DATE:	06/07/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.46	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	60.16	500.30	-	2.0
09/28/21	DRY			
12/07/21	DRY			
03/22/22	DRY			
06/27/22	DRY			

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	-	-	-
09/28/21	DRY		
12/07/21	DRY		
03/22/22	DRY		
06/27/22	DRY		

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-10**	
INSTALLATION DATE:	06/07/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.46	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	<0.001	0.002	0.016	0.001	0.013	0.032	<0.005
09/28/21	NOT SAMPLED (DRY)						
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	NOT SAMPLED (DRY)						
GRP SSTLs:	**0.685**	**0.171**	**34.3**	**24**	**175**	**-**	**0.685**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-10**	
INSTALLATION DATE:	06/07/21	WELL DEPTH (FT BTOC):	65.0	SCREEN LENGTH (FT):	15	CASING ELEV (FT ABOVE MSL):	560.46	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.00002	<0.000020	<0.000020	<0.000020
09/28/21	NOT SAMPLED (DRY)										
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	NOT SAMPLED (DRY)										
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-11**		
INSTALLATION DATE:	06/08/21	WELL DEPTH (FT BTOC):	70.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	561.18	WELL TYPE: DIAMETER (IN):	II 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	68.22	492.96	-	2.0
09/28/21	DRY			
12/07/21	DRY			
03/22/22	DRY			
06/27/22	DRY			

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	-	-	-
09/28/21	DRY		
12/07/21	DRY		
03/22/22	DRY		
06/27/22	DRY		

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-11**	
INSTALLATION DATE:	06/08/21	WELL DEPTH (FT BTOC):	70.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	561.18	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
09/28/21	NOT SAMPLED (DRY)						
12/07/21	NOT SAMPLED (DRY)						
03/22/22	NOT SAMPLED (DRY)						
06/27/22	NOT SAMPLED (DRY)						
GRP SSTLs:	**1.23**	**0.307**	**61.4**	**43**	**175**	**-**	**1.23**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**MW-11**	
INSTALLATION DATE:	06/08/21	WELL DEPTH (FT BTOC):	70.0	SCREEN LENGTH (FT):	20	CASING ELEV (FT ABOVE MSL):	561.18	WELL TYPE: II DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
09/28/21	NOT SAMPLED (DRY)										
12/07/21	NOT SAMPLED (DRY)										
03/22/22	NOT SAMPLED (DRY)										
06/27/22	NOT SAMPLED (DRY)										
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**VW-1**		
INSTALLATION DATE:	06/03/21	WELL DEPTH (FT BTOC):	80.0	SCREEN LENGTH (FT):	5	CASING ELEV (FT ABOVE MSL):	560.87	WELL TYPE: DIAMETER (IN):	III 2

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

POTENTIOMETRIC ELEVATION SUMMARY

MEASUREMENT DATE	DEPTH TO WATER (FT BTOC)	ELEVATION (FT ABOVE MSL)	FREE PRODUCT THICKNESS (FT)	PCW GALLONS REMOVED
06/17/21	79.49	481.38	0.57	-
09/28/21	78.53	482.34	0.66	-
12/07/21	78.13	482.74	0.79	-
03/22/22	78.68	482.19	0.13	-
06/27/22	79.37	481.50	0.05	-

INTRINSIC GROUNDWATER DATA SUMMARY

SAMPLE DATE	DISSOLVED OXYGEN (mg/L)	pH	REDOX POTENTIAL (mV)
06/17/21	FREE PRODUCT (0.57 FT)		
09/28/21	FREE PRODUCT (0.56 FT)		
12/07/21	FREE PRODUCT (0.79 FT)		
03/22/22	FREE PRODUCT (0.13 FT)		
06/27/22	FREE PRODUCT (0.05 FT)		

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**VW-1**	
INSTALLATION DATE:	06/03/21	WELL DEPTH (FT BTOC):	80.0	SCREEN LENGTH (FT):	5	CASING ELEV (FT ABOVE MSL):	560.87	WELL TYPE: III DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
06/17/21	NOT SAMPLED - FREE PRODUCT (0.57 FT)						
09/28/21	NOT SAMPLED - FREE PRODUCT (0.66 FT)						
12/07/21	NOT SAMPLED - FREE PRODUCT (0.79 FT)						
03/22/22	NOT SAMPLED - FREE PRODUCT (0.13 FT)						
06/27/22	NOT SAMPLED - FREE PRODUCT (0.05 FT)						
GRP SSTLs:	**1.23**	**0.307**	**61.4**	**43**	**175**	**-**	**1.23**
Inhalation SSTLs:	**48000**	**213**	**526**	**169**	**175**	**-**	**31**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**VW-1**	
INSTALLATION DATE:	06/03/21	WELL DEPTH (FT BTOC):	80.0	SCREEN LENGTH (FT):	5	CASING ELEV (FT ABOVE MSL):	560.87	WELL TYPE: III DIAMETER (IN): 2

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
06/17/21	NOT SAMPLED - FREE PRODUCT (0.57 FT)										
09/28/21	NOT SAMPLED - FREE PRODUCT (0.66 FT)										
12/07/21	NOT SAMPLED - FREE PRODUCT (0.79 FT)										
03/22/22	NOT SAMPLED - FREE PRODUCT (0.13 FT)										
06/27/22	NOT SAMPLED - FREE PRODUCT (0.05 FT)										
GRP SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**
Inhalation SSTLs:	**0.0434**	**0.0094**	**0.00162**	**0.0015**	**0.0007**	**0.0008**	**0.0016**	**0.206**	**1.98**	**1**	**0.135**

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4		UST NUMBER:	20-07-03	WELL ID:	**Carbon Effluent**	
INSTALLATION DATE:	-	WELL DEPTH (FT BTOC):	-	SCREEN LENGTH (FT):	-	CASING ELEV (FT ABOVE MSL):	-
WELL TYPE:	-	DIAMETER (IN):	-				

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

GROUNDWATER ANALYTICAL SUMMARY (mg/L)							
SAMPLE DATE	MTBE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	TOTAL BTEX	NAPHTHALENE
11/05/20	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/09/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/16/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
09/28/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
12/07/21	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
03/22/22	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005
06/27/22	<0.001	<0.001	<0.002	<0.001	<0.001	BDL	<0.005

Monitoring Point Data Summary Table

SITE NAME:	Shop-N-Fill #4			UST NUMBER:	20-07-03	WELL ID:	**Carbon Effluent**	
INSTALLATION DATE:	-	WELL DEPTH (FT BTOC):	-	SCREEN LENGTH (FT):	-	CASING ELEV (FT ABOVE MSL):	-	WELL TYPE: DIAMETER (IN):	- -

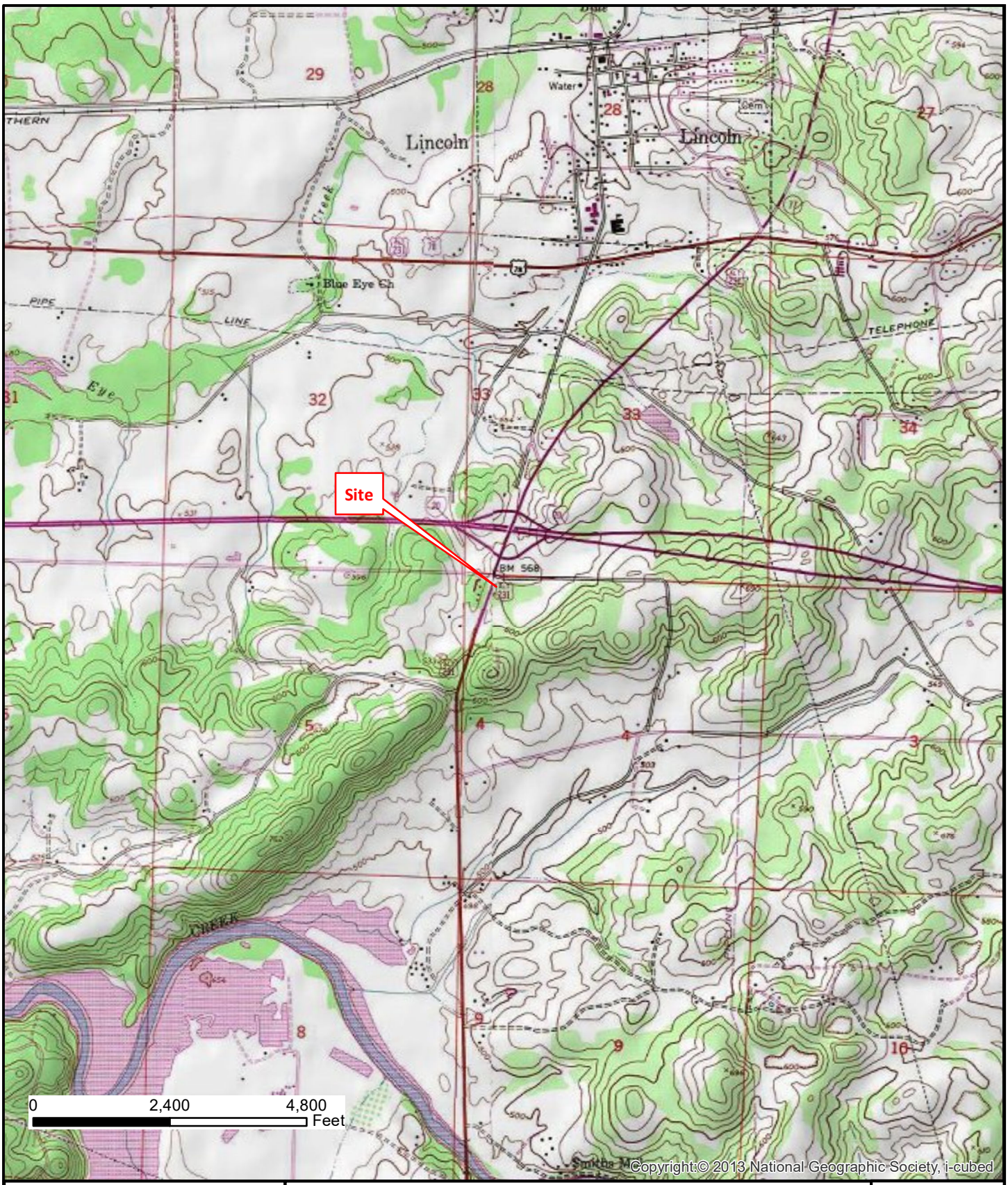
Notes: BTOC (Below Top of Casing); MSL (Mean Sea Level); BDL (Below Detection Limit); CA (Corrective Action)

GROUNDWATER ANALYTICAL SUMMARY (mg/L)

SAMPLE DATE	ANTHRACENE	BENZO(a) ANTHRACENE	BENZO(a) PYRENE	BENZO(b) FLUORANTHENE	BENZO(g,h,i) PERYLENE	BENZO(k) FLUORANTHENE	CHRYSENE	FLUORANTHENE	FLUORENE	PHENANTHRENE	PYRENE
11/05/20	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/09/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/16/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
09/28/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000022	<0.000020
12/07/21	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
03/22/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
06/27/22	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

FIGURES

APPENDIX B

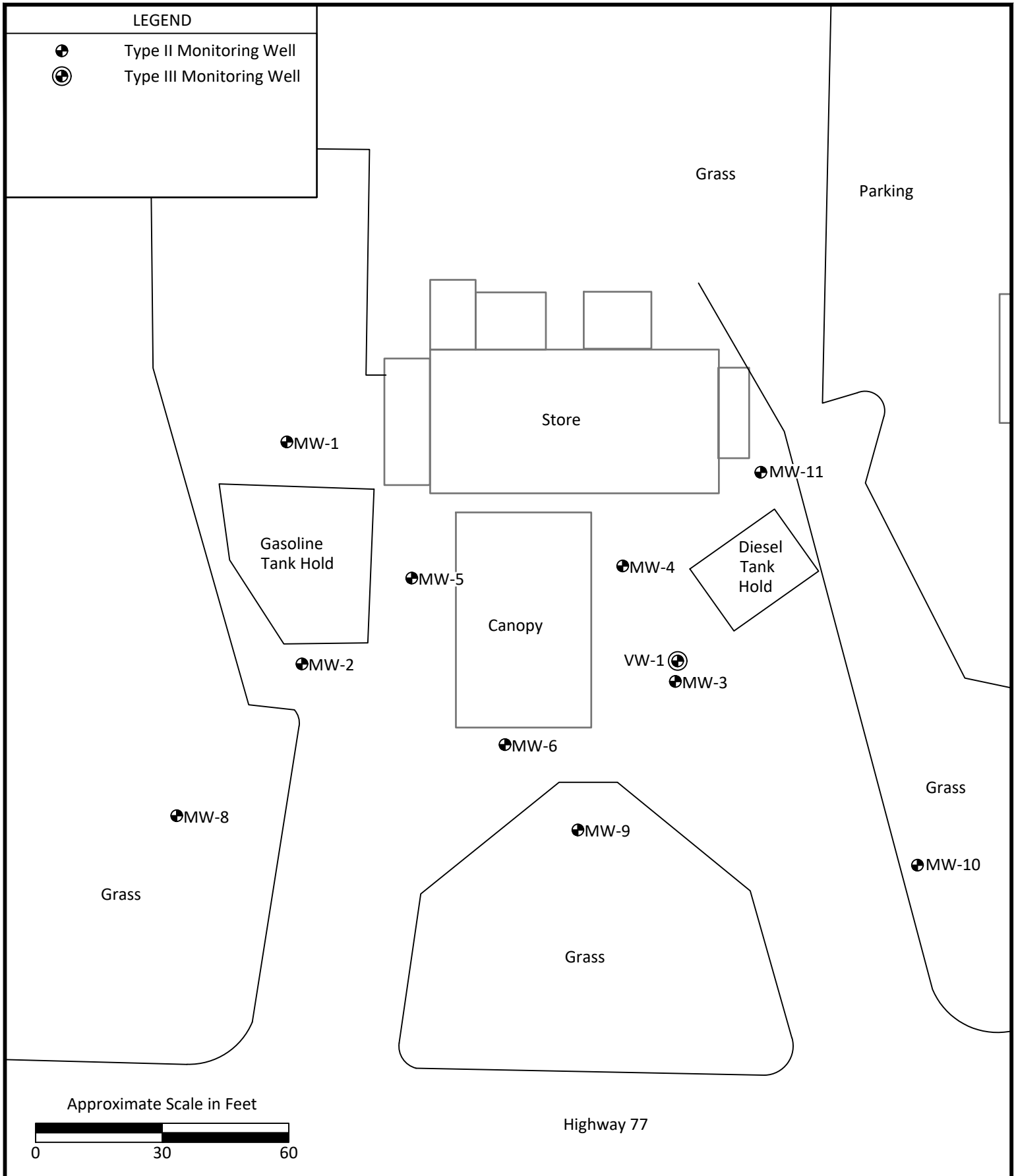


CDG

Site Location USGS Topographic Map

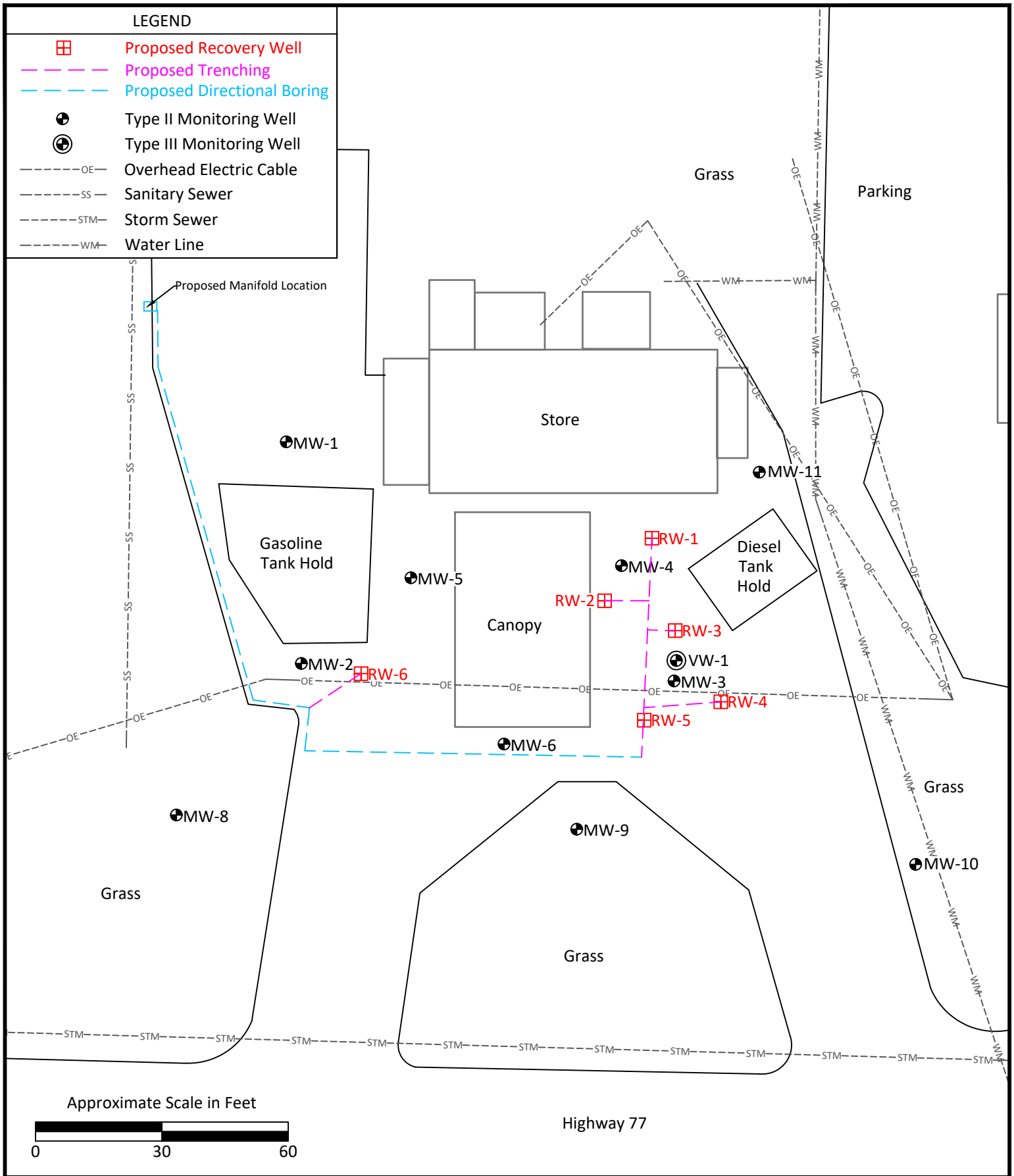
Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama

N



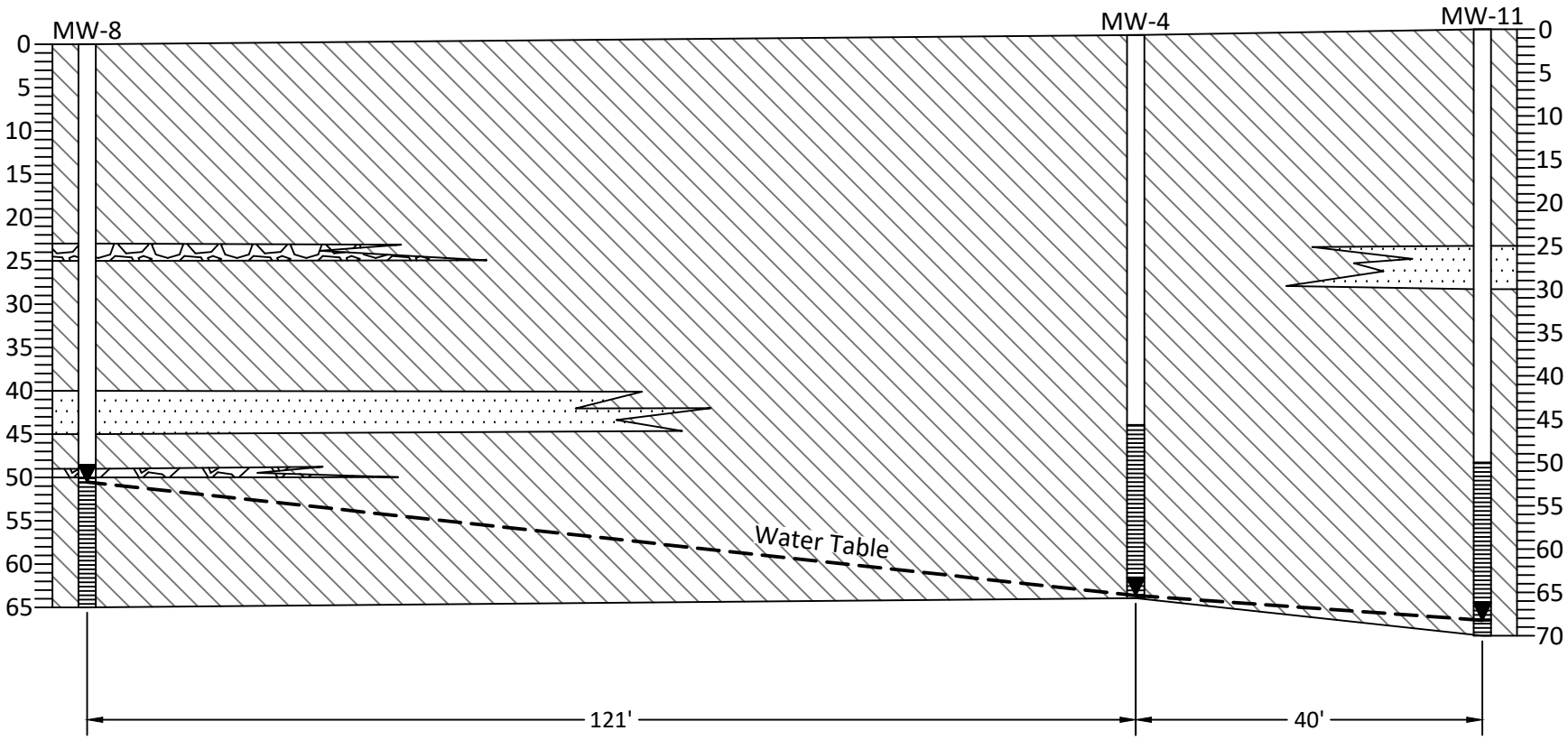
Site Map with Utility and Well Locations

Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama



Site Map with Utility and Proposed Well Locations

Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama



20

Approximate
Scale in Feet

0 20

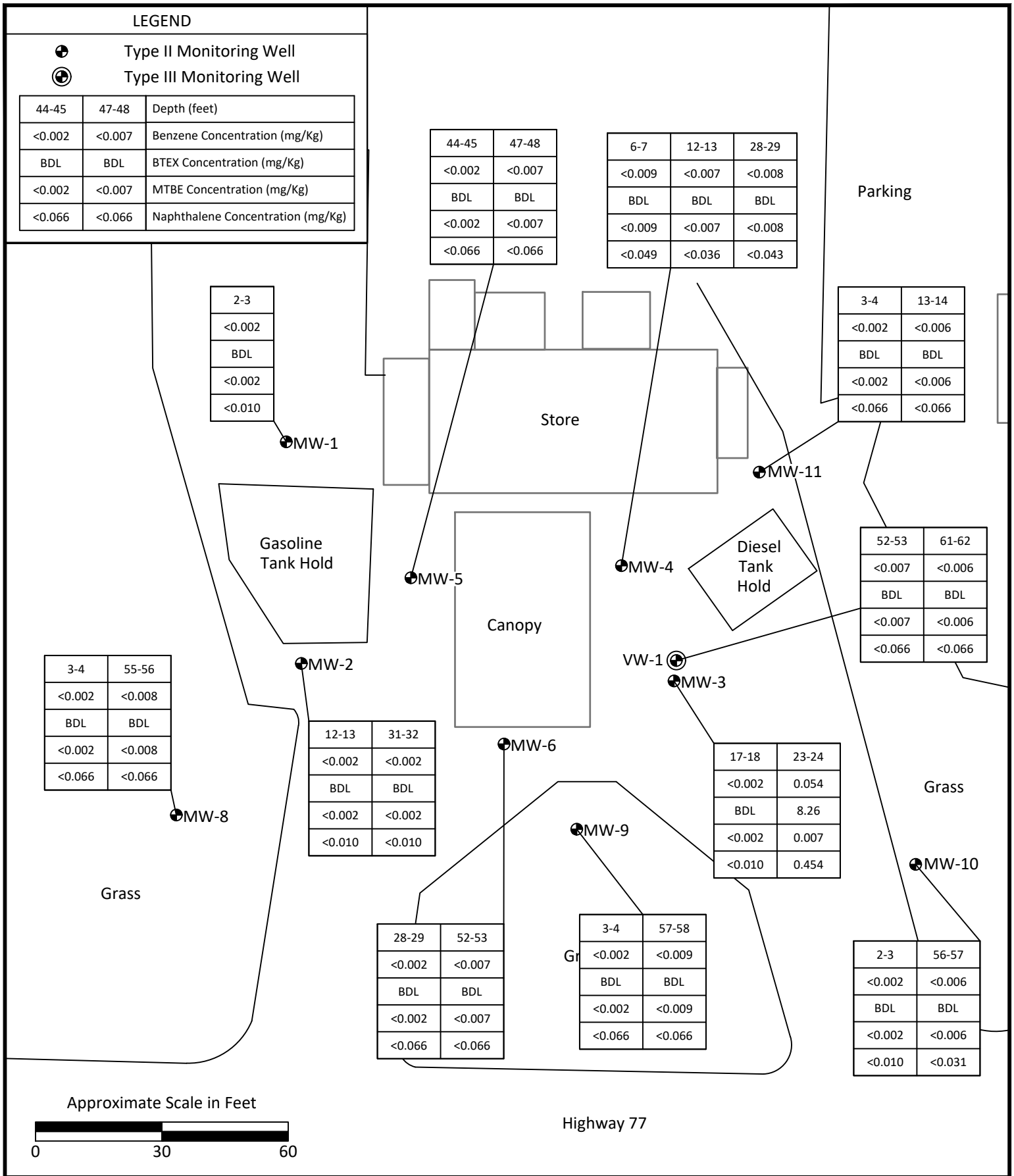
Legend

Sand
Clay
Rock
Screened Interval
Groundwater Level

CDG

Lithologic Cross-Section

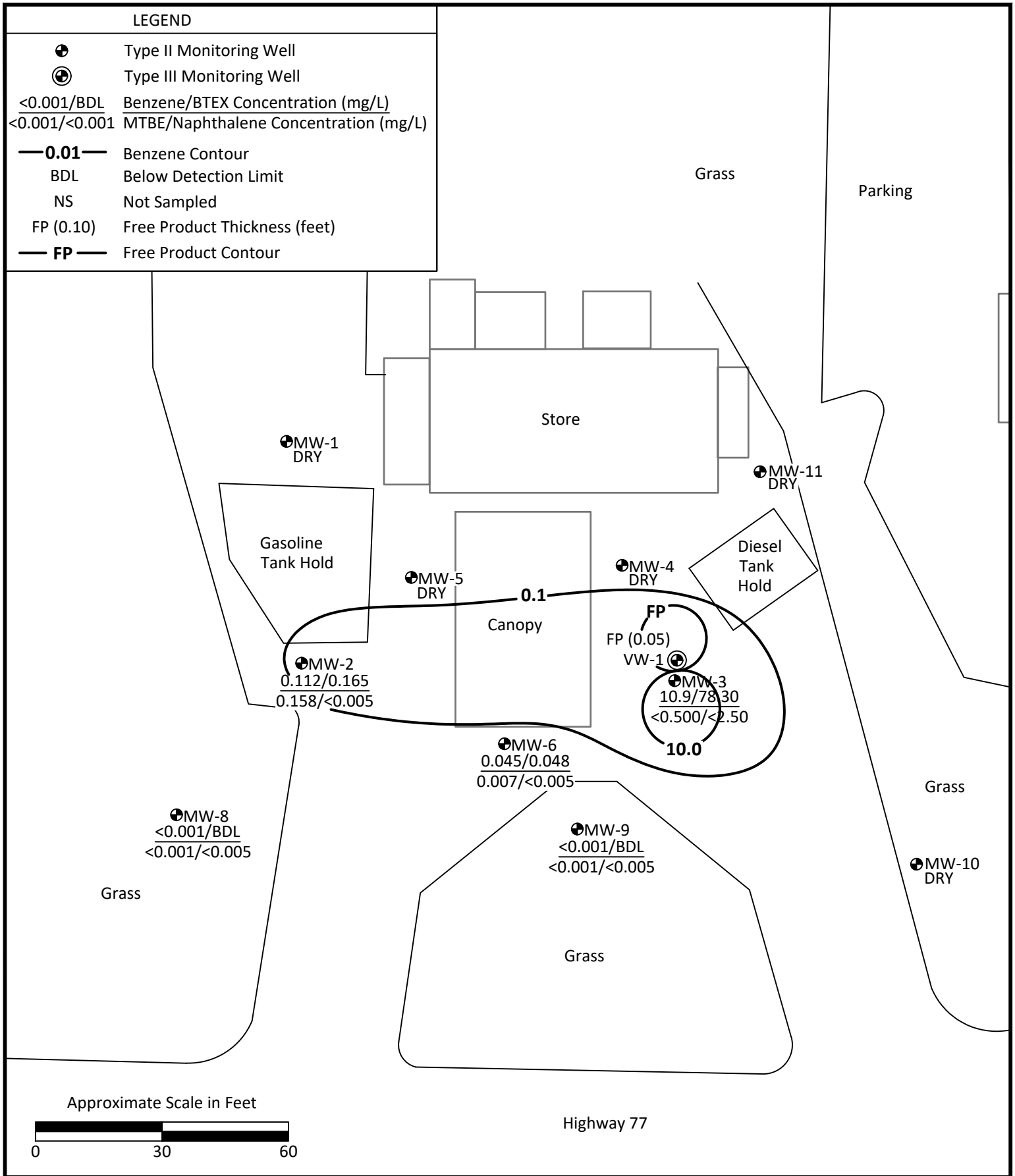
Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama



CDG

Soil Analytical Map

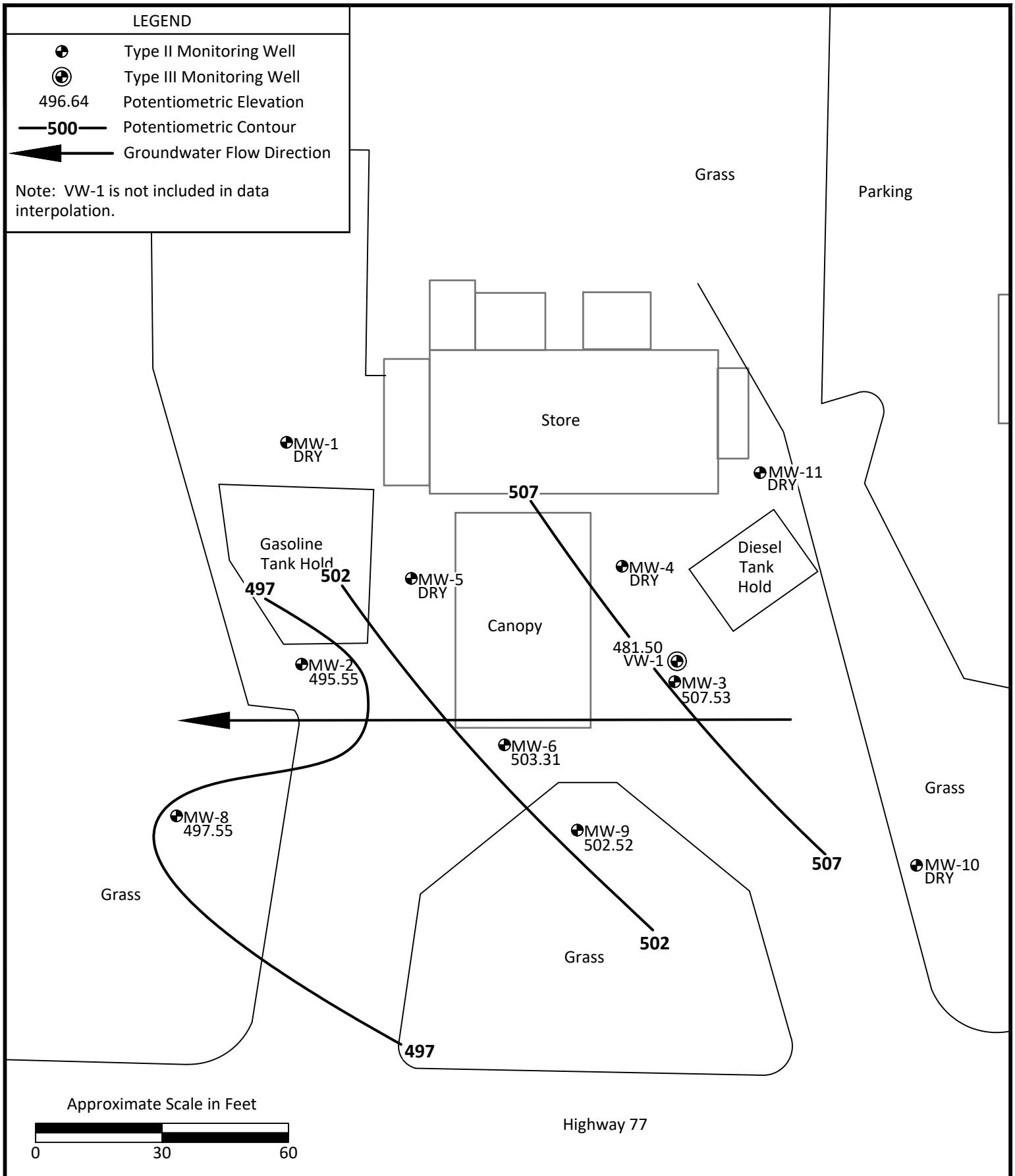
Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama



CDG

Groundwater Analytical and Benzene Contour Map
June 27, 2022

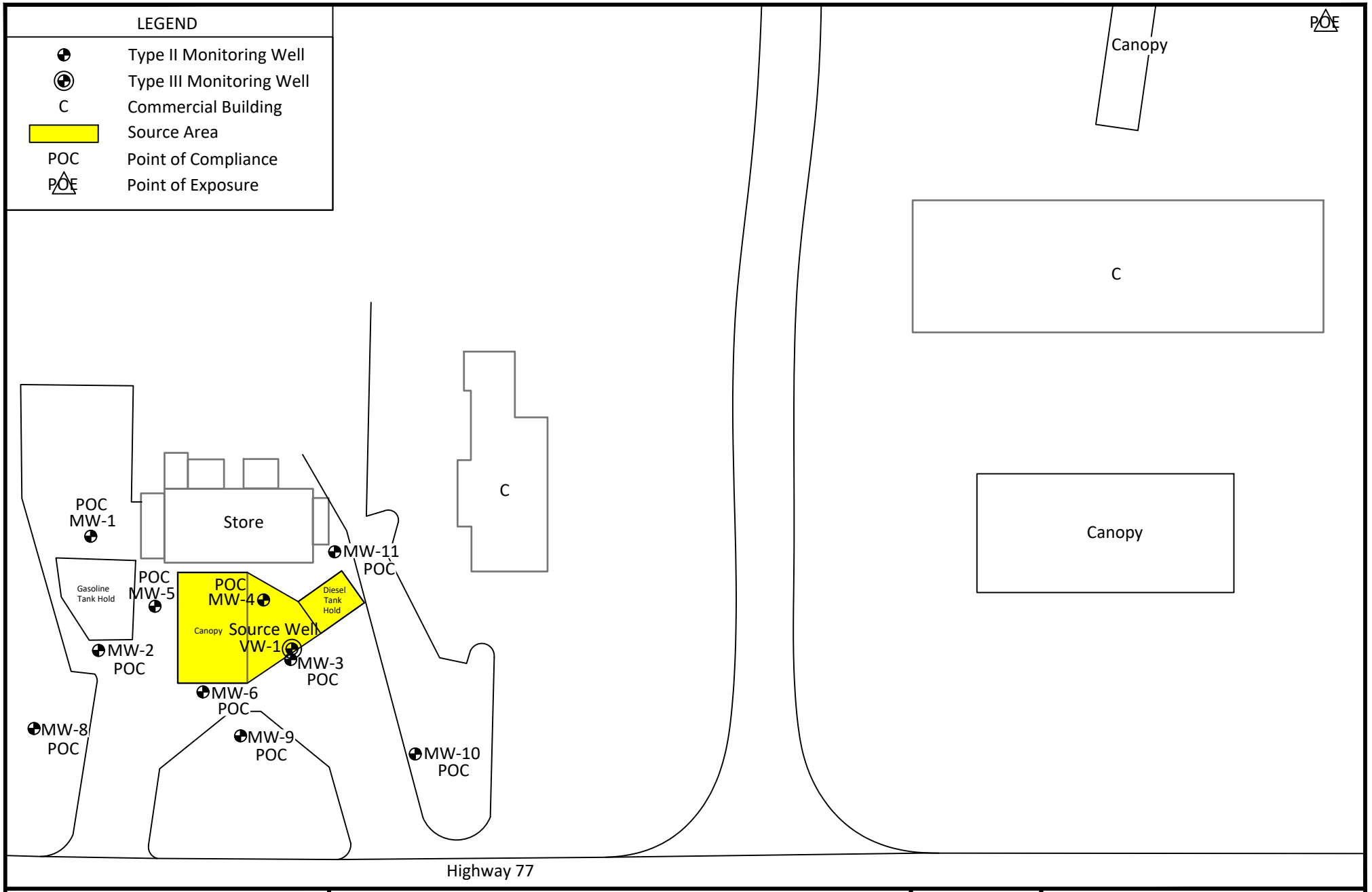
Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama



CDG

Potentiometric Surface Map
June 27, 2022

Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama



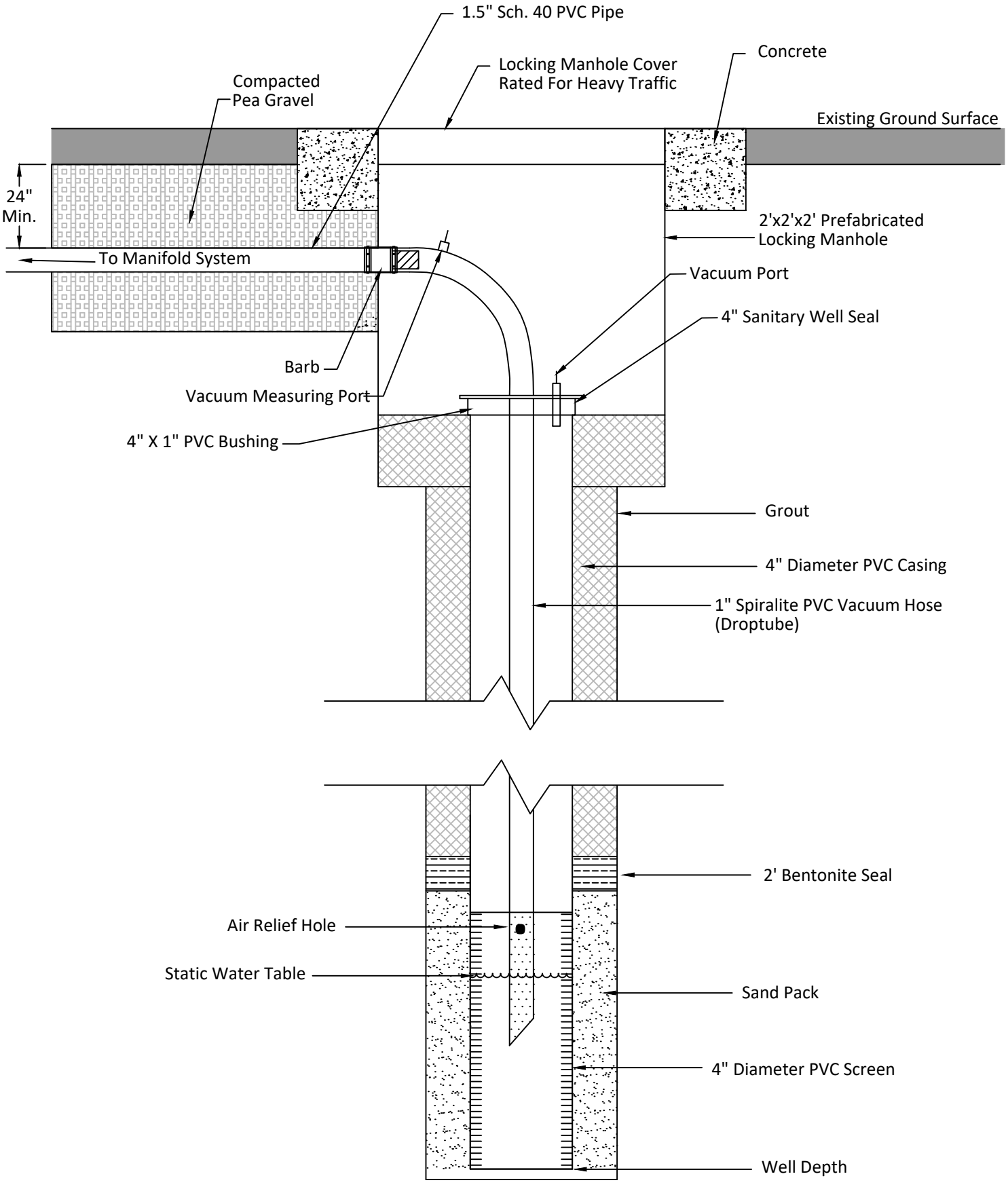
CDG

Attachment 13
Map Identifying POE and POCs

Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama

Approximate Scale in Feet

0 60 120



CDG

Typical Recovery Well Construction Detail

Shop-N-Fill #4
75304 Hwy 77
Lincoln, Talladega County, Alabama

Not to Scale

APPROVED ARBCA SSTLs

APPENDIX C

Approved SSTLs
Shop-N-Fill #4
75304 Highway 77
Lincoln, Talladega County, AL
UST20-07-03

WELL ID	SSTL	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
		Concentrations Reported in mg/L					
MW-1	GRP	1.03	0.258	51.5	36.1	175	1.03
	Indoor Inhalation	48,000	213	526	169	175	31
MW-2	GRP	1.14	0.285	57	39.9	175	1.14
	Indoor Inhalation	48,000	213	526	169	175	31
MW-3	GRP	1.23	0.307	61.4	43	175	1.23
	Indoor Inhalation	48,000	213	526	169	175	31
MW-4	GRP	1.23	0.307	61.4	43	175	1.23
	Indoor Inhalation	48,000	213	526	169	175	31
MW-5	GRP	1.23	0.307	61.4	43	175	1.23
	Indoor Inhalation	48,000	213	526	169	175	31
MW-6	GRP	1.23	0.307	61.4	43	175	1.23
	Indoor Inhalation	48,000	213	526	169	175	31
MW-8	GRP	0.697	0.174	34.9	24.4	175	0.697
	Indoor Inhalation	48,000	213	526	169	175	31
MW-9	GRP	1.22	0.304	60.8	42.6	175	1.22
	Indoor Inhalation	48,000	213	526	169	175	31
MW-10	GRP	0.685	0.171	34.3	24	175	0.685
	Indoor Inhalation	48,000	213	526	169	175	31
MW-11	GRP	1.23	0.307	61.4	43	175	1.23
	Indoor Inhalation	48,000	213	526	169	175	31
VW-1	GRP	1.23	0.307	61.4	43	175	1.23
	Indoor Inhalation	48,000	213	526	169	175	31

Approved SSTLs - PAH
Shop-N-Fill #4
75304 Highway 77
Lincoln, Talladega County, AL
UST20-07-03

WELL ID	SSTL	Anthracene	Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(g, h, i) Perylene	Benzo(k) Fluoranthene	Chrysene	Fluoranthene	Fluorene	Phenanthrene	Pyrene
		Concentrations Reported in mg/L										
MW-1	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-2	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-3	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-4	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-5	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-6	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-8	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-9	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-10	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
MW-11	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
VW-1	GRP	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135
	Indoor Inhalation	0.0434	0.0094	0.00162	0.0015	0.0007	0.0008	0.0016	0.206	1.98	1	0.135

QUALITY ASSURANCE / QUALITY CONTROL PLAN

APPENDIX D

QA/QC MONITORING/SAMPLING PLAN

FIELD ACTIVITIES

Air Sampling

Air samples are collected utilizing an air sampling pump system or Summa canister. 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 collected directly into and stored in a Tedlar air/gas sampling bag or Summa canister. The sample bag or canister is provided to CDG by the analytical laboratory. The air sampling pump system 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 an organic vapor analyzer, equipped with a methane filter (as applicable). The field instrument is field calibrated to a gas standard of known concentration. Field air/gas samples are screened at ambient conditions and the data recorded. The field screening test form contains the following information:

- Project name (client and location);
- Data table number;
- Personnel collecting samples;
- Field screening instrument used and I.D. number;
- Calibration information;
- Description of field screening method;
- Sample identification information; and
- Screening data, including time collected/screened, ambient temperature/results.

Air Sampling Protocols

Air samples designated for laboratory analysis are collected in Tedlar bags or a Summa canister. The sample bags or canister are provided to CDG directly by the analytical laboratory. If Tedlar bags are used, two Tedlar bags are filled for each sample, in the event the bags are damaged during shipment. Upon collection, each sample bag is immediately placed in a cooler or other secure shipping container, following laboratory instructions and appropriate chain of custody documentation. The samples are sent direct to the laboratory via overnight carrier, or are picked up from the CDG office by a representative of the laboratory.

Groundwater Monitoring/Sampling Activity Protocols

Groundwater monitoring/sampling includes the following associated activities:

1) Measurement for the presence of free product;
2) Measurement of static water level;
3) Calculation of standing water volume (in well);
4) Sample collection; and
5) Equipment decontamination.

Groundwater sampling parameters are recorded in the field on a monitor well sampling record form. The details for each of the above referenced monitoring/sampling activities are described in the following sections.

Free Product Detection and Measurement

The presence of free product is measured prior to free product recovery, and purging/sampling the selected monitor well. Free product is detected/measured using a hydrocarbon/water interface probe. The probe is lowered slowly into the well until an instrument tone is heard (a constant tone indicates that free product is present, and an intermittent tone indicates that water is present). The point at which a constant tone is first heard is considered the top of free product. The measurement from the top of the PVC well casing to the top of free product is recorded. The measurement is checked at least twice. The probe is then slowly lowered further into the well until an intermittent tone is heard (indicating that the probe has passed through the free product layer into the underlying groundwater interval). Once the intermittent tone is encountered, the probe is slowly raised until the constant tone is again indicated. This point is considered the interface between the floating free product layer and the groundwater table. The measurement from the top of the PVC casing to the interface is recorded. This measurement is also checked at least twice.

The free product thickness is determined by calculating the difference between the measurement to the top of free product and the measurement to the free product/water interface (the interface probe measures free 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 into the well to collect a sample for visual confirmation of the free product. Remarks regarding visual characteristics of the free product are recorded (black, clear, colored, etc.).

Calculation of Standing Water Volume

The standing water volume in a monitor well is calculated using the equation:

$v = 3.14 \times r^2 \times l$ (where **v** = well volume, **r** = well radius, and **l** = length of the column of water in the well).

The column of water in the well can be calculated using the equation:

l = w – d (where **w** = distance from the top of casing to the bottom of the well and **d** = distance from the top of casing to the top of the water).

Well Evacuation

Well evacuation is initiated after the static water level is measured and the standing water volume has been calculated. Well evacuation is conducted by either using a new disposable (single-use) bailer, a well-dedicated PVC bailer, or a surface mounted pneumatic operated diaphragm pump (a diaphragm pump is only used in deep wells (greater than 25 feet) or in wells that yield such large volumes that hand-bailing is not practical).

Well evacuation with a bailer is performed by attaching a new nylon line to the bailer, and 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 do not contact the ground or surrounding vegetation (to prevent contaminating the bailer or line). The water removed from the well is poured into a graduated bucket so that the amount of water removed can be determined. This procedure is repeated until three well volumes of water are removed, or until the well is purged dry. For wells that recharge very slowly, the purge water is limited to one well volume. The volume of groundwater purged from each well will be recorded.

Well evacuation with a diaphragm pump is conducted by lowering disposable tubing (hose) into the well, to sufficient depth. For deeper wells, a PVC pipe, equipped with a foot valve (to stage-lift the water out of the well) will be employed. The piping will be well-dedicated to prevent cross-contamination. Pumping will be performed until at least three well volumes are recovered (purge volume will be recorded).

Petroleum contaminated water (PCW) purged from wells in conjunction with groundwater monitoring/sampling activities will be containerized on-site in labeled 55-gallon drums. PCW will be removed periodically from the site to an appropriate disposal/treatment/recycling facility approved by the ADEM. Records will be maintained as to the volume of PCW accumulated at the site, and identification labels will be affixed to PCW containers. Prior to disposal, samples will be collected and analyzed as required by the ADEM and the disposal/treatment/recycling facility. No waste will be removed from the site without ADEM knowledge/approval.

Groundwater Sample Collection

Groundwater samples are collected from monitor wells not containing free product, unless otherwise directed by the ADEM. Groundwater sampling is performed using a new disposable bailer for each sampled well. The disposable bailers are purchased in individually wrapped packages, and are not opened until ready to use. Once opened, the bailers are attached to a length of new nylon string. The bailer and string are not allowed to touch the ground or vegetation, and are disposed of after each well.

Sampling is accomplished by slowly lowering the bailer into the well to a depth where the bailer is almost completely submerged. The bailer is then slowly retrieved from the well to minimize agitation of the sample. Once collected, the water sample is immediately transferred (poured slowly to minimize agitation and formation of air bubbles) into the designated sample containers.

Groundwater samples collected for BTEX/MTBE and naphthalene analysis (volatile organics) are transferred very slowly down the inside of the sample vial to avoid aeration. The sample vials, consisting of 40 ml glass with a Teflon septum cap, are shipped to CDG directly from the analytical laboratory. The groundwater sample is added to the vial until a convex meniscus is formed across the top of the vial. The Teflon septum cap is placed on the vial and the vial is upended to check for trapped air bubbles. If bubbles are present, the sample container is opened, and topped off again until an air-free sample is obtained. If the vial cannot be closed "air-free" after three tries, it is discarded. Two samples are collected for each BTEX/MTBE (volatile) analysis. The preservation employed for BTEX/MTBE (volatile) analysis will include either of the following (depending on holding time constraints):

- Cool collected sample to 4^{o}C and maintain (7 day holding time), or
- Add 4 drops concentrated HCl to sample vial (typically the acid is pre-added by the laboratory to the sample vial) and then cool sample to 4^{o}C and maintain (14 day holding time).

Immediately following collection of each groundwater sample, the sample is labeled, placed in bubble pack (to prevent the glass vial from breaking during shipping), and stored in a well-iced ice chest. Each sample label includes the site location, sample identification number, name of collector, date/time of collection, and parameter(s) requested.

Following collection of all samples, the iced chest will be sealed and transported to the laboratory following appropriate chain of custody protocols (refer to description of Chain of Custody protocols provided below).

Decontamination of Groundwater Sampling Equipment
All equipment used for groundwater sampling is either well-dedicated or is used only once and disposed of. As a result, cleaning/decontamination of sampling equipment is minimal.

QA/QC PROCEDURES DISCUSSION

Chain of Custody
Sample custody begins with the subcontracted laboratory when sample kits are prepared and shipped for CDG use at a specified project location. Responsibility for

sample container materials and preparation lies with the subcontracted laboratory. Sample containers and kits are normally shipped to CDG by common carrier or are dropped off by a laboratory representative. Upon receipt of the kits, CDG personnel complete an inventory of the contents to confirm that the containers, etc. are adequate for the number of wells and specified analytes. Sample bottles may be pre-labeled and contain the proper preservative. The individual sample vials and/or other sample containers are not opened until used in the field. CDG will secure the sample kits inside the office until the specific sampling project is to be performed.

The samples remain in the custody of the CDG representative until delivered to the subcontract laboratory or dispatched via common carrier for shipment to the laboratory. In cases where samples leave the direct control of CDG personnel, such as shipment to a laboratory by a common carrier (FedEx, UPS, etc.), a seal will be provided on the shipping container or individual sample bottles to ensure that the samples have not been opened or otherwise disturbed during transportation.

To establish and maintain the documentation necessary to trace sample possession from the time of collection, a chain of custody record will be completed 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 (soil, groundwater, air, etc.)
- Identification of well
- Number of containers
- Parameters requested for analysis
- Required detection limit
- Signature of person(s) involved in the chain of possession.

Field QA/QC Program

Various types of field blanks are collected to verify that the sample collection and handling process has not affected the quality or integrity of the samples.

1) Trip Blanks – A trip blank is a field blank that is transported from the laboratory to the sampling site, handled in the same manner as other samples, and then returned to the laboratory for analysis in determining QA/QC of sample handling procedures. The trip blank is prepared in the laboratory with distilled/organic free water and is utilized at a frequency of 1 trip blank for each cooler (or other shipping container) used to transport samples from the laboratory to the field and back to the laboratory.

2) Duplicate Sample – Duplicate samples are collected simultaneously from the same source, under identical conditions, into separate sample containers. These samples provide a check on the sampling techniques as well as laboratory equipment. Duplicate samples are only collected on groundwater samples at a frequency of one sample per sampling event.

The results of the analysis of the blanks will not be used to correct the groundwater data. If contaminants are found in the blanks, an attempt to identify the source of contamination will be initiated and corrective action, including re-sampling if necessary, will be evaluated.

After completing a sampling program, the field data package (field logs, calibration records, chain of custody forms, etc.) will be reviewed for completeness and accuracy. Some of the items considered in the Field Data Package Validation Procedure 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 blanks were properly prepared, identified, and analyzed;
- A check on field analyses for equipment calibration and condition; and
- 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 can be directed either by the client or by CDG. In either case, the selection is typically based upon several facts, including cost; laboratory certification; quality data and reporting; and turn around time. The most critical factor in the selection of an analytical laboratory by CDG is the quality of data and reporting provided by the laboratory. Typically, the results of analytical laboratory testing dictate the activities conducted at a site. The activities conducted when selecting a laboratory include discussions with current and past customers, discussions with regulators, and review of laboratory QA/QC practices.

The normal turn around for samples will be two weeks for most samples. Prior to contracting a laboratory to conduct analysis, an estimate of the turn around time is obtained. If the expected turn around is in excess of three weeks then a backup laboratory is contacted to determine their availability. A decision of which laboratory to use in a particular instance is made on a case-by-case basis.

Once an analytical report is received by CDG, validation of the analytical data package will be performed. The Analytical Data Package Validation procedure will include but is not 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, sample extraction dates, and analysis dates to determine if samples were extracted and/or analyzed within the proper holding times' as failure in this area may render the data unusable;
- A review of analytical methods and required detection limits to verify that they agree with set standards; as failure in this area may render the data unusable;
- A review of sample blanks to evaluate possible sources of contamination. The preparation techniques and frequencies, and the analytical results (if appropriate) will be considered; and
- A review of blanks (trip blanks, reagent blanks, method blanks, and extraction blanks) to assure that they are contamination free at the lowest possible detection limit. All blank contaminants must be explained or the data applicable to those blanks will be labeled suspect and may only be sufficient for qualitative purposes.
- A review of detection limits, to ensure sample results are accurate to below the levels specified as ADEM Initial Screening Levels.
- A review of data "qualifiers" reported by the laboratory for significance to the results.

SITE HEALTH & SAFETY PLAN

APPENDIX E

Site Health and Safety Plan

Shop-N-Fill #4
Facility ID# 10642-121-011302
UST No. 20-07-03

Prepared For:
Bowden Oil Company, Inc.
P.O. Box 145
Sylacauga, AL 35150

Prepared By:
CDG, Inc.
700 Southgate Drive, Suite A
Pelham, Alabama 35124

Table of Contents

Page No.

1.0 Introduction

This Health and Safety Plan (HASP) has been prepared specifically for corrective action activities to be conducted by CDG, Inc. (CDG) for the Shop-N-Fill #4 site located in Lincoln, Talladega County, Alabama. These activities include all fieldwork necessary to conduct soil and groundwater remediation of petroleum hydrocarbons at the site.

2.0 Purpose

This HASP describes the preventative measures, person protection, and safety procedures to be followed by CDG personnel and subcontractors during all field activities. The HASP has been prepared in accordance with and meets the requirements of the Occupation Safety and Health Administration (OSHA) General Safety Standards for industry under 29 CFR 1910 and construction under 29 CFR 1926, the joint NIOSH/OSHA/USCG/EPA, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, dated October 1985, and NFPA Safety Guidelines. Should any unexpected conditions arise, the HASP will be amended to accommodate site specific conditions.

3.0 Key Personnel and Responsibilities

All CDG personnel have received an initial 40-hour HAZWOPER certification, which is updated annually through an 8-hour refresher course. This training course meets the requirements of the OSHA 29 CFR 1910.120 standards. CDG personnel assigned to the project include:

NAME	TITLE	RESPONSIBILITIES
David Dailey	Professional Engineer/ Corporate HSO	Overall management of entire project from beginning to completion. Responsible for preparation and implementation of the HASP and reporting of all hazard incidents to appropriate enforcement agencies. Coordinates and oversees all field activities.
Daniel Roe	Project Manager / Site HSO	Performs all field activities and is responsible for recognizing site hazards and reporting hazard incidents to Corporate HSO.

4.0 Scope of Work

Work to be performed may include installation and excavation activities.

4.1 Installation Activities

Installation activities generally involve preparing the site for installation activities and also the construction of the MEME manifold onsite. More specifically this will include:

- Preparing the site for work to be performed
- Saw-cutting concrete surface, excavating, and installing well vaults
- Installing polyvinyl chloride (PVC) extraction piping
- Installing piping connections from extraction piping to wellhead

5.0 Chemical Hazards

When conducting the corrective action activities, the primary chemicals of concern are gasoline or diesel.

5.1 Gasoline and Diesel

Gasoline and diesel are substances to be potentially encountered in the soil and groundwater at the site. Gasoline components include benzene, toluene, ethylbenzene, and xylenes (BTEX). Diesel components may include anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

5.2 Hazard Identification

During the corrective action activities, many hazards or potential hazards may be encountered when dealing with gasoline or diesel. This section serves as a guideline in recognizing hazards associated with these chemicals that exist or may potentially arise during field activities. Recognition is the first step in eliminating exposure to these hazards.

Occasionally methyl tertiary-butyl ether (MTBE) is encountered. MTBE has been used since 1979 as an oxygenate to gasoline in order to decrease carbon monoxide production in cars, particularly older model cars; however, MTBE has been determined to be a potential carcinogen. MTBE has low taste and odor thresholds, which can make a water supply non-potable even at low concentrations.

Exposure to MTBE will only be seen through exposure to gasoline containing MTBE and the effects of gasoline containing MTBE are relatively similar to gasoline not containing MTBE. The following are hazards associated with exposure to gasoline:

- Contact may irritate or burn the skin and eyes and absorption through the skin may be poisonous
- Vapors may be poisonous if inhaled and are irritating to the respiratory tract
- Vapors are an explosion hazard and my travel to a source of ignition and produce flashback
- A gasoline fire may produce irritating and poisonous gases
- Gasoline and diesel are flammable/combustible materials that may be ignited by heat, sparks, or flames, and a gasoline container may explode when exposed to heat or fire

The primary hazard associated with exposure to gasoline is the inhalation of vapors. The Safety Data Sheet (SDS) is attached to this Health & Safety Plan.

5.3 Hazard Prevention

Preventing exposure to chemical hazards generally requires the use of personal protective equipment (PPE). Level D equipment will provide the protection necessary to prevent exposure to these hazards. Level D equipment is discussed further in Section 10.1, Personal Protective Equipment.

5.4 Symptoms and First Aid Procedures

Many of the constituents found in gasoline and diesel act as central nervous system (CNS) depressants. The following table includes first aid measures for CNS depressants, which affect a person through inhalation (breathing), dermal (skin), or ingestion (mouth) exposure. In addition, the eye can be very sensitive to exposure to chemicals and is therefore included in the following table:

ROUTES OF EXPOSURE	SYMPTOMS	TREATMENT
Inhalation	Dizziness, nausea, lack of coordination, headache, irregular and rapid breathing, weakness, loss of consciousness, coma	Bring victim to fresh air. Rinse eyes or throat with plenty of water, if irritated. If symptoms are severe (victim vomits, is very dizzy or groggy, etc.), evacuate to hospital. Be prepared to administer CPR if certified. Monitor victim for at least 48 hours.
Dermal	Irritation, rash, or burning	Flush affected area with water for at least 15 minutes. Apply clean dressing and get medical attention.
Ingestion	Dizziness, nausea with stomach, cramps, loss of consciousness, coma	Evacuate victim to hospital. Do not induce vomiting.
Eye	Redness, irritation, pain, impaired vision	Flush with an abundant amount of water for at least 15 minutes. If severe, seek medical attention immediately.

6.0 Equipment/Operational Hazards

The following sections will address the hazards, preventative measures, and first aid procedures associated with the drill rig, backhoes, and other heavy equipment. The drill rig used during these field activities generally requires the use of augers for probing. These augers are designed to rotate in a circular motion while being forced downward through the soil. Field personnel are required to assemble and disassemble these parts. Contact with these rotating parts is one recognized hazard. In addition, the machinery also contains parts that become increasingly heated during operation.

6.1 Hazard Identification

There are several hazardous associated with use of any type of drill rig and heavy machinery while performing corrective action activities. Generally during these field operations, the general public may become fascinated with the operation and approach the work area. All unauthorized personnel are required to remain 100 feet away from the work area. The site HSO officer will be responsible for keeping all unauthorized personnel away from the work area. The hazardous associated with the use of a drill rig or other heavy machinery is as follows:

- Gasoline vapors from nearby dispensers can potentially enter the diesel-operated engine thereby causing fire/explosion hazards
- Rotating augers may catch onto gloves or clothing thereby pulling hands arms into the rotating machinery
- Drilling equipment may rupture hydraulic hoses thereby releasing hydraulic fluids
- Engine and exhaust system of an engine are extremely hot during and following operation
- Potential contact with overhead and underground utilities
- Open excavations/boreholes can be the source of trips and falls
- Digging machinery such as backhoes may puncture subsurface utilities
- Operators of heavy machinery may be unable to locate pedestrians near the operating equipment; therefore, all field personnel are to remain with eye contact of the operator at all times during operation

6.2 Hazard Prevention

Hazards associated with heavy machinery can easily be avoided with additional planning. The key to avoiding these hazards includes being familiar with the equipment and the process. In addition, being familiar with and implementing the precautionary measures listed below may reduce or eliminate the risks of a hazardous situation.

- Wear hard hat when working near or around the machinery
- Wear safety glasses when performing maintenance to machinery or power tools
- Shut down the machine engine when repairing or adjusting equipment
- Prevent accidental starting of engine during maintenance procedures by removing or tagging ignition key
- Block wheels or lower leveling jacks and set hand brakes to prevent equipment form moving during drilling procedures

- When possible, release all pressure on hydraulic systems, drilling fluid systems, and air pressure systems of heavy machinery prior to performing maintenance
- Know the location of the emergency shut-off switch for all equipment
- Avoid contact with engine or exhaust system of engine following its operation
- Avoid using gasoline or other volatile/flammable liquids as a cleaning agent on or around heavy machinery
- Replace all caps, filler plugs, protective guards or panels, and high-pressure hose clamps, chains or cables moved during maintenance prior to excavation
- Avoid wearing rings or jewelry during drilling or installation procedures
- Be aware of all overhead and underground utilities
- Avoid alcohol or other CNS depressants or stimulants prior to excavation
- Avoid contact with equipment parts during freezing weather. Freezing of moist skin to metal can occur almost instantaneously
- Shut all field operations during an electrical storm
- Do not operate heavy equipment within 20 feet of overhead power lines

6.3 Symptoms and First Aid Procedure

Hazards associated with heavy equipment were identified in Section 6.1. Unlike hazards associated with temperature or chemicals, symptoms will not be apparent with these types of hazards. In addition, these hazards will occur rapidly as opposed to over a period of time. Due to the size and composition of hydraulic vehicles, exposure to these hazards will range from extremely serious to life-threatening; therefore CDG requires that exposed field personnel seek medical attention at the nearest medical facility and the Project Manager be notified immediately. A site location map to the nearest hospital is attached to this Health & Safety Plan.

7.0 Temperature Hazards

Another hazard associated with corrective action activities involves working in extreme weather conditions. Temperatures in the Southeast USA during the spring, summer, and occasionally the fall seasons can vary from mild to extremely hot. During this season, extra precautions are necessary to prevent hazards associated with elevated temperatures, which result in various forms of heat stress. In addition, the Southeast is known for its rather mild winter condition; however, on occasion, the Southeast may experience freezing conditions; therefore, precautions are also necessary to prevent hazards associated with these extreme temperatures.

7.1 Heat

As stated in OSHA's regulatory guidelines for heat exposure operations involving high air temperatures, radiant heat sources, high humidity, direct physical contact with hot objects, or strenuous physical activities have a high potential for inducing heat stress. Additional factors to consider in the determination of heat stress on an individual include age, weight, degree of physical fitness, degree of acclimatization, metabolism, use of alcohol or

drugs, and a variety of medical conditions such as hypertension (high blood pressure). The following sections will identify the hazards associated with heat stress, the measures needed in order to prevent exposure to these hazards, and first aid procedures in the event exposure to these hazards should occur.

7.1.1 Hazard Identification

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. The hazards associated with heat stress range from heat fatigue (mild discomfort) to heat stroke (extreme danger, which may result in death, and are discussed in the following sections.

7.1.1.1 Heat Fatigue

Heat fatigue occurs due to a lack of acclimatization (adjusting one's tolerance to work in elevated temperatures). Acclimatization is a gradual process. This process should include all field personnel being permitted to work in elevated temperatures in specified increments. On a daily basis, the maximum allowable work period should gradually be increased until the worker is able to perform his/her duties more proficiently under these conditions. The use of an acclimatization program is recommended in the regulatory guidelines established by OHSA.

7.1.1.2 Heat Rash

Heat rash (prickly heat) is the most common heat stress factor and may result from continuous exposure to heat or humid air where the skin remains wet due to lack of evaporation. Under these conditions, sweat ducts become plugged, and a skin rash appears, generally in areas where clothing is restrictive. This uncomfortable rash can be prevented by resting in a cool place during breaks and by implementing good daily personal hygiene.

7.1.1.3 Heat Collapse

Heat collapse is commonly referred to as "fainting." Fainting generally occurs when the brain does not receive enough oxygen. As a result of this condition, the exposed individual may lose consciousness. Heat collapse is rapid and unpredictable; therefore, acclimatization is an important factor in preventing this condition.

7.1.1.4 Heat Cramps

Heat cramps are muscular spasms, which usually occur in the abdomen or limbs due to loss of electrolytes following profuse sweating. Cramps are caused by either too much or too little salt intake. During the sweating process, salt exits the body; therefore, without the proper replenishment, the body experiences an electrolyte imbalance thereby inducing heat cramps. Thirst cannot be relied upon as a guide to the need for water. When working in hot environments, water must be replenished every 15 to 20 minutes.

7.1.1.5 Heat Exhaustion

Heat exhaustion is a result of overexertion in hot or warm weather. It is highly possible for an onsite worker to experience heat exhaustion due to the use of worker-protective coveralls, boots, gloves, and respirator protection, even when ambient temperatures are mild. Fainting may also occur with heat exhaustion. This can become an extreme hazard if operating heavy machinery.

Caution: Individuals with heart problems or on a "low sodium" diet who work in these environments should consult a physician and Corporate HSO prior to working in these conditions.

7.1.1.6 Heat Stroke

Heat stroke is the most severe form of heat stress. The body's temperature control system is maintained through sweat production. Perspiration is a cooling process for the body and keeps the body core temperature within a stable range. During heat stroke, sweat production is inhibited and the body temperature begins to rapidly rise. Brain damage and death may occur if body core temperature is extremely elevated and is not reduced.

7.1.2 Hazard Prevention

Hazards associated with temperature extremes can also be prevented with additional planning and preparation. The hazards associated with temperature can range from heat fatigue to heat stroke as described previously in Section 7.1.1 Measures to ensure the prevention of temperature hazards are as follows:

- Adhere to acclimatization process by exposing field personnel to progressively longer periods of time in hot environments.
- Schedule work for early morning or evening during warm weather
- Work in shifts; limit exposure time of personnel and allow frequent breaks
- Have cool liquids at an Exclusion Zone border for exposed personnel to continuously replace body fluids. As stated in the previous section, OSHA recommends that fluids, preferably water and/or a water-electrolyte solution be replenished every 15 to 20 minutes.
- Avoid caffeine and alcoholic beverages both during work hours and 24 hours prior to performing field activities

The site HSO or designee should continually monitor personnel for signs of heat stress. If any signs of heat disorders are apparent, all field personnel must immediately rest and replenish fluids until body core temperature is lowered and remains stable.

7.1.3 Symptoms and First Aid Procedures

As discussed previously in Section 7.1.1, hazards associated with heat stress range from heat fatigue to heat stroke. Taking precautionary measures to ensure that personnel are not exposed to extreme temperatures for

long periods of time can prevent these hazards. First aid measures for heat fatigue, heat rash, and heat collapse include taking frequent breaks so that the body core temperature can cool down. The following table includes first aid measures for signs of overexposure to heat.

TEMPERATURE HAZARDS	SYMPTOMS	TREATMENT
Heat Fatigue	Impaired performance of skilled sensorimotor, mental or vigilance jobs	No known treatment. Victim should be placed under cooler conditions until body core temperature lowers.
Heat Rash	Rash due to plugged sweat ducts, generally where clothing is restrictive	Keep dry towels or paper towels at the site to dry skin when excessive sweating occurs. Rash usually disappears when affected individual returns to cooler environment.
Heat Collapse	Loss of consciousness	Attempt to awaken individual. Relocate victim to a cooler area until body core temperature lowers and replenish fluids. Victim should rest for a few days.
Heat Cramps	Uncontrollable muscle spasms	Apply warm, moist heat and pressure to reduce pain. Give electrolyte drinks by mouth. Victim should intake additional potassium (Bananas are good potassium source).
Heat Exhaustion	Pale, clammy skin, profuse perspiration, weakness, headache, and nausea	Get victim into shade or cooler place. Immediately remove any protective clothing. Victim should drink plenty of fluids. Victim should lie down with feet raised. Fan and cool victim with wet compresses. If vomiting occurs, transport to hospital. Victim should rest for a few days.
Heat Stroke	Pale, dry skin due to lack of perspiration, weakness, unconsciousness	Immediately take precautions to cool body core temperature by removing clothing and sponging body with cool water or placing in tub of cool 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. Under no condition is the victim to be left unattended unless authorized by a physician.

8.0 Explosion/Electrocution Hazards

As stated previously in Section 4.1, extensive efforts are made in order to determine the location of subsurface utilities prior to corrective action activities. Efforts are made to obtain the location of underground utilities through the Line Locator Services, and utility companies are notified in advance to perform a site inspection and utility marking; however, the potential for a subsurface utility to go unnoticed exists. Therefore, the hazards associated with exposure to these utilities are identified and preventative measures and first aid procedures are discussed further in the following sections.

8.1 Explosion

Primarily when dealing with subsurface utilities, two potentially life-threatening hazards exist. The first hazard identified in association with subsurface utilities during excavation activities are discussed further in the following section.

8.1.1 Hazard Identification

The main hazard associated with puncturing a subsurface utility gas line is explosion. By releasing gas (usually natural gas, which is generally methane gas or propane gas) into the atmosphere, explosive conditions are favorable; therefore, ignition sources must be immediately eliminated in the event a gas release occurs. Due to the flammability of gasoline, ignition sources will be minimized; however, the engines are needed during field activities. Therefore, the only alternative to reducing the explosion hazard is to stop the release as soon as possible. However, when dealing with gases under pressure, the volatilization process may occur at such a rapid speed that an explosive situation is inevitable.

8.1.2 Hazard Prevention

Preventative measures are ensured prior to field activities. These measures generally encompass locating subsurface utilities. In addition, CDG will request local utility companies to perform site inspections and mark all subsurface utilities. In addition to this notification, if a particular subsurface utility is not identified and CDG suspects the utility to exist, CDG will take additional precautionary measures to ensure the suspected utility does not exist. These measures generally include locating utility meter boxes, etc. In addition, a field technician or subcontractor will generally probe the ground with a small rod in order to possibly identify the existence of subsurface utilities. This is conducted usually when machinery reaches 2-3 feet below land surface (ft-bls).

8.2 Electrocution

8.2.1 Hazard Identification

The main hazard associated with puncturing a subsurface electrical line or coming into contact with an overhead power line is electrocution. When dealing with electricity, all things are classified as either conductors or insulators. Conductors allow electricity to pass through them while insulators prevent electricity to pass through.

Examples of conductors are metals, wood, and water, and examples of insulators are rubber and PVC. Humans are also classified as conductors; therefore, contact with electrical sources can be fatal.

Because the heavy machinery is metal, which has been classified as one of the best sources of electrical conduction, contact with exposed electrical lines will allow current to flow. The National Electrical Code (NEC) has determined that 20 milliamps (mA) of current can be fatal. For comparison, a common household circuit breaker may conduct 15, 20, or 30 amps of electrical current.

8.2.2 Hazard Prevention

As stated previously in Section 8.1.2, preventative measures to locate subsurface and overhead electrical lines prior to corrective action activities are required by CDG. CDG will notify local utility companies to provide a site inspection and mark any existing subsurface electrical lines. In addition, CDG will contact the local power provider to insulate overhead lines if necessary. When dealing with the electrical components of the dewatering system, the following precautionary measures may prevent exposure to electrocution:

- Avoid contact with exposed connections/wiring and other related components
- If unfamiliar with the system, do not attempt contact with any component
- Call the Project Manager if unsure of any connections associated with the operations of the system.

8.2.3 Symptoms and First Aid Procedures

As discussed previously in Section 8.2.1, the hazard associated with puncturing subsurface electrical utilities and contacting electrical components of dewatering system is electrocution. The primary route of exposure is contact. The transmission of electricity is allowed because the metal equipment serves as a conductor for electrical current. Symptoms and treatment for exposure to electrical current is presented in the following table:

Caution: NEVER attempt to dislodge or remove someone that is contacting a high voltage line Use an insulating material (PVC) to release the victim from the electrocution source.

9.0 Miscellaneous Hazards

The last hazard identified when performing corrective action activities has been classified as miscellaneous hazards due to the variety of these hazards. These hazards generally are nothing more than nuisances and with additional planning should be entirely avoidable; however, there are instances in which exposure to these hazards will occur. Therefore, these hazards are identified and preventative measures and first aid procedures are discussed in further detail in the following sections.

9.1 Hazard Identification

Occasionally, exposure to common nuisances may potentially result in a life-threatening situation. For example, a

wasp or bee sting for some individuals only causes irritation or localized soreness; however, to others with little tolerance for wasp or bee venom, an allergic reaction can result which could potentially lead to death if not treated immediately. Therefore, allergic reactions to these insects have been identified as a potential hazard. In addition to the insects, contact with black widow spiders (red hourglass), brown recluse spiders (violin shape on back), and snakes are also potential hazard.

9.2 Hazard Prevention

Prevention, with regards to miscellaneous hazards, is more difficult to plan ahead. Generally, prior to conducting corrective action activities, the primary location for the activities has been established; therefore, barricades such as cones and company vehicles can be placed around the work area to prevent exposure to incoming and ongoing vehicles. However, the limitation to using cones is that they are often small and unnoticeable to drivers once inside the vehicles; therefore, the best prevention with regards to this miscellaneous hazard is to constantly be aware of your surroundings. This preventative measure can also be applied to exposure to insects, snakes, and spiders. Be aware of your surrounding when working around dark, secluded areas such as cracks and crevices, where snakes, spiders, and mice like to hide.

9.3 Symptoms and First Aid Procedures

If an employee or subcontractor shows any signs of an allergic reaction (anaphylactic shock, hives, or difficulty breathing) to a sting or bite, immediately seek medical attention at the nearest hospital. In the event that an operating vehicle strikes a person, seek medical attention immediately. In the meantime, a first aid kit and eye wash bottle will be provided by CDG and should be kept in all company vehicles. If field personnel are aware of their allergic reactions to insect bites, CDG requires that medication be kept on hand during field activities and at least one other field technician be made aware of the medication in the event of an allergic reaction should occur.

10.0 Additional Precautions

Additional precautions have been implemented in order to ensure overall safety for all field personnel. The safety protocols listed in this segment are to be considered the minimum requirements to be met by all field personnel engaging in corrective action activities.

10.1 Personal Protective Equipment

PPE is the most effective measure to prevent exposure to chemical hazards. There are four levels of PPE protection ranging from Level A to Level D equipment. Level A protection serves as the most conservative protective equipment, and Level D protection serves as the least conservative protective equipment. These levels are described further in the following table:

LEVELS OF PPE PROTECTION	PPE REQUIREMENTS
Level A	Worn when the highest level of respiratory, skin, and eye protection is necessary.
Level B	Worn when the highest level of respiratory protection is needed, but a lesser level of skin protection is necessary.
Level C	Worn when the criteria for using air-purifying respirators are met, and a lesser level of skin protection is necessary.
Level D	Refers to work conducted without respiratory protection. This level should be used only when the atmosphere contains no know or suspected airborne chemical or radiological contaminants and oxygen concentrations are between 19.5 % and 23.0%

Level D protective clothing, as indicated below, shall be considered the minimum requirements for installation and excavation operations:

- Hard hat
- Coveralls*
- Non permeable gloves
- Steel-toe, non-permeable boots
- Hearing protection*
- Safety goggles (chemical)*

*These items area mandatory on an "as needed" basis. Generally, normal site conditions do not warrant the use of this equipment; however, under certain conditions where large amounts of free product are encountered, the issue of coveralls and safety goggles may be warranted. Safety goggles and hearing protection are mandatory when near the drill rig to reduce stress on the ear and also prevent objects from the soil or drill rig from lodging in the eye.

Equipment may be upgraded to Level C depending on the site conditions and/or monitoring results. Level C protection, in addition to Level D protection, includes the following:

- Rubber/chemical resistant outer gloves
- Face-shield if splash hazards exist
- Outer disposable booties
- Half-mask respirator

10.2 Signs, Signals, and Barricades

As stated previously in Section 9.1, corrective action activities are generally conducted at retail gasoline facilities and convenience stores, and are therefore, high traffic areas. All CDG field personnel must be aware of his/her

surroundings at all times. In addition, the items listed below will be provided to secure the area in order to protect all field personnel as well as the general public.

- Utilize barricades to protect workers, pedestrians and vehicles from work activities
- Post area for "NO SMOKING"
- Utilize cones to protect workers from incoming and ongoing vehicles

10.3 Fire Protection and Prevention

As stated previously in Section 5.1, gasoline is a highly flammable substance. CDG requires that the work area be posted with "NO SMOKING" signs in an attempt to prevent fires from occurring; however, as a secondary precaution CDG plans to implement the following:

- Maintain a 20 lb. ABC Dry Chemical fire extinguisher on site at all times
- Eliminate ALL ignition sources in the vicinity of any releases
- The contractor will clean up all small spills using absorbent materials or by pumping

10.4 Storage and Decontamination

During the corrective action activities, impacted soils will be encountered. Groundwater will be treated and pumped to an NPDES outfall. Contaminated soil will be temporarily stored until transported for disposal. Decontamination procedures will be implemented should chemical exposure occur. The procedures are detailed below:

- Avoid contact with liquid gasoline or diesel
- Place contaminated soil on visqueen and cover once removed from the excavation
- Change any product contaminated soil immediately
- Wash any contaminated skin surfaces immediately with soap and water

Caution: All personnel are required to wash hands at the completion of work, before and after restroom use and before eating in order to prevent dermal contact with or ingestion of contaminants encountered during field activities.

11.0 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 appropriate CDG personnel will be notified of the incident as soon as possible.

11.1 Notification/Reporting Procedures

In the event of an emergency, CDG Project Manager will be notified as soon as possible regarding the nature of the incident and emergency service contact will be notified as needed (see Section 11.7, Contingency Contacts). It is the responsibility of the Site HSO to report all incidents to the CDG Corporate HSO so that the required reporting procedures may be implemented.

11.2 Hazardous Substance Release

In the event that potentially hazardous substances migrate from the work zone and potentially endanger unprotected personnel or the community all on site activities will cease until the release is brought under control. CDG will immediately notify the proper authorities so that they may be able to ensure that public health and safety is maintained throughout this process event to the extent of evacuation if necessary.

11.3 Personnel Injury

In the event of an injury, all personnel will assemble at the designated emergency meeting location. The Site HSO, prior to the beginning of filed activities should designate this location. If the injured person is immobile one or more persons should remain nearby to provide any necessary first aid techniques. If medical help is necessary, the Site HSO will summon the appropriate assistance for transportation to the nearest medical facility. Due to the potential for these situations, CDG recommends that at least one qualified person be CPR/First Aid certified.

11.4 Evacuation Plan

Gasoline and diesel are flammable substances; therefore, a fire/explosion potential exists during the excavation activities. In the event of an onsite evacuation, the following plan will be implemented:

- A signal consisting of one continuous blast of a vehicle or air horn will be used
- All personnel will immediately evacuate the area and report to the designated emergency meeting location for further instruction

11.5 Spill Prevention and Response

In the event of a leak or spill, the area will be blocked using barricades, and the spill contained until absorbed and removed by authorized personnel. Unauthorized persons will be denied access to the area until all spills have been removed and field operations completed. CDG will follow prescribed procedures for reporting and responding to large releases by notifying the National Response Center (see Section 11.7). All materials will be disposed of according to regulatory guidelines.

11.6 Emergency Communication

In the event of an emergency situation, the following standard hand signals will be used onsite as a means of

communication:

- Hand gripping throat (cannot breathe)
- Grip partner's wrist 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)

11.7 Contingency Contacts

In the event of an emergency, CDG has provided several emergency contacts. These contacts, along with phone numbers, are listed in the following table. The Site HSO will be responsible for the notification of these contacts in the event of an emergency.

AGENCY	CONTACT	TELEPHONE NO.
Fire Department		911
Police Department		911
Ambulance		911
Hospital		1-205-338-3301
Corporate HSO	David Dailey	1-205-403-2600
Project Manager	Daniel Roe	1-205-403-2600
EPA RCRA-Superfund Hotline		1-800-424-9346
Chemtrec (24 hours)		1-800-424-9300
Bureau of Explosives (24 hours)		1-202-293-4048
Centers for Disease Control (Biological Agents)		1-404-633-5353
National Response Center		1-800-424-8802

11.8 Medical Facility

Name of Hospital: Ascension St. Vincent's St. Clair

Address: 7063 Veterans Parkway, Pell City, AL 35125

Phone: 205-338-3301

Route to Hospital: see attached map with driving directions

Travel Time from Site: 12 minutes

Distance to Hospital: 11.3 miles

Name/Number of 24-hour Ambulance Service: 911

In cases of construction accidents, rapid notification to OSHA is required.

SAFETY DATA SHEET

SDS ID NO.: 0127MAR019
Revision Date 03/19/2018

1. IDENTIFICATION

Product Name: Marathon Petroleum Gasoline - All Grades

Synonym: Gasoline; Regular Unleaded Gasoline; Conventional Regular Unleaded Gasoline; Mid Grade Unleaded Gasoline; Conventional Mid Grade Unleaded Gasoline; Premium Unleaded Gasoline; Conventional Premium Unleaded Gasoline; Sub-Octane Gasoline; Regular RBOB; Super RBOB; Premium RBOB; RBOB; Reformulated Blend Stock For Oxygenated Blending; 84 Octane Gasoline; CBOB; Premium CBOB; Conventional Blend Stock for Oxygenate Blending; Recreational Gasoline; Recreational Gasoline; Recreational Unleaded Gasoline; 89 Recreational Gasoline; Brand 89 Recreational Gasoline; 7.0 Max RVP 89 Recreational Gasoline; BR 7.0 Max RVP 89 Recreational Gasoline; 90 Recreational Gasoline; 90 Marina Gasoline; Brand EX 90 UL Recrtnl Gasoline; Brand 91 Recreational Gasoline; 91 Recreational Gasoline; 91 Marina Gasoline; 90 Octane Midgrade Gasoline with No Ethanol; 7.8# New York CBOB Gasoline Blend Grade; Non-Summer New York CBOB Gasoline Blend Grade 0125MAR019; 0126MAR019; 0134MAR019; 0313MAR019; 0314MAR019

Product Code: 0127MAR019
Chemical Family: Complex Hydrocarbon Substance

Recommended Use: Fuel.
Restrictions on Use: All others.

Manufacturer, Importer, or Responsible Party Name and Address:

MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information (M-F, 8-5 EST): 1-419-421-3070

Emergency Telephone (24/7): CHEMTREC: 1-800-424-9300 CCN#: 13740

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 1
Skin corrosion/irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1

Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)
Static accumulating flammable liquid

Label elements

EMERGENCY OVERVIEW

Danger

EXTREMELY FLAMMABLE LIQUID AND VAPOR
May accumulate electrostatic charge and ignite or explode
May be fatal if swallowed and enters airways
Causes skin irritation
May cause respiratory irritation
May cause drowsiness or dizziness
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
Causes damage to organs (blood, blood-forming organs, immune system) through prolonged or repeated exposure
Toxic to aquatic life with long lasting effects

Appearance Clear yellow liquid **Physical State** Liquid **Odor** Hydrocarbon

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools.
Take action to prevent static discharges
Do not eat, drink or smoke when using this product
Do not breathe mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Wash hands and any possibly exposed skin thoroughly after handling
Avoid release to the environment

Precautionary Statements - Response
IF exposed, concerned or you feel unwell: Get medical attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
In case of fire: Use water spray, fog or regular foam for extinction
Collect spillage

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Gasoline is a complex combination of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having molecular chains ranging in length from four to ten carbons. May contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

Composition Information:

Name	CAS Number	% Concentration
Gasoline	86290-81-5	100
Heptane (mixed isomers)	142-82-5	2.5-26
Butane (mixed isomers)	106-97-8	0.5-19
Pentane (mixed isomers)	78-78-4	6.5-19
Hexane Isomers (other than n-Hexane)	107-83-5	2-12
Toluene	108-88-3	3-9.5
Xylene (mixed isomers)	1330-20-7	3.5-9.5
Benzene	71-43-2	0.1-4.9
n-Hexane	110-54-3	0.1-4.5
Cumene	98-82-8	0-4
1,2,4 Trimethylbenzene	95-63-6	1-4
Ethylbenzene	100-41-4	0.5-2.5
Cyclohexane	110-82-7	0-1.5
Octane	111-65-9	0-1.5
1,2,3-Trimethylbenzene	526-73-8	0-1
Naphthalene	91-20-3	0.1-0.5

Benzene concentration is percent by volume. All other concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First Aid Measures

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation: Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. If symptoms occur get medical attention.

Skin Contact: Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Destroy contaminated, non-chemical resistant footwear.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while

flushing. Get medical attention if irritation persists.

Ingestion: Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Prolonged or repeated exposure may cause adverse effects on blood, blood-forming organs, and immune system. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Indication of any immediate medical attention and special treatment needed

Notes To Physician: INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media
Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical
This product has been determined to be an extremely flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128.

Hazardous combustion products
Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data
Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

Additional firefighting tactics
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles: if this is impossible, withdraw from area and let fire burn.

EVACUATION: Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.

NFPA	Health 1	Flammability 3	Instability 0	Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.

Protective equipment: Use personal protection measures as recommended in Section 8.

Emergency procedures: Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

Environmental precautions: Avoid release to the environment. Avoid subsoil penetration. Ethanol in gasoline phase seperates in contact with water. Monitor downstream for dissolved ethanol or other appropriate indicators.

Methods and materials for containment: Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.

Methods and materials for cleaning up: Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe Handling Precautions: NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Vapors may travel along the ground or be moved by ventilation. Flashback may occur along vapor trails. No smoking. Use only non-sparking tools. Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the

presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Portable containers should never be filled while in or on a motor vehicle or marine craft. Containers should be placed on the ground. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers.

A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

Storage Conditions: Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Do not store near an open flame, heat or other sources of ignition.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELS:	OSHA - Vacated PELs	NIOSH IDLH
Gasoline 86290-81-5	300 ppm TWA 500 ppm STEL	-	300 ppm TWA 900 mg/m³ TWA 500 ppm STEL 1500 mg/m³ STEL	-
Heptane (mixed isomers) 142-82-5	400 ppm TWA 500 ppm STEL	TWA: 500 ppm TWA: 2000 mg/m³	400 ppm TWA 1600 mg/m³ TWA 500 ppm STEL 2000 mg/m³ STEL	750 ppm
Butane (mixed isomers) 106-97-8	1000 ppm STEL	-	800 ppm TWA 1900 mg/m³ TWA	-
Pentane (mixed isomers) 78-78-4	1000 ppm TWA	-	-	-
Hexane Isomers (other than n-Hexane) 107-83-5	500 ppm TWA 1000 ppm STEL	-	500 ppm TWA 1800 mg/m³ TWA 1000 ppm STEL 3600 mg/m³ STEL	-
Toluene 108-88-3	20 ppm TWA	TWA: 200 ppm Ceiling: 300 ppm	100 ppm TWA 375 mg/m³ TWA 150 ppm STEL 560 mg/m³ STEL	500 ppm
Xylene (mixed isomers) 1330-20-7	100 ppm TWA 150 ppm STEL	TWA: 100 ppm TWA: 435 mg/m³	100 ppm TWA 435 mg/m³ TWA 150 ppm STEL 655 mg/m³ STEL	900 ppm
Benzene	0.5 ppm TWA	TWA: 10 ppm (applies to	25 ppm Ceiling	500 ppm

71-43-2	2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	industry segments exempt from the benzene standard) TWA: 1 ppm STEL: 5 ppm (see 29 CFR 1910.1028)	1 ppm TWA 5 ppm STEL	
n-Hexane 110-54-3	50 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 500 ppm TWA: 1800 mg/m³	50 ppm TWA 180 mg/m³ TWA	1100 ppm
Cumene 98-82-8	50 ppm TWA	TWA: 50 ppm TWA: 245 mg/m³ Skin	50 ppm TWA 245 mg/m³ TWA Limit applies to skin	900 ppm
1,2,4 Trimethylbenzene 95-63-6	25 ppm TWA	-	25 ppm TWA 125 mg/m³ TWA	-
Ethylbenzene 100-41-4	20 ppm TWA	TWA: 100 ppm TWA: 435 mg/m³	100 ppm TWA 435 mg/m³ TWA 125 ppm STEL 545 mg/m³ STEL	800 ppm
Cyclohexane 110-82-7	100 ppm TWA	TWA: 300 ppm TWA: 1050 mg/m³	300 ppm TWA 1050 mg/m³ TWA	1300 ppm
Octane 111-65-9	300 ppm TWA	TWA: 500 ppm TWA: 2350 mg/m³	300 ppm TWA 1450 mg/m³ TWA 375 ppm STEL 1800 mg/m³ STEL	1000 ppm
1,2,3-Trimethylbenzene 526-73-8	25 ppm TWA	-	25 ppm TWA 125 mg/m³ TWA	-
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m³	10 ppm TWA 50 mg/m³ TWA 15 ppm STEL 75 mg/m³ STEL	250 ppm

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Use nitrile rubber, Viton® or PVA gloves for repeated or prolonged skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear yellow liquid

Color	Yellow
Odor	Hydrocarbon
Odor Threshold	No data available.

Property	**Values (Method)**
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	24-210 °C / 75-410 °F (ASTM D86)
Flash Point	-43 °C / -45 °F
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	7.6
Lower Flammability Limit:	1.4
Explosion limits:	No data available.
Vapor Pressure	5.5-15 psi (ASTM D4814)
Vapor Density	3-4
Specific Gravity / Relative Density	0.70-0.76
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	2.13-4.5
Decomposition temperature	No data available.
pH:	Not applicable
Autoignition Temperature	280 °C / 536 °F
Kinematic Viscosity	No data available.
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	100%
Density	No data available.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

Reactivity	The product is non-reactive under normal conditions.
Chemical stability	The material is stable at 70°F (21°C), 760 mmHg pressure.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Will not occur.
Conditions to avoid	Excessive heat, sources of ignition, open flame.
Incompatible Materials	Strong oxidizing agents.
Hazardous decomposition products	None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation	May cause irritation of respiratory tract. May cause drowsiness or dizziness. Breathing high concentrations of this material in a confined space or by intentional abuse can cause irregular heartbeats which can cause death.
Eye contact	Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.
Skin contact	Irritating to skin. Effects may become more serious with repeated or prolonged contact. May be absorbed through the skin in harmful amounts.

Ingestion May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Gasoline 86290-81-5	14000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Heptane (mixed isomers) 142-82-5	-	3000 mg/kg (Rabbit)	103 g/m³ (Rat) 4 h
Butane (mixed isomers) 106-97-8	-	-	658 mg/L (Rat) 4 h
Pentane (mixed isomers) 78-78-4	-	-	450 mg/L (Mouse) 2 h
Hexane Isomers (other than n-Hexane) 107-83-5	> 5000 mg/kg (Rat)	-	-
Toluene 108-88-3	> 2000 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h
Xylene (mixed isomers) 1330-20-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.04 mg/L (Rat) 4 h
Benzene 71-43-2	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 20 mg/l (Rat) 4 h
n-Hexane 110-54-3	15000 mg/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (Rat) 4 h
Cumene 98-82-8	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 20 mg/L (Rat) 6 h
1,2,4 Trimethylbenzene 95-63-6	3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	18,000 mg/m³ (Rat) 4 h
Ethylbenzene 100-41-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Cyclohexane 110-82-7	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	13.9 mg/L (Rat) 4 h
Octane 111-65-9	-	-	118 g/m³ (Rat) 4 h
1,2,3-Trimethylbenzene 526-73-8	-	-	-
Naphthalene 91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 340 mg/m³ (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

C9 AROMATIC HYDROCARBONS: A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats.

Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

BUTANES: Studies in laboratory animals indicate exposure to extremely high levels of butanes (1-10 or higher vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

TOLUENE: Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal studies following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

XYLENES, ALL ISOMERS: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, nervous system damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure with evidence of maternal toxicity. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

BENZENE: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a case control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene

suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

N-HEXANE: Long-term or repeated exposure to n-hexane can cause peripheral nerve damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

CUMENE: Overexposure to cumene may cause upper respiratory tract irritation and CNS depression. Studies in laboratory animals indicate evidence of respiratory tract hyperplasia, and adverse effects on the liver, kidney and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time. Findings from lifetime laboratory rodent inhalation studies were as follows: In F344/N rats: an increased incidence of renal carcinomas and adenomas, respiratory epithelial adenomas, and interstitial cell adenomas of the testes. In B6C3F1 mice: an increased incidence of carcinomas and adenomas of the bronchi and lung, liver neoplasms, hemangiosarcomas of the spleen, and adenomas of the thyroid.

1,2,4-TRIMETHYLBENZENE: The following information pertains to a mixture of C9 aromatic hydrocarbons, over 40% of which was composed of 1,2,4-trimethylbenzene. A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm. Embryotoxicity has been reported in studies of laboratory animals. Adverse effects included increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate.<n><n>

ETHYLBENZENE: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure with evidence of maternal toxicity. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss)

following exposure levels as low as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

CARBON MONOXIDE: is a chemical asphyxiant with no warning properties (such as odor). At 400-500 ppm for 1 hour headache and dyspnea may occur. If activity is increased, symptoms of overexposure may include nausea, irritability, increased respiration, tinnitus, sweating, chest pain, confusion, impaired judgement, dizziness, weakness, drowsiness, ataxia, irregular heart beat, cyanosis and pallor. Levels in excess of 1000 ppm can result in collapse, loss of conciousness, respiratory failure and death. Extremely high concentrations (12,800 ppm) can cause immediate unconsciousness and death in 1-3 minutes. Repeated anoxia can lead to central nervous system damage and peripheral neuropathy, with loss of sensation in the fingers, amnesia, and mental deterioration and possible congestive heart failure. Damage may also occur to the fetus, lung, liver, kidney, spleen, cardiovascular system and other organs.

WHOLLY-VAPORIZED UNLEADED GASOLINE: Lifetime exposure to wholly vaporized unleaded gasoline produced an increased incidence of liver tumors in female mice exposed to the highest exposure concentration (2056 ppm) and α-2 urinary globulin-mediated kidney tumors in male rats. No exposure-related tumors were observed in male mice or female rats. The male-specific rat kidney tumors are not considered relevant to human health. Mice receiving lifetime repeated skin application of various petroleum naphthas exhibited an irritation-dependent increased incidence of skin tumors. Additional studies suggest that these tumors occur through a mechanism that may not be relevant to human health. Epidemiological data from over 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer resulting from gasoline exposure. Unleaded gasoline has been identified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

COMBUSTION ENGINE EXHAUST: Chronic inhalation studies of gasoline engine exhaust in mice, rats and hamsters did not produce any carcinogenic effects. Condensates/extracts of gasoline engine exhaust produced an increase in tumors compared to controls when testing by skin painting, subcutaneous injection, intratracheal instillation or implantation into the lungs. Gasoline exhaust has been classified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and Symptoms

Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Prolonged or repeated exposure may cause damage to organs. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects May cause genetic defects.

Carcinogenicity May cause cancer.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Gasoline 86290-81-5	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Heptane (mixed isomers) 142-82-5	Not Listed	Not Listed	Not Listed	Not Listed
Butane (mixed isomers) 106-97-8	Not Listed	Not Listed	Not Listed	Not Listed
Pentane (mixed isomers) 78-78-4	Not Listed	Not Listed	Not Listed	Not Listed
Hexane Isomers (other than n-Hexane) 107-83-5	Not Listed	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	Not Classifiable (A4)	Not Classifiable (3)	Not Listed	Not Listed
Xylene (mixed isomers) 1330-20-7	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed
Benzene 71-43-2	Confirmed human carcinogen (A1)	Carcinogenic to humans (1)	Known to be human carcinogen	Known carcinogen
n-Hexane 110-54-3	Not Listed	Not Listed	Not Listed	Not Listed
Cumene 98-82-8	Not listed	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not listed
1,2,4 Trimethylbenzene 95-63-6	Not Listed	Not Listed	Not Listed	Not Listed
Ethylbenzene 100-41-4	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Cyclohexane 110-82-7	Not Listed	Not Listed	Not Listed	Not Listed
Octane 111-65-9	Not Listed	Not Listed	Not Listed	Not Listed
1,2,3-Trimethylbenzene 526-73-8	Not Listed	Not Listed	Not Listed	Not Listed
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (STOT) - single exposure Respiratory system. Central nervous system.

Specific Target Organ Toxicity (STOT) - repeated exposure Blood. Blood-forming organs. Immune system.

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Gasoline 86290-81-5	72-hr EC50 = 56 mg/l Algae	96-hr LC50 = 11 mg/l Rainbow trout (static)	-	48-hr LC50 = 7.6 mg/l Daphnia magna
Heptane (mixed isomers)	-	96-hr LC50 = 375 mg/L	-	-

142-82-5		Tilapia		
Butane (mixed isomers) 106-97-8	-	-	-	-
Pentane (mixed isomers) 78-78-4	-	96-hr LC50 = 3.1 mg/L Rainbow trout	-	48-hr EC50 = >1 - <10 mg/L Daphnia magna
Hexane Isomers (other than n-Hexane) 107-83-5	-	-	-	-
Toluene 108-88-3	72-hr EC50 = 12.5 mg/l Algae	96-hr LC50 <= 10 mg/l Rainbow trout	-	48-hr EC50 = 5.46-9.83 mg/l Daphnia magna 48-hr EC50 = 11.5 mg/l Daphnia magna (Static)
Xylene (mixed isomers) 1330-20-7	72-hr EC50 = 11 mg/l Algae	96-hr LC50 = 8 mg/l Rainbow trout	-	48-hr LC50 = 3.82 mg/l Daphnia magna
Benzene 71-43-2	72-hr EC50 = 29 mg/l Algae	96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through)	-	48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static)
n-Hexane 110-54-3	-	96-hr LC50 = 2.5 mg/l Fathead minnow	-	-
Cumene 98-82-8	72-hr EC50 = 2.6 mg/l Algae	96-hr LC50 = 6.04-6.61 mg/l Fathead minnow (Flow-through) 96-hr LC50 = 2.7 mg/l Rainbow trout (semi-static)	-	48-hr EC50 = 7.9-14.1 mg/l Daphnia magna (static)
1,2,4 Trimethylbenzene 95-63-6	-	96-hr LC50 = 7.19-8.28 mg/l Fathead minnow (flow-through)	-	48-hr EC50 = 6.14 mg/L Daphnia magna
Ethylbenzene 100-41-4	72-hr EC50 = 1.7-7.6 mg/l Algae	96-hr LC50 = 4 mg/L Rainbow trout	-	48-hr EC50 = 1-4 mg/L Daphnia magna
Cyclohexane 110-82-7	72-hr EC50 = 500 mg/l Algae	96-hr LC50 = 3.96-5.18 mg/l Fathead minnow	-	48-hr EC50 = 1.7-3.5 mg/L Bay shrimp
Octane 111-65-9	-	-	-	48-hr LC50 = 0.38 mg/l Daphnia magna
1,2,3-Trimethylbenzene 526-73-8	-	96-hr LC50 = 7.72 mg/l Fathead Minnow (flow-through)	-	-
Naphthalene 91-20-3	-	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	-	48-hr LC50 = 1.6 mg/l Daphnia magna

Persistence and degradability Expected to be inherently biodegradable. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents.

Bioaccumulation Has the potential to bioaccumulate.

Mobility in soil May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues
This material may be a flammable liquid waste.

Safe Handling of Wastes
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal
Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper Shipping Name:	Gasoline
UN/Identification No:	UN 1203
Class:	3
Packing Group:	II

TDG (Canada):

UN Proper Shipping Name:	Gasoline
UN/Identification No:	UN 1203
Transport Hazard Class(es):	3
Packing Group:	II

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Gasoline	NA
Heptane (mixed isomers)	NA
Butane (mixed isomers)	NA
Pentane (mixed isomers)	NA
Hexane Isomers (other than n-Hexane)	NA
Toluene	NA
Xylene (mixed isomers)	NA
Benzene	NA
n-Hexane	NA
Cumene	NA
1,2,4 Trimethylbenzene	NA
Ethylbenzene	NA
Cyclohexane	NA
Octane	NA
1,2,3-Trimethylbenzene	NA
Naphthalene	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Gasoline	NA
Heptane (mixed isomers)	NA
Butane (mixed isomers)	NA
Pentane (mixed isomers)	NA
Hexane Isomers (other than n-Hexane)	NA

Toluene	1000 lb final RQ 454 kg final RQ
Xylene (mixed isomers)	100
Benzene	10
n-Hexane	5000
Cumene	5000
1,2,4 Trimethylbenzene	NA
Ethylbenzene	1000
Cyclohexane	1000
Octane	NA
1,2,3-Trimethylbenzene	NA
Naphthalene	100 lb final RQ 45.4 kg final RQ

SARA Section 311/312: The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Gasoline	None
Heptane (mixed isomers)	None
Butane (mixed isomers)	None
Pentane (mixed isomers)	None
Hexane Isomers (other than n-Hexane)	None
Toluene	1.0 % de minimis concentration
Xylene (mixed isomers)	1.0 % de minimis concentration
Benzene	0.1 % de minimis concentration
n-Hexane	1.0 % de minimis concentration
Cumene	1.0 % de minimis concentration
1,2,4 Trimethylbenzene	1.0 % de minimis concentration
Ethylbenzene	0.1 % de minimis concentration
Cyclohexane	1.0 % de minimis concentration
Octane	None
1,2,3-Trimethylbenzene	None
Naphthalene	0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Gasoline

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0957
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen; Flammable - third degree
New Jersey - Environmental Hazardous	SN 0957 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental

Substances List:	hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Heptane (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1339
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Butane (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0273
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 0273 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Pentane (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1064
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1064 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 -	Not Listed

List of Hazardous Substances:	
Hexane Isomers (other than n-Hexane)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1285
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Toluene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Developmental toxicity, initial date 1/1/91 Female reproductive toxicity, initial date 8/7/09
New Jersey Right-To-Know:	SN 1866
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree; Teratogen
New Jersey - Environmental Hazardous Substances List:	SN 1866 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
Xylene (mixed isomers)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 2014
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold all isomers
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 2014 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
Benzene	
Louisiana Right-To-Know:	Not Listed

California Proposition 65:	Carcinogen, initial date 2/27/87 Developmental toxicity, initial date 12/26/97 Male reproductive toxicity, initial date 12/26/97
New Jersey Right-To-Know:	SN 0197
Pennsylvania Right-To-Know:	Environmental hazard; Special hazardous substance
Massachusetts Right-To Know:	Carcinogen; Extraordinarily hazardous
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin); Carcinogen (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Carcinogen; Extraordinarily hazardous
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Present
New Jersey - Special Hazardous Substances:	Carcinogen; Flammable - third degree; Mutagen
New Jersey - Environmental Hazardous Substances List:	SN 0197 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	10 lb RQ (air); 1 lb RQ (land/water)

n-Hexane

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1340
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 1340 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1 lb RQ (air); 1 lb RQ (land/water)

Cumene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/6/10
New Jersey Right-To-Know:	SN 0542
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0542 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	5000 lb RQ (air); 1 lb RQ (land/water)

1,2,4 Trimethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1929

Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Ethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 6/11/04
New Jersey Right-To-Know:	SN 0851
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen; flammable - Third degree
New Jersey - Environmental Hazardous Substances List:	SN 0851 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)

Cyclohexane

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0565
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0565 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)

Octane

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1434
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable

Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

1,2,3-Trimethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1929
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Naphthalene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	SN 1322 SN 3758
Pennsylvania Right-To-Know:	Environmental hazard Present (particulate)
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	100 lb RQ (air); 1 lb RQ (land/water)

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Gasoline	B2,D2A,D2B	0.1%
Heptane (mixed isomers)	B2,D2B	1%

Butane (mixed isomers)	A,B1	1%
Pentane (mixed isomers)	B2	1%
Hexane Isomers (other than n-Hexane)	B2	1%
Toluene	B2,D2A,D2B	0.1%
Xylene (mixed isomers)	B2,D2A,D2B	m-, o-isomers 1.0%; p-isomer 0.1%
Benzene	B2,D2A,D2B	0.1%
n-Hexane	B2,D2A,D2B	1%
Cumene	B2,D2A	0.1%
1,2,4 Trimethylbenzene	B3,D2B	1%
Ethylbenzene	B2,D2A,D2B	0.1%
Cyclohexane	B2,D2B	1%
Octane	B2,D2B	1%
1,2,3-Trimethylbenzene	B3	1%
Naphthalene	B4,D2A	0.1%

Note: Not applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Revision Notes

Revision Date 03/19/2018
Previous Publish Date 11/06/2017
Revised Sections The following sections (§) have been updated:
2. HAZARD IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
11. TOXICOLOGICAL INFORMATION

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

75304 AL Highway 77
to 7063 Veterans Pkwy

12 min

11.3 miles

Est fuel cost:

$1.59

IRS reimbursement:

$6.60

12 min (11.28 miles)
75304 AL Highway 77 to 7063 Veterans Pkwy

75304 AL Highway 77

Start out going north on AL HIghway 77/AL-77 toward Speedway Industrial Dr. Continue to follow AL-77.

Then 0.31 miles

Merge onto I-20 W via the ramp on the left toward Birmingham.

- ***If you are on AL HIghway 77 and reach Hackney Rd you've gone about 0.1 miles too far***

Then 9.01 miles

Merge onto Martin St/US-231 N/AL-53 via EXIT 158 toward Ashville.

Then 0.48 miles

Turn left onto Hazelwood Dr.

- ***If you are on US Highway 231 and reach Lewis Lake Ln you've gone a little too far***

Then 0.58 miles

Turn left onto Jefferson State Pkwy.

- ***Jefferson State Pkwy is 0.1 miles past Hazelwood Dr***
- ***If you reach Crest Dale Ln you've gone about 0.1 miles too far***

Then 0.09 miles

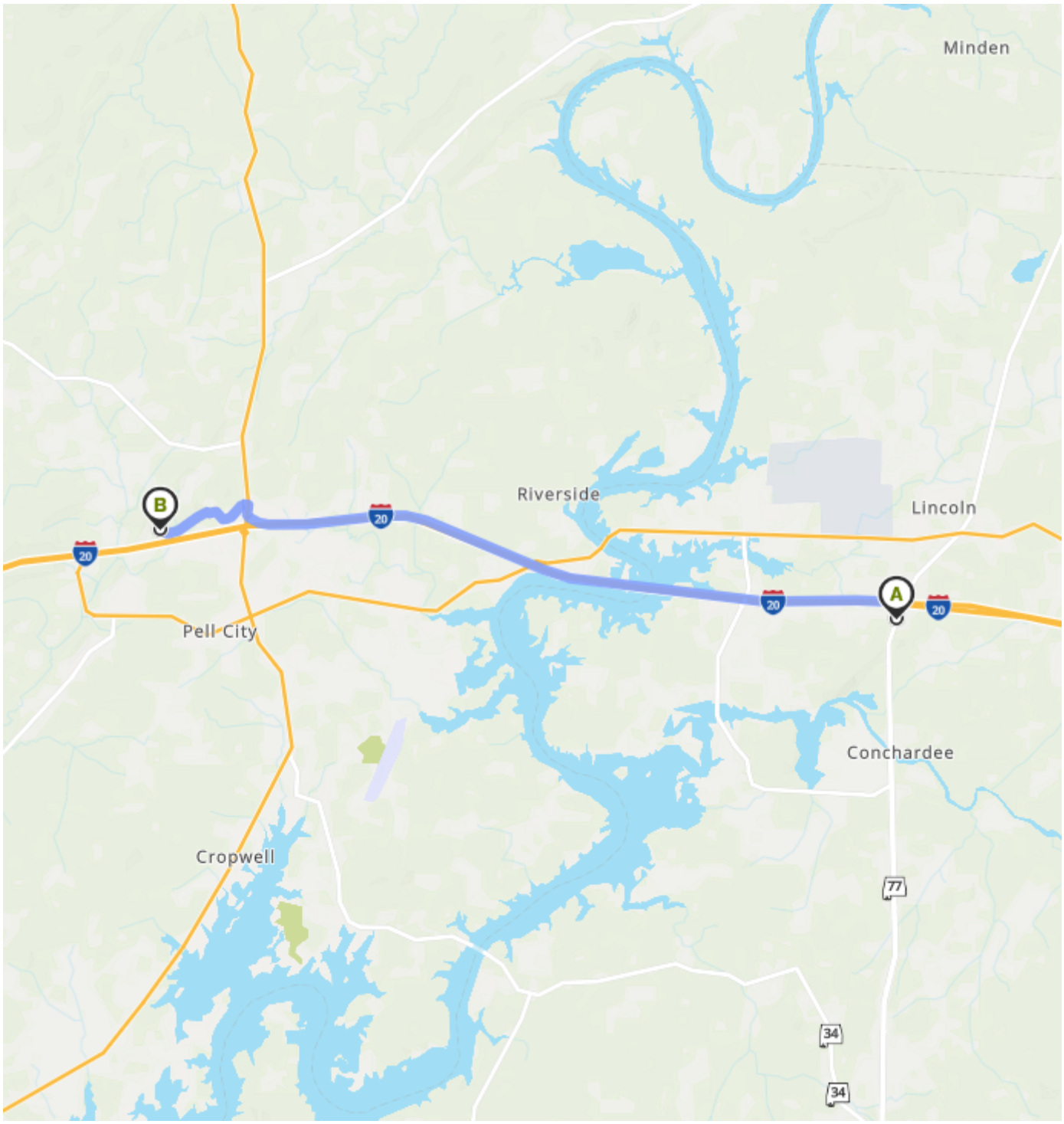
Take the 1st right onto Veterans Pkwy.

- ***If you reach Jubilee Cir you've gone about 0.1 miles too far***

Then 0.79 miles

7063 Veterans Pkwy
Pell City, AL 35125-5114

- ***7063 VETERANS PKWY is on the left.***
- ***If you reach Wolf Creek Rd you've gone a little too far***


Minden
Riverside
Lincoln
B
A
20
Pell City
Conchardee
Cropwell
77
34
34

ADEM FORMS

APPENDIX F

UST RELEASE FACT SHEET

GENERAL INFORMATION:

SITE NAME: Shop-N-Fill #4
ADDRESS: 75304 Highway 77
Lincoln, Talladega County, Alabama

FACILITY I.D. NO.: 10642-121-011302
INCIDENT NO.: UST20-07-03

RESULTS OF EXPOSURE ASSESSMENT:

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

CONTAMINATION DESCRIPTION:

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

Free product present in wells? {X} Yes { } No Maximum thickness measured: 1.50' (MW-3 – 11/5/20)

Maximum TPH concentrations measured in soil: N/A

Maximum BTEX or PAH concentrations measured in groundwater: 78.3 mg/L (MW-3 6/27/22)

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:	Shop-N-Fill #4
SITE ADDRESS:	75304 Highway 77
	Lincoln, Talladega County, AL
FACILITY I.D. NO.:	10642-121-011302
UST INCIDENT NO.:	UST20-07-03
OWNER NAME:	Bowden Oil Company, Inc.
OWNER ADDRESS:	P.O. Box 145
	Sylacauga, AL 35150
NAME & ADDRESS OF PERSON COMPLETING THIS FORM:	Daniel C. Roe, Project Manager
	CDG, Inc
	700 Southgate Drive, Suite A
	Pelham, AL 35124

CLASSIFICATION	***DESCRIPTION***	***YES***	***NO***
CLASS A	IMMEDIATE THREAT TO HUMAN HEALTH, HUMAN SAFETY OR SENSITIVE ENVIRONMENTAL RECEPTOR		
A.1	Vapor concentrations at or approaching explosive levels that could cause health effects, are present in a residence or building.	☐	☒
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, storm water or groundwater discharges within 500 feet of a surface water body used for human drinking water, whole body water-contact sports, or habitat to a protected or listed endangered plant and animal species.	☐	☒
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:	C.2

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

TASKS PERFORMANCE SUMMARY

APPENDIX G

TASK PERFORMANCE SUMMARY

CAP Development Report
CP-09
Shop-N-Fill #4
75304 Highway 77
Lincoln, Talladega County, Alabama

Task Completed by Personnel/Title:	Project Management	Work Plan Preparation/ Review	Cost Proposal Preparation/ Review	Field Work	Data Interpretation/ Tabulations	Drafting	Report Preparation/ Review	Payment Request Preparation/ Review
Michelle Grantham, PM		X	X					X
Alec Black, PG								
David Dailey, PE								
Jessica Reed, PE					X		X	
Mike Kotar, PM							X	
Daniel Roe, PM	X	X	X					X
Ray Hollinghead, Drafter						X		
Clint Foxx, Tech								
Jeff Webb, Tech								
Karen Moore, Admin	X	X	X			X	X	X
Britney Reed, Admin							X	
Leigh Caylor, Admin								
Kim Ballard, Admin								

Notes:
DO=Drilling Oversight
BL=Boring Log Description/Soil Classification
WG=Well Gauging
GSC=Groundwater Sample Collection
MEME=MEME Oversight
PM=Project Management
O&M=Routine Operation & Maintenance
HRS=High Resolution Study
VM=Vapor Monitoring
FC=Fan Check