

March 16, 2020

Philip Ofosu, Site Assessment Manager
U.S. EPA Region 6 (SEDAS)
1201 Elm Street, Suite 500
Dallas, TX 75270

**Re: Task Work Plan for Street & Performance, Inc.
1 Hot Rod Lane
Mena, Polk County, Arkansas
EPA SEMS ID: ARR000006957; AFIN: 57-00259**

Dear Mr. Ofosu:

The Arkansas Department of Energy and Environment Division of Environmental Quality (DEQ) Office of Land Resources has completed the Site Inspection (SI) Task Work Plan (TWP) for the Street & Performance, Inc. ("Street & Performance") site located at 1 Hot Rod Lane in Mena, Polk County, Arkansas. Enclosed are a hard copy and CD of the SI TWP. DEQ has tentatively scheduled the SI sampling event for May 2020.

If you have any questions or require additional information, please contact me at 501-683-0822 or by email at chelsea.whetstine@adeq.state.ar.us.

Sincerely,



Chelsea Whetstine
Site Assessment and Brownfield Project Manager
Office of Land Resources

Enclosure: SI TWP and CD

**TASK WORK PLAN
FOR
STREET & PERFORMANCE, INC.
EPA SEMS ID: ARR000006957
MENA, POLK COUNTY, ARKANSAS**

Philip Ofosu
EPA Site Assessment Manager

Date



Dianna Kilburn, P.G.

Assessment and Remediation Senior Manager

Office of Land Resources

Arkansas Department of Energy and Environment, Division of Environmental Quality

3/16/2020

Date



Chelsea Whetstine

Site Assessment and Brownfield Project Manager

Office of Land Resources

Arkansas Department of Energy and Environment, Division of Environmental Quality

3/16/2020

Date

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LIST OF ACRONYMS

ADH	Arkansas Department of Health
AFIN	DEQ Facility Identification Number
ANHC	Arkansas Natural Heritage Commission
ANRC	Arkansas Natural Resources Commission
AOC	Area of Concern
ARDOT	Arkansas Department of Transportation
BGS	below ground surface
BNA	Base/Neutral/Acid
CAO	Consent Administrative Order
CEI	Compliance Evaluation Inspection
CLP	Contract Laboratory Program
DEQ	Arkansas Department of Energy and Environment, Division of Environmental Quality
HASP	Health and Safety Plan
HRS	Hazard Ranking System
IDW	Investigation Derived Wastes
LQG	Large Quantity Generator
NAICS	North American Industry Classification System
NFRAP	No Further Remedial Action Planned
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PCB	polychlorinated biphenyl

LIST OF ACRONYMS (cont.)

PDS	Permit Data System
PPE	Probable Point of Entry
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act\
RSL	Regional Screening Level
SAP	Sampling and Analysis Plan
SESSI	Soil Exposure and Subsurface Intrusion
SI	Site Inspection
SQG	Small Quantity Generator
TAL	Target Analyte List
TCL	Target Compound List
TDL	Target Distance Limit
TSDF	Treatment, Storage, and Disposal Facility
TWP	Task Work Plan
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey

1.0 INTRODUCTION

The Arkansas Department of Energy and Environment Division of Environmental Quality (DEQ) Office of Land Resources has been tasked by the United States Environmental Protection Agency (U.S. EPA) Region 6 to conduct a Site Inspection (SI) at the Street & Performance, Inc. (“Street & Performance”) site in Mena, Polk County, Arkansas. This SI Task Work Plan (TWP) provides a description of the site and discusses the objectives and rationale of the SI sampling strategy, health and safety guidelines, quality assurance/quality control (QA/QC) procedures, and project team member responsibilities.

A Preliminary Assessment (PA) investigation to provide information on historical waste generation and disposal, potential hazardous substance sources, migration pathways, and potential targets was completed for the Street & Performance site in September of 2017. The objective of the SI is to determine site waste characteristics, contaminant sources, and exposure pathways by collecting and analyzing samples needed to support the Hazard Ranking System (HRS) evaluation for the Street & Performance site.

The SI is intended to provide sufficient information for DEQ and U.S. EPA to determine whether the site: (a) poses a potential unacceptable risk to human health or the environment and requires further investigation or (b) is eligible for No Further Remedial Action Planned (NFRAP) documentation.

To meet the objectives of the SI, DEQ personnel will: (1) review available information, (2) conduct field work to inspect the site and collect samples, (3) evaluate analytical data, and (4) prepare the SI report. The soil exposure and subsurface intrusion pathway and the surface water migration pathway are of the most concern for the Street & Performance site. This SI will build on available file information collected by DEQ and U.S. EPA Region 6 and will assist in validating or invalidating assumptions made during the PA investigation.

Section 5.0 contains the Sampling and Analysis Plan (SAP). Section 6.0 contains the Health and Safety Plan (HASP). Section 7.0 contains the Quality Assurance Project Plan (QAPP).

2.0 SITE BACKGROUND

The Street & Performance site location, description, waste characteristics, and Areas of Concern (AOCs) are summarized in this section. The site background information presented in this TWP was obtained from information compiled by DEQ and presented in the *Preliminary Assessment for Street & Performance* (“2017 Street & Performance PA”) dated September 2017 (Ref. 1).

2.1 Operational History

According to DEQ records and Arkansas Department of Transportation (ARDOT) historical aerial photographs, the original building was constructed and Street & Performance is presumed to have commenced operations on-site on February 10, 1987, when the facility became a hazardous waste operator. Between 1990 and 2006, another building was constructed on-site and additions were made to this and the original building. While in operation, Street & Performance manufactured and plated custom automotive parts and automobile engines. Manufacturing processes at the site included: aluminum casting and milling, spray coating, buffing, polishing, electroplating, and thermo-coating. Due to market changes, Street & Performance ceased all operations on-site on October 28, 2016. According to Polk County property records, the site is currently owned by Street & Performance.

2.2 Waste Characteristics and Regulatory Involvement

This section provides available information from DEQ records regarding waste characteristics and regulatory involvement at the Street & Performance site.

While in operation, Street & Performance manufactured and plated custom automotive parts and automobile engines. Manufacturing processes at the site included: aluminum casting and milling, spray coating, buffing, polishing, electroplating, and thermo-coating. According to Resource Conservation and Recovery Act (RCRA) Subtitle C Site Identification Forms, waste streams generated at the Street & Performance site included D002 (corrosive), D005 (barium), D006 (cadmium), D007 (chromium), F003 and F005 (spent solvents), F006 (wastewater treatment sludge from electroplating operations), and F007 (spent cyanide plating bath solutions).

DEQ records showed that Street & Performance stored materials and generated potential waste containing the following contaminants on-site: methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents.

Based upon site reconnaissance and DEQ records, the following sources are or were located on the Street & Performance site: a former atmospheric evaporator, a plating shop floor sump, a 500-gallon chromium waste tank, a 500-gallon cyanide waste tank, five copper plating baths totaling approximately 700 gallons, five approximately 500-gallon nickel plating baths, three approximately 500-gallon nickel rinse tanks, one approximately 500-gallon chromium plating tank, three approximately 500-gallon chromium rinse tanks, one approximately 500-gallon cyanide plating tank, one 1,800-gallon batch treatment tank that formerly contained lead contaminated water, one

approximately 500-gallon copper rinse tank, two approximately 500-gallon nitric acid and water plating tanks, four approximately 500-gallon soap tanks, four approximately 500-gallon rinse tanks, one approximately 120-gallon nitric acid plating tank, one approximately 500-gallon caustic soda tank, one approximately 500-gallon sodium cyanide and sodium hydroxide tank, one approximately 500-gallon sodium cyanide and sodium hydroxide rinse tank, one approximately 500-gallon Techmatic A139 tank, one approximate 500-gallon Techmatic A129 rinse tank, a former pile of approximately 2,000 pounds of foundry sand from nickel and aluminum casting, a former 20-cubic yard roll-off container approximately half-full of foundry sand from nickel and aluminum casting, an unknown former quantity of used fluorescent lamps, numerous former 55-gallon drums and small-quantity containers holding various contaminants, a chromium solution formerly covering the floor of the “Rectifier Room,” and the former approximately 968 square foot area of lead and chromium contaminated soil between the two main buildings.

Regulatory Information

A review of the DEQ Permit Data System (PDS) indicated that DEQ Facility Identification Number (AFIN) 57-00259 is associated with the Street & Performance site. The North American Industry Classification System (NAICS) Code for DEQ-issued permits for the Street & Performance site is listed as 332813: Electroplating, Plating, Polishing, Anodizing, and Coloring. According to DEQ records, the Street & Performance site was a large quantity generator (LQG) of hazardous waste from 2001 to its closing in 2016. Prior to 2001, Street & Performance registered as a small quantity generator (SQG) of hazardous waste.

In addition, Street & Performance had multiple regulatory issues while in operation including the following complaints and violations:

- Street & Performance had numerous occurrences of submitting Hazardous Waste Annual Reports and paying fees past required due dates;
- A violation in 1999 for failing to label or mark clearly containers used to store used oil with the words “Used Oil”;
- The two approximately 300-gallon rinse water tanks that had been dumped every week outside a building on the site and the corresponding soil samples with high levels of chromium, lead, and barium;
- A complaint in 2007 regarding a rinse water tank or a nickel-chromium plating bath tank that had been emptied into a box drain on the site that leads directly to the city’s water system and the corresponding analytical sampling results from this drain indicating elevated levels of chromium. In addition, the Mena Wastewater Treatment Plant had experienced a recent fish kill in one of their lagoons;

- The Consent Administrative Order (CAO) (LIS 08-040) entered on June 9, 2008, regarding numerous hazardous waste management violations;
- Violations in 2009 regarding an Industrial Stormwater Permit that was needed for the site and a pile of waste sand and a burn pile that needed to be removed from the site and properly disposed;
- The Complaint Investigation and subsequent Compliance Evaluation Inspection (CEI) in 2011 that revealed approximately 115 55-gallon drums containing hazardous waste, some of which had been on-site since 2009, and numerous instances of significant noncompliance;
- The CEI in 2013, which revealed that Street & Performance had stored 132 containers of hazardous waste on-site for greater than ninety (90) days, and numerous additional compliance violations;
- The CEI in 2016, which revealed numerous additional instances of significant noncompliance;
- The Emergency Order for remedial actions in 2016 resulting in approximately 199,320 pounds of abandoned waste being characterized and removed from the site;

3.0 SITE CONDITIONS

Information on site conditions presented in this SI TWP was compiled from the 2017 Street & Performance PA and site reconnaissance on May 2, 2017 and August 5, 2019.

The Street & Performance site is located at 1 Hot Rod Lane, Mena, Polk County, Arkansas. Mena is located in north-central Polk County, on the western border of Arkansas. According to Google Earth Pro, the geographic coordinates for the approximate center of the site are 34.564123° North latitude and 94.217089° West longitude. **Figure 3-1** provides a map with the location of Polk County and the Street & Performance site. **Figure 3-2** provides a map depicting the 1-mile and 4-mile radii around the approximate site location. Figures are provided at the end of each corresponding section.

The Street & Performance site is located in a mixed residential and commercial area on an approximately 4.96-acre lot. The site is bordered by an open vegetated field to the north; a wooded area to the east; Prairie Creek, a residence, and an unidentified commercial facility to the south; and Highway 375 and an open vegetated field to the west.

The Street & Performance site consists mostly of concrete, gravel, vegetated areas, and some areas of exposed soil. One approximately 30,000 square foot metal-sided building (“South Building”) and one approximately 25,000 square foot metal-sided building (“North Building”), both with concrete foundations, are located on the site. In addition, a small metal-sided shed is located on the south portion and a trailer is located on the northwest portion of the site.

The Street & Performance site is not fenced and is easily accessible to trespassers. A concrete entrance driveway is located on the west side of the site and leads to an office area on the west portion of the South Building. Concrete parking areas are located on the south and west portions and gravel parking areas are located on the east and north portions of the site. Concrete drainage runs between the South Building and North Building. In addition, an approximately 2,000 square foot concrete area formerly used for storage of 55-gallon drums (“Concrete Storage Area”) is located on the east portion between these two buildings. During site reconnaissance, the Concrete Storage Area had staining in the shape of rings indicative of former 55-gallon drums.

During site reconnaissance, multiple areas of disturbed soil and gravel were located throughout the site. Piles of debris including scrap metal, wood pallets, lumber, and tires were located throughout the site, primarily on the east. A burn pile was located in a vegetated area on the east portion of the site. Two empty approximately 250-gallon plastic totes were located on the northeast portion of the site. The former contents of these totes are unknown. An approximately six-inch diameter plastic pipe extending underground is located on the northeast portion of the site. The purpose of this pipe could not be determined during this PA investigation. Multiple smaller plastic and metal pipes are extending from the northeast portion of the North Building and are presumed to be for air conditioning purposes.

Surface water runoff flows directly into Prairie Creek along the south site boundary and into unnamed drainage that runs throughout the site, eventually flowing into Prairie Creek. Prairie Creek flows east along the south site boundary, eventually reaching the Ouachita River, approximately 3.8 miles northeast of the Street & Performance site.

Figure 3-3 provides an aerial view of the site and shows the site boundary, significant site features, and adjacent properties and roads.

Current site and area conditions, including topography, soils, geology, hydrogeology, and climatology are characterized in the remainder of this section. Unless otherwise referenced, the information was obtained from the 2017 Street & Performance PA.

3.1. Topography

According to Google Earth Pro, the site is relatively flat with minor changes in elevation. The center of the site is approximately 1,025 feet above mean sea level.

3.2 Soils

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey for Polk County, Arkansas, the soil map unit composition for the Street & Performance site is comprised primarily of the following soils (Ref. 2).

Kenn-Ceda complex, zero to three percent slopes, frequently flooded; and Wetsaw Loam, one to six percent slopes.

Descriptions of these soils are summarized below (Ref. 3):

Kenn-Ceda complex, zero to three percent slopes, frequently flooded

This well-drained soil is found in narrow flood plains in mountainous areas. Most areas are long and narrow in shape, and limited in acreage. These areas are predominantly used for woodlands and wildlife. This soil is comprised of approximately sixty percent Kenn and similar soils, thirty percent Ceda and similar soils, and ten percent minor soils. The typical profile of Kenn soils is as follows: the surface layer is typically dark yellowish brown cobbly fine sandy loam approximately zero to eight inches thick; the subsoil consists of strong brown clay loam that extends to approximately thirty-nine inches below ground surface (bgs), and brown very gravelly clay loam that extends to approximately fifty-one inches bgs; and the underlying material is brown extremely cobbly loam that extends to approximately seventy-two inches bgs. The typical profile of Ceda soils is as follows: the surface layer is typically dark brown very cobbly fine sandy loam approximately zero to six inches thick; the subsoil consists of brown very gravelly fine sandy loam that extends to approximately inches bgs, dark yellowish brown extremely gravelly loam that extends to approximately thirty-nine inches bgs, and dark yellowish brown extremely cobbly fine sandy loam that extends to approximately sixty-five inches bgs. Available water capacity is high for Kenn soils and low for Ceda soils. Permeability is moderate for Kenn soils and rapid for Ceda soils. Surface runoff ranges from negligible to medium. The soil ranges from slightly acidic to very strongly acidic.

Wetsaw Loam, one to six percent slopes

This soil is found on stream terraces, mainly in the northern part of the country. Areas of this soil are predominantly used for pasture and hayland. The surface layer is typically brown loam approximately zero to six inches thick. The subsurface layer consists of yellowish brown loam that extends to approximately fourteen inches bgs. The subsoil consists of yellowish brown loam that extends to approximately twenty inches bgs, yellowish brown mottled clay loam that extends to approximately thirty-four inches bgs, yellowish brown and light brownish gray mottled clay loam that extends to approximately forty-four inches bgs, and yellowish brown and light gray mottled gravelly clay loam that extends to approximately seventy inches bgs. Available water capacity is very high and permeability is slow. Surface runoff ranges from low to medium. This soil ranges from moderately acidic to very strongly acidic, except for areas where amendments have been applied.

3.3 Geology and Hydrogeology

The following information was obtained from the Arkansas Geological Commission's *Stratigraphic Summary of Arkansas* and the 1993 Geologic Map of Arkansas.

Polk County is located within the Ouachita Mountains Region physiographic province. The Ouachita Mountains are composed of intricately folded and faulted Paleozoic age sedimentary rocks that were originally deposited in deep marine environments. The structural fabric of this region also trends from east to west.

The Street & Performance site is located on the Stanley Shale Formation of the Ouachita Mountains physiographic province. The Stanley Shale Formation is composed of dark gray shale interbedded with fine-grained sandstone. Both plant and invertebrate fossils have been reported in this formation, but preservation is usually poor. The total thickness of the Stanley Shale Formation ranges from 3,500 feet to over 10,000 feet (Ref. 4; Ref. 5).

The Ouachita Mountains aquifer system lies under the Street & Performance site. This aquifer consists of mostly shale, sandstone, and chert beds of Cambrian and Pennsylvanian age. The Ouachita Mountains are characterized by alternating mountains and inter-montane valleys to the north and a southernmost piedmont area. The Ouachita Mountains Aquifer has a wide extent. This aquifer has a width of eighty miles along the Arkansas-Oklahoma state border and progressively narrows eastward toward the central part of the state. Despite its large expanse, due to the predominance of shale and low porosity sandstones, this aquifer yields limited quantities of water for domestic and non-irrigation farm uses. Well depths are shallow in the Ouachita Mountains aquifer and often yield less than fifty gallons per minute. Other than for limited quantities of water for domestic and non-irrigation farm purposes, most communities rely on surface water supplies (Ref. 6).

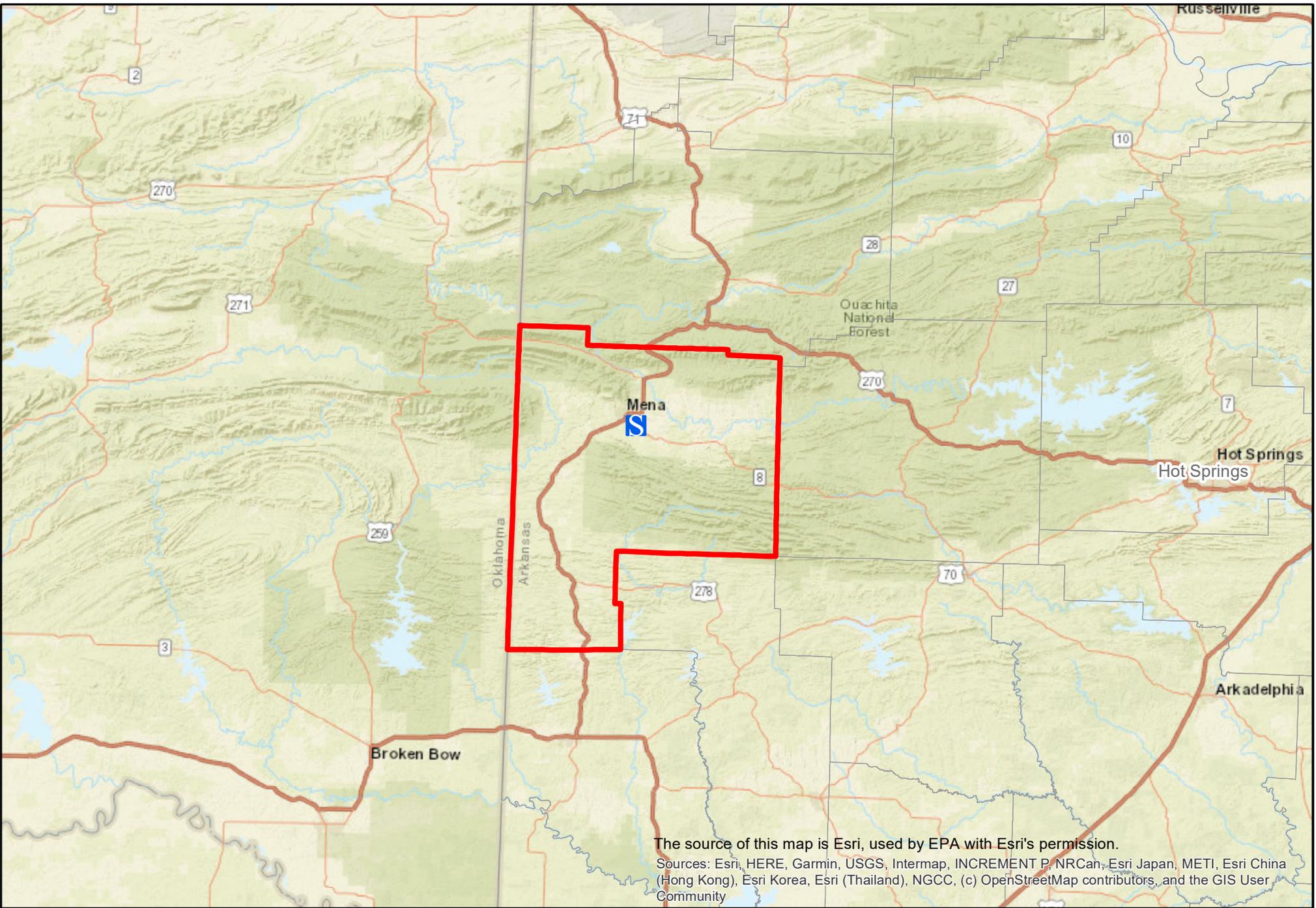
Groundwater in the vicinity of the Street & Performance site is believed to flow northeast toward Prairie Creek and the Ouachita River, with groundwater elevations influenced by topography. By searching through the United States Geological Survey (USGS) National Water Information System (Ref. 7), only one well was found within a 4-mile radius of the Street & Performance site. The static groundwater elevations for this well ranged from 1.63 feet bgs at the shallowest to 13.32 feet bgs at the deepest.

A radius search conducted using the Arkansas Natural Resource Commission (ANRC) Well Construction and Pump Installation Database indicated that six groundwater wells are located within a 1-mile radius and 147 groundwater wells are located within a 4-mile radius of the Street & Performance site. The well depths recorded within a 4-mile radius range from four feet to 310 feet bgs. Of the 147 ANRC wells recorded, ninety are domestic wells, fifty-one are of an unknown use, two are test wells, two are monitoring wells, one is an irrigation well, and one is a livestock watering well (Ref. 8).

No domestic wells within a 4-mile radius of the Street & Performance site were recorded as drinking water wells on the ANRC Well Construction and Pump Installation Database.

3.4 Climatology and Meteorology

Mena is warm during summer when temperatures tend to be in the 70s and cold during winter when temperatures tend to be in the 40s. The average annual temperature is 59.0 degrees Fahrenheit (°F), with an average annual low of 47.5°F and an average annual high of 70.3°F. The average annual precipitation is 58.39 inches. Precipitation is fairly evenly distributed throughout the year with the wettest month being May at an average of 6.65 inches (Ref. 9).

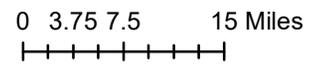


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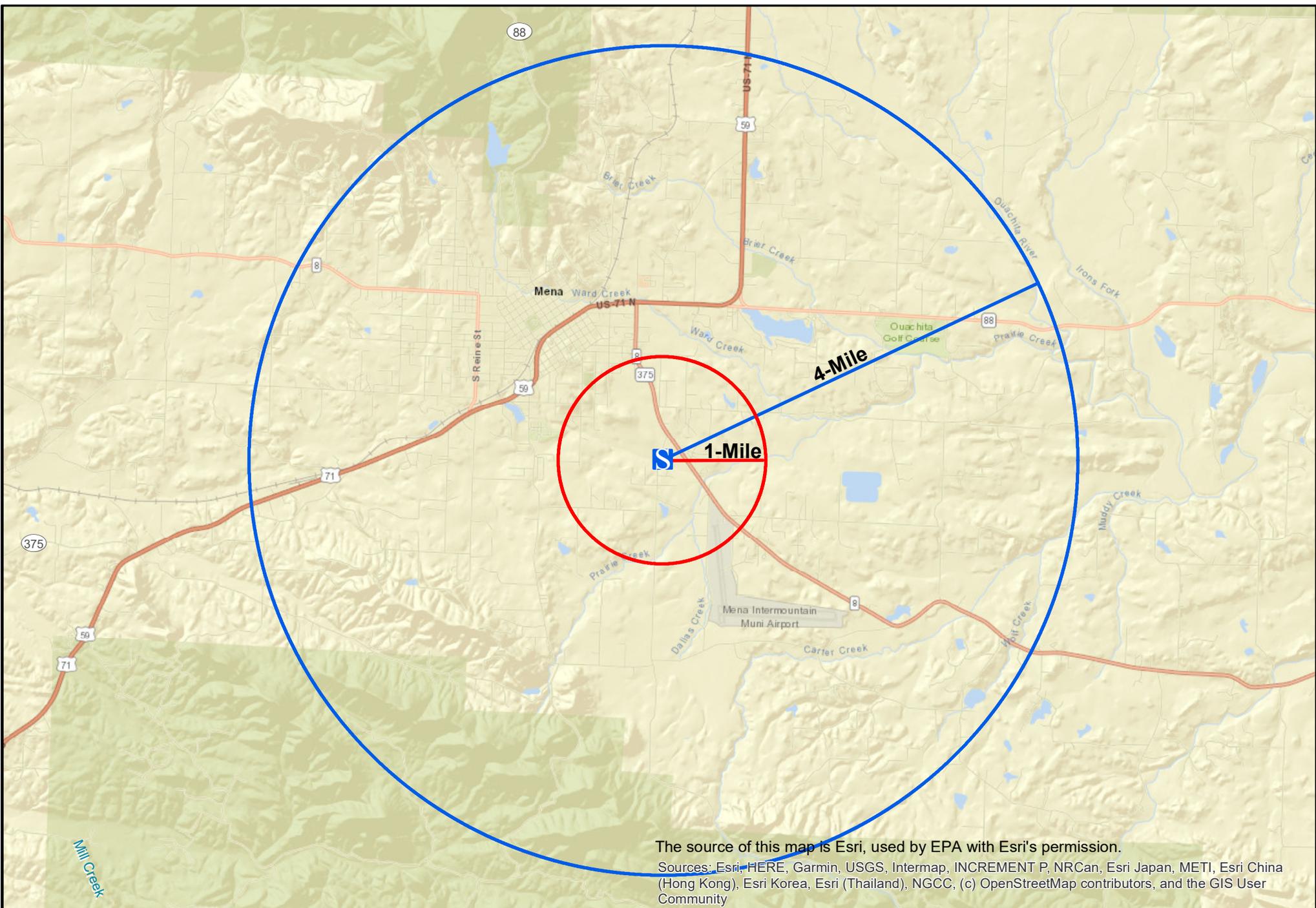
**Street & Performance
 County and Site Location
 Figure 3-1**

Legend:

- Polk County
- S Site Location



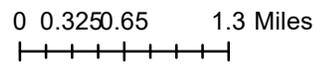
DEQ	County and Site Location
	Location: Mena, Arkansas
	County: Polk
AFIN: 57-00259	Date: January 2020



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 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

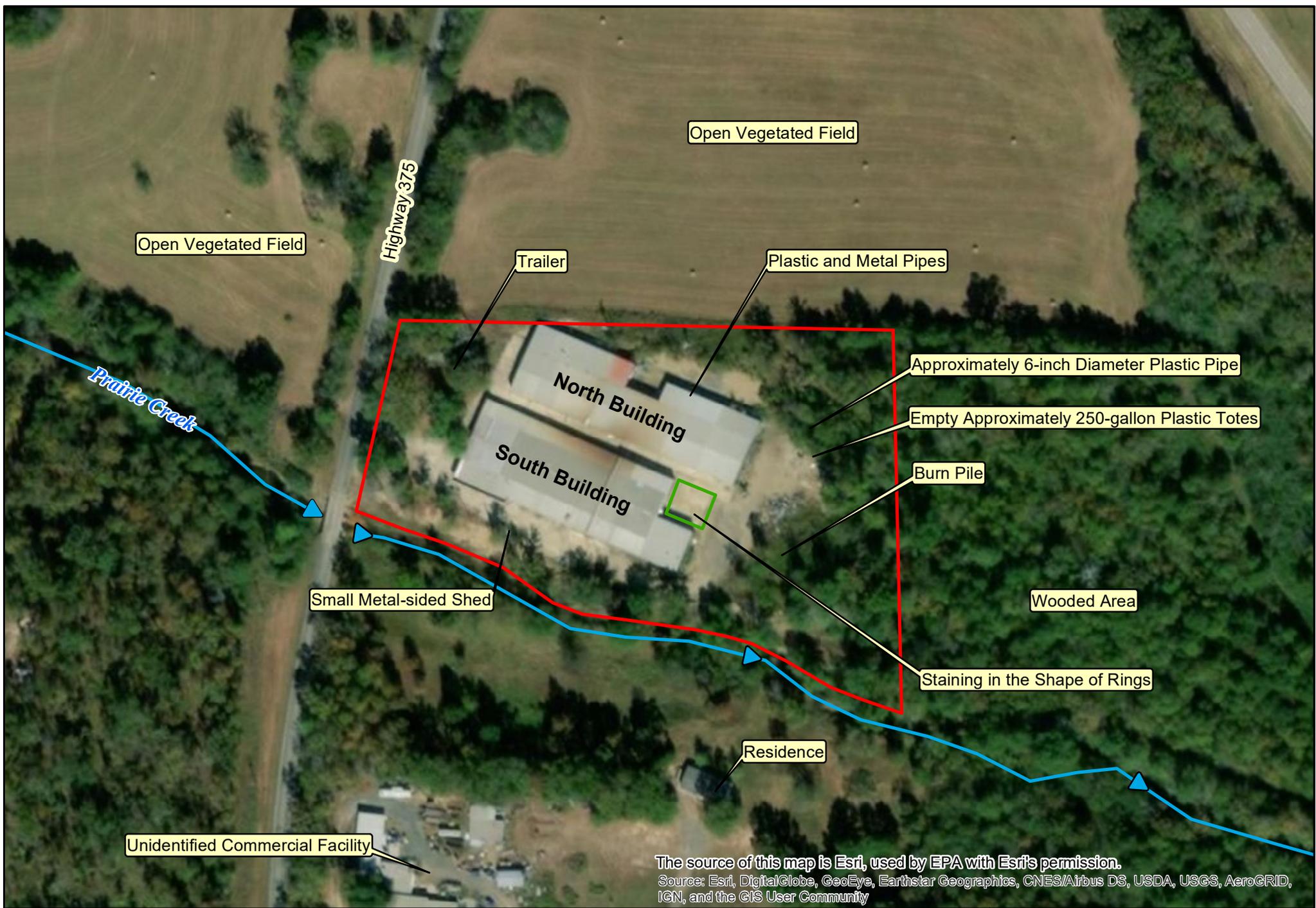
Street & Performance
1-Mile and 4-Mile Radius
Figure 3-2

Legend:
 Site Location



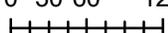
DEQ
AFIN:
57-00259

1-Mile and 4-Mile Radius	
Location:	Mena, Arkansas
County:	Polk
Date:	January 2020



Street & Performance
Site Map
Figure 3-3

Legend:

- Site Boundary
 - Concrete Storage Area
 - / Site Drainage
 - ▶ Flow Direction
- 0 30 60 120 Feet
- 



DEQ	Site Map
	Location: Mena, Arkansas
	County: Polk
	Date: January 2020

4.0 PATHWAY ASSESSMENT

The HRS, which is used in screening sites for ranking on the National Priorities List (NPL), defines four pathways for hazardous waste, hazardous substance, and hazardous constituent migration and exposure: groundwater migration, surface water migration, soil exposure and subsurface intrusion (SESSI), and air migration. This section summarizes information specific to the four exposure and migration pathways previously compiled by DEQ and U.S. EPA Region 6 and presented in the 2017 Street & Performance PA.

4.1 Groundwater Migration

The residents of Mena are served by Mena Water Utilities. The source of water for Mena Water Utilities is surface water rather than groundwater. Mena Water Utilities receives water from an intake in Irons Fork Lake located approximately 7.3 miles northeast of the Street & Performance site. In addition, there are ANRC domestic groundwater wells within a 4-mile radius of the Street & Performance site; however, none were recorded as drinking water wells.

According to the Arkansas Department of Health (ADH), which routinely monitors for constituents in drinking water according to Federal and State laws, the most current sample results for Mena Water Utilities had no violations (Ref. 10).

There are no groundwater monitoring wells on-site and based upon the aforementioned lack of groundwater targets, the groundwater migration pathway is currently of minimal concern and will not be included in the SI sampling event.

4.2 Surface Water Migration

Surface water runoff at the Street & Performance site flows directly into Prairie Creek along the south site boundary and into unnamed drainage that runs throughout the site, eventually flowing into Prairie Creek. Prairie Creek flows east along the south site boundary, eventually reaching the Ouachita River approximately 3.8 miles northeast of the Street & Performance site. The 15-mile Target Distance Limit (TDL) is estimated to occur in the Ouachita River.

The site has one Probable Point of Entry (PPE). The PPE is located on the southeast corner of the site, where Prairie Creek flows east off-site.

According to the file review conducted by the Arkansas Natural Heritage Commission (ANHC) for the Street & Performance site, no occurrences of an element of special concern have been recorded within a 1-mile radius of the site. Thirty-eight occurrences of elements of special concern have been recorded within a 4-mile radius of the site. The Ozark Pigtoe, Arkansas Fatmucket, Mena Crayfish, Purple Lilliput, Lilliput, Tapered Pondhorn, little spectaclecase, Ringed Salamander, and Wolf's spike-rush are aquatic elements of special concern within a 4-mile radius of the site. A total of 530 occurrences

of elements of special concern have been recorded within a 15-mile radius of the site (Ref. 11).

The residents of Mena are served by Mena Water Utilities. The source of water for Mena Water Utilities is surface water rather than groundwater. Mena Water Utilities receives water from an intake in Irons Fork Lake located approximately 7.3 miles northeast of the Street & Performance site.

The potential sources of surface water migration identified during the PA investigation are potential runoff and discharges associated with areas of potential soil exposure into Prairie Creek along the south site boundary, and into unnamed drainage that runs throughout the site eventually flowing into Prairie Creek.

The surface water migration pathway is included in the SI sampling strategy, as detailed in the SAP found in Section 5.0 of this TWP.

4.3 Soil Exposure and Subsurface Intrusion

The Street & Performance site consists mostly of concrete, gravel, vegetated areas, and some areas of exposed soil. The North Building and South Building are metal-sided with concrete foundations. Both buildings are locked; however, the small metal-sided shed on the south portion of the site is unlocked. A concrete entrance driveway is located on the west side of the site and leads to an office area on the west portion of the South Building. Concrete parking areas are located on the south and west portions and gravel parking areas are located on the east and north portions of the site. The Street & Performance site is not fenced and is easily accessible to trespassers; however, little evidence of vandalism was present throughout the site during reconnaissance.

The MARPLOT[®] mapping tool, which includes United States Census Bureau information for the year 2010, was used to calculate populations within the radii below. Using the coordinates of 34.564123° North latitude and 94.217089° West longitude, approximately 663 persons reside within a 1-mile radius of the Street & Performance site.

**Table 4-1.
Population in Vicinity of Street & Performance**

Distance Radius (Miles)	Number of Residents
0.25	2
0.50	208
1.0	663
2.0	3,754
3.0	7,119
4.0	8,513

The following indicate the potential for releases to the soil at the Street & Performance site to have occurred:

- The use of methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum;
- The historical use of numerous 55-gallon drums, small-quantity containers, waste tanks, rinse tanks, plating tanks, and other ASTs holding various contaminants on-site;
- The weekly dumping of two rinse water tanks outside a building on-site; and
- The multiple areas of disturbed soil and gravel located throughout the site and the burn pile located in a vegetated area on the east portion of the site.

In addition, numerous areas of staining and debris were located throughout the Street & Performance site during site reconnaissance in 2017. All areas of staining and debris indicate the potential for releases to the soil to have occurred. In addition, there is the potential for subsurface intrusion into nearby buildings via soil or groundwater contamination.

The SESSI pathway is included in the SI sampling strategy, as detailed in the SAP, found in Section 5.0 of this TWP.

4.4 Air Migration

The Street & Performance site consists mostly of concrete, gravel, and vegetated areas. There are some areas of exposed soil on the Street & Performance site; however, no blowing particulates were noted during site reconnaissance. In addition, no current air emissions are being produced at the site. Air samples will not be collected for the SI since this pathway does not appear to contribute significantly to the overall HRS score.

5.0 SAMPLING AND ANALYSIS PLAN

This SAP has been prepared in accordance with methodologies and activities for conducting site inspections outlined in *Guidance for Performing Site Inspections Under CERCLA* (Ref. 12); *Soil Screening Guidance: User's Guide* (Ref. 13); *Contract Laboratory Program Guidance for Field Samplers* (Ref. 14); *Field Sampling Guidance Document #1215, Sediment Sampling* (Ref. 15); and *Guidance on Choosing a Sampling Design for Environmental Data Collection* (Ref. 16). Development of the sampling

strategy was based on both known and suspected past operations at the site. The objectives of the field sampling activities are to: (1) establish representative background levels, (2) determine site waste characteristics, (3) attribute hazardous substances to on-site operations, (4) investigate migration of hazardous substances from the site, and (5) provide sufficient data for the HRS package. The number of samples and locations proposed in this SAP are subject to modification based on conditions encountered in the field during the sampling event and at the discretion of the U.S. EPA Site Assessment Manager.

The DEQ sampling team will be responsible for completing the tasks described in this section. The team will conduct all sample collection activities, perform associated field activities, and complete sample documentation, preparation, and shipping. The SI sampling event is tentatively scheduled for May 2020.

5.1 On-site Reconnaissance

The DEQ sampling team will conduct an on-site reconnaissance on the day of the field sampling event to familiarize the sampling team with the site. During this on-site reconnaissance, the DEQ sampling team will: (1) document current site conditions, (2) survey sampling locations, and (3) mark each sampling location for future identification. The DEQ Project Manager will confirm that the sample locations have been appropriately selected. Alternate or additional sample locations will be selected if one or more proposed locations are inaccessible or a more appropriate sampling location(s) is identified.

SI sampling activities will occur within and outside the boundaries of the Street & Performance site. Access to public areas will be gained in accordance with Arkansas Hazardous Waste Management Act § 8-7-225(c). Access to private property, if necessary, will be gained through the owner's permission.

Prior to conducting sampling activities, the DEQ Project Manager will conduct a meeting to review this SAP and the HASP, found in Section 6.0 of this TWP, with the sampling team. The DEQ Project Manager will be authorized to stop any activities that are not in compliance with the SAP or the HASP.

5.2 Sampling Activities

The SI sampling strategy will focus on the SESSI pathway and the surface water migration pathway. Groundwater will not be sampled due to minimal targets and the absence of monitoring wells on-site. Air samples will not be collected to further assess the SESSI pathway at this time.

Duplicate and QA/QC samples will be collected. QA/QC samples will be used to assess the precision, accuracy, representativeness, completeness, and comparability of the analytical laboratory data.

Background samples will be collected to determine levels of both potentially naturally-occurring ambient levels of substances in the environment (e.g., metals found in soils) and anthropogenic levels of substances in the area due to non-site related sources. The background sample analytical results will be used to attribute substances detected in the soil and sediment samples collected during the SI to site sources.

Sediment, surface soil, subsurface soil, and surface water samples will be collected and analyzed for Target Compound List (TCL) organics (base/neutral/acid (BNA) fractions only); Target Analyte List (TAL) metals, including mercury and cyanide, by the U.S. EPA Contract Laboratory Program (CLP) or U.S. EPA Region 6 laboratory, in accordance with U.S. EPA Routine Analytical Services procedures. In addition, all sediment, surface soil, and subsurface soil samples will be analyzed for polychlorinated biphenyls (PCBs).

The U.S. EPA CLP and the U.S. EPA Region 6 laboratory currently do not have the capability to analyze soils for hexavalent or trivalent chromium; instead the lab calculates screening levels for hexavalent and trivalent chromium (Ref. 17). U.S. EPA indicates that total chromium sampling results are a 1:6 ratio of hexavalent chromium to trivalent chromium. Therefore, hexavalent chromium and trivalent chromium concentrations will be calculated by this method from the measured total chromium concentrations sampled on-site. Trivalent chromium concentrations will be compared to U.S. EPA residential soil Regional Screening Levels (RSLs) and hexavalent chromium will be compared to U.S. EPA carcinogenic residential soil RSLs.

All sampling activities will be documented in a designated bound field logbook. Any deviation from the procedures in the SAP will be documented. The location, depth, time, station number, sample number, and any field observations will be recorded for each sample. Additionally, each sample location will be documented with a RICOH G700SE GPS camera. The sampling team will also take photographs of the sample locations to document site conditions and support the observations made in the logbook.

A judgmental, or biased, sampling design was used to select the sampling locations. As noted in Section 2.2 of this TWP, the 2017 Street & Performance PA identified multiple potential sources, or AOCs. The AOCs and associated sampling media considered in the sampling design are provided below and shown in **Figure 5-1**.

AOC 1 – Manufacturing Area: Where Street & Performance formerly operated and location of buildings and former tanks, roll-off containers, and waste piles. Media: soil.

AOC 2 – Drainage Ditches and Prairie Creek: Unnamed drainage ditches running along the west site boundary and northeast portion of the site, Prairie Creek that flows east along the south site boundary eventually reaching the Ouachita River, and location of one PPE. Media: sediment and water.

The proposed sample locations are shown in **Figure 5-2**. Proposed background sample locations are shown in **Figure 5-3**. It should be noted that the proposed sample locations are approximate, not to scale, and subject to modification based on field conditions and the discretion of the U.S. EPA Site Assessment Manager. If the U.S. EPA Site Assessment Manager is not present during sampling, he will be contacted via phone.

Sample station descriptions and rationales are summarized in **Table 5-1**. A summary of the samples and QA/QC information is listed in **Table 5-2**. Sample container and preservation specifications are listed in **Table 5-3**. The figures and tables are provided at the end of this section.

The procedure to be used by the field sampling team for sampling activities at each AOC is described in the following subsections.

5.2.1 Soil Sampling

Surface and subsurface soil will be sampled to assess the SESSI pathway. Only soil samples (no air samples) will be collected at this time to assess this pathway. DEQ will collect a total of seventeen surface/subsurface soil samples, including two duplicates and two background samples. These samples were selected to primarily address AOC 1 – Manufacturing Operation Area, described in Section 5.2 of this TWP.

Surface soil samples will be collected at depths ranging from zero to six inches. Subsurface soil samples will be collected at depths ranging from six to eighteen inches. Samples will be collected using clean nitrile gloves and dedicated, pre-sterilized disposable plastic scoops at each location and a metal auger at subsurface sampling locations. DEQ personnel will wear clean nitrile gloves during all sampling activities.

Background samples will be collected in an area assumed to be unaffected by potential site, off-site, or upgradient sources. The designated soil background samples are located off-site and upgradient to ensure that they have not been impacted by site sources.

One field duplicate sample will be collected as a surface soil split sample and the other will be collected as a subsurface soil split sample. Analysis of the field duplicate samples will allow for the evaluation of precision of the sample collection and analytical process.

5.2.2 Sediment Sampling

Sediment will be sampled to assess the surface water migration pathway. DEQ will collect a total of eleven sediment samples, including one duplicate and one background sample. These samples were selected to primarily address AOC 2 – Drainage Ditches and Prairie Creek, described in Section 5.2 of this TWP.

The background samples will be collected in areas assumed to be unaffected by potential site, off-site, or upgradient sources. The designated sediment background sample is located off-site and upgradient to ensure that it has not been impacted by site sources.

One field duplicate sediment sample will be collected as a sediment split sample. Analysis of the field duplicate sample will allow for the evaluation of precision of the sample collection and analytical process.

5.2.3 Surface Water Sampling

In addition to sediment, surface water will be sampled to assess the surface water migration pathway. DEQ will collect a total of four surface water samples, including one duplicate and one background sample. The samples were selected to address AOC 2 – Drainage Ditches and Prairie Creek, described in Section 5.2 of this TWP.

The site has one PPE. The PPE is located on the southeast corner of the site, where Prairie Creek flows east off-site. Surface water samples will be collected from Prairie Creek where it flows onto and off site. These sampling locations are presumed to collect any surface water contamination leaving the site. Based on the analytical results of this sampling investigation, additional sampling can be performed, if necessary, to further assess any contamination found.

A background surface water sample will be collected from Prairie Creek approximately 0.1 miles west and upgradient of the Street & Performance site. This area is assumed to be unaffected by site and other off-site and upgradient sources.

One field duplicate surface water sample will be collected. Analysis of the field duplicate sample will allow for the evaluation of precision and representativeness of the sample collection and analytical process.

5.3 Decontamination

All sampling equipment, unless pre-sterilized, will be decontaminated before and after collection of each sample. The following decontamination procedures will be performed for sampling equipment used:

- 1) Scrub with brush to remove any excess material
- 2) Wash in Liquinox[®] (phosphate-free detergent) and water solution
- 3) Rinse with potable water
- 4) Rinse with deionized water

Decontaminated sampling equipment will be placed on clean plastic sheeting or on surfaces covered with aluminum foil. Sampling personnel will wear clean nitrile gloves during decontamination of equipment. All decontamination procedures performed during

sampling events will be documented in the field logbook. Any deviations from the standard decontamination procedures will be noted in the field logbook.

5.4 Post Sampling Activities

All samples will be sealed and labeled in the field immediately after collection. The DEQ Project Manager will assure that each sample is properly documented and identified by using the appropriate seals and chain-of-custody forms. Filled sample containers will be sealed in padded plastic bags and placed in ice-filled coolers for preservation to 4° Celsius.

The appropriate copies of the chain-of-custody forms will be submitted with the samples to the assigned CLP or U.S. EPA Region 6 laboratory. Remaining copies will be submitted to the CLP sample management officer and U.S. EPA Region 6. The documentation records accompanying each cooler will be sealed in a plastic bag and taped securely to the inside of the cooler lid. Each cooler will be labeled with a clearly visible return address. The cooler lids will be secured with tape encircling the cooler's ends at least twice. A chain-of-custody seal will be placed at the front left and rear right sides of the cooler so that opening the lid will break the seal. The samples will be promptly shipped through Federal Express overnight service to the designated CLP or U.S. EPA Region 6 laboratory for analysis.

The following types of investigation derived wastes (IDW) will be generated during DEQ's field activities: excess soil samples, disposable sampling equipment, and used personal protective equipment. The unused portions of the soil samples generated from the sampling activities will be returned to the sampling location. Disposable sampling equipment and personal protective equipment will be collected, double-bagged, and disposed of in accordance with U.S. EPA guidance on IDW.

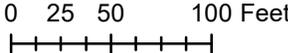


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Street & Performance
Areas of Concern
Figure 5-1

Legend:

- AOC 1
- AOC 2



AFIN:
57-00259

Areas of Concern

Location:	Mena, Arkansas
County:	Polk
Date:	January 2020

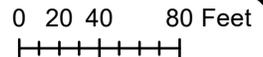


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**Street & Performance
 Proposed Sampling Locations
 Figure 5-2**

Legend:
 □ Site Boundary
 ↗ Site Drainage
 ▶ Flow Direction

- Surface Soil Sample
- Subsurface Soil Sample
- Sediment Sample
- Surface Water Sample



DEQ
 AFIN:
 57-00259

Proposed Sampling Locations	
Location:	<i>Mena, Arkansas</i>
County:	<i>Polk</i>
Date:	<i>January 2020</i>

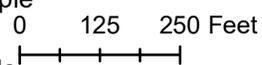


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**Street & Performance
 Proposed Background Locations
 Figure 5-3**

- Legend:**
- Site Boundary
 - ▶ Site Drainage
 - ▶ Flow Direction

- Surface Soil Sample
- Subsurface Soil Sample
- Sediment Sample
- Surface Water Sample



DEQ	Proposed Background Locations	
	Location:	<i>Mena, Arkansas</i>
	County:	<i>Polk</i>
AFIN: 57-00259	Date:	<i>January 2020</i>

**Table 5-1.
Sampling Station Descriptions and Rationales**

Station Identification/Type	Description	Rationale	Sample Identification/QC Type
SSBK-01 Background Surface Soil	Off-site area presumed to be representative; approximately 0.3 miles southwest and upgradient of the site in an open vegetated field south of Polk Rd 298	Low concentration sample collected to document background conditions in the SESSI pathway	Background
SBSBK-01 Background Subsurface Soil	Off-site area presumed to be representative; approximately 0.3 miles southwest and upgradient of the site in an open vegetated field south of Polk Rd 298	Low concentration sample collected to document background conditions in the SESSI pathway	Background
SDBK-01 Background Sediment	Off-site area presumed to be representative; approximately 0.1 miles west and upgradient from the site along Prairie Creek	Low concentration sample collected to document background conditions in the surface water migration pathway	Background
SWBK-01 Background Surface Water	Off-site area presumed to be representative; approximately 0.1 miles west and upgradient from the site along Prairie Creek	Low concentration sample collected to document background conditions in the surface water migration pathway	Background
SS-01 Surface Soil	AOC 1 – Manufacturing Area; low-lying area on the southwest portion of site	Low concentration sample collected to document potential on-site contamination	Normal
SS-02 Surface Soil	AOC 1 – Manufacturing Area; near the small metal-sided shed	Low concentration sample collected to document potential on-site contamination	Normal
SS-03 Surface Soil	AOC 1 – Manufacturing Area; within two feet of the southeast portion of South Building	Low concentration sample collected to document potential on-site contamination	Normal
SS-04 Surface Soil	AOC 1 – Manufacturing Area; low-lying area between South Building and Prairie Creek	Low concentration sample collected to document potential on-site contamination	Normal
SS-05 Surface Soil	AOC 1 – Manufacturing Area; low-lying area on southeast portion of site between former waste pile and Prairie Creek	Low concentration sample collected to document potential on-site contamination	Normal
SS-06 Surface Soil	Duplicate of SS-05	Field Duplicate	Field Duplicate
SS-07 Surface Soil	AOC 1 – Manufacturing Area; east of former waste pile on east portion of site	Low concentration sample collected to document potential on-site contamination	Normal
SS-08 Surface Soil	AOC 1 – Manufacturing Area; within two feet of north side of North Building	Low concentration sample collected to document potential on-site contamination	Normal

**Table 5-1. (cont.)
Sampling Station Descriptions and Rationales**

Station Identification/Type	Description	Rationale	Sample Identification/QC Type
SS-09 Surface Soil	AOC 1 – Manufacturing Area; northwest portion of site near former trailer	Low concentration sample collected to document potential on-site contamination	Normal
SBS-01 Subsurface Soil	AOC 1 – Manufacturing Area; near the small metal-sided shed	Low concentration sample collected to document potential on-site contamination	Normal
SBS-02 Subsurface Soil	AOC 1 – Manufacturing Area; within two feet of the southeast portion of South Building	Low concentration sample collected to document potential on-site contamination	Normal
SBS-03 Subsurface Soil	AOC 1 – Manufacturing Area; low-lying area on southeast portion of site between former waste pile and Prairie Creek	Low concentration sample collected to document potential on-site contamination	Normal
SBS-04 Subsurface Soil	AOC 1 – Manufacturing Area; east of former waste pile on east portion of site	Low concentration sample collected to document potential on-site contamination	Normal
SBS-05 Subsurface Soil	Duplicate of SBS-04	Field Duplicate	Field Duplicate
SBS-06 Subsurface Soil	AOC 1- Manufacturing Area; within two feet of north side of North Building	Low concentration sample collected to document potential on-site contamination	Normal
SD-01 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along Prairie Creek in the southeast portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-02 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along Prairie Creek in the south portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-03 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along Prairie Creek in the southwest portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-04 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along Prairie Creek near the west site boundary	Low concentration sample collected to document potential on-site contamination	Normal
SD-05 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along the drainage ditch at the west site boundary	Low concentration sample collected to document potential on-site contamination	Normal
SD-06 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along the drainage ditch at the west site boundary	Low concentration sample collected to document potential on-site contamination	Normal
SD-07 Sediment	Duplicate of SD-06	Field Duplicate	Field Duplicate

**Table 5-1. (cont.)
Sampling Station Descriptions and Rationales**

Station Identification/Type	Description	Rationale	Sample Identification/QC Type
SD-08 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along the drainage ditch on the north portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-09 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along the drainage ditch on the northeast portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-10 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along the drainage ditch on the northeast portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-08 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along the north site boundary drainage ditch	Low concentration sample collected to document potential on-site contamination	Normal
SD-09 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along a drainage ditch on the east-central portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SD-10 Sediment	AOC 2 – Drainage Ditches and Prairie Creek; along a drainage ditch on the east-central portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SW-01 Surface Water	AOC 2 – Drainage Ditches and Prairie Creek; along Prairie Creek in the southeast portion of the site	Low concentration sample collected to document potential on-site contamination	Normal
SW-02 Surface Water	AOC 2 – Drainage Ditches and Prairie Creek; along Prairie Creek near the west site boundary	Low concentration sample collected to document potential on-site and off-site contamination	Normal
SW-03 Surface Water	Duplicate of SW-02	Field Duplicate	Field Duplicate

**Table 5-2.
Summary of Samples**

Sample Matrix	Number of Samples ^(a)	Number of Field Duplicates ^(b)	Number of Lab QA/QC Matrix Samples
Surface Soil (0-6 inches)	9	1	0
Subsurface Soil (6-18 inches)	6	1	0
Sediment	10	1	0
Surface Water	3	1	0

(a) Number of samples includes background samples but does not include field or laboratory QA/QC samples.

(b) Field duplicate samples are based on a sample frequency of one per ten samples, or 10%, of collected per matrix or concentration level.

**Table 5-3.
Sample Container and Preservation Specifications**

Constituents for Analysis	Analytical Matrix	Container Type	Sample Preservation	Holding Times
TAL Metals + Mercury	Soil/sediment	8 oz. glass jar	Ice to 4°C	180 days
Extractable Organics	Soil/sediment	8 oz. glass jar	Ice to 4°C	7 days
PCBs	Soil/sediment	8 oz. glass jar	Ice to 4°C	14 days
Total Metals + Mercury	Surface Water	1 liter HDPE	pH<2 HNO ₃ , Ice to 4°C	180 days/ Hg-28 days
BNA	Surface Water	1 liter amber glass	Ice to 4°C	7 days

6.0 HEALTH AND SAFETY PLAN (HASP)

This section contains specific health, safety, and emergency response requirements necessary to perform the SI sampling activities. The purpose of this plan is to provide site and task specific operating procedures that will ensure the health and safety of DEQ personnel and any official visitors. This plan includes provisions for preventing, responding to, and reporting injuries, illnesses, and environmental emergencies. Before any field work begins, all field personnel will be briefed on their work assignments and safety procedures contained in this HASP. Each person will have access to a copy of this document and will sign a form stating that they have read, understood, and will abide by the information presented in this document.

6.1 Hazard Assessment

Moderate safety risks are associated with the sampling activities that will be conducted during the SI. Risks include materials handling risks (i.e., lifting, hand and foot injuries), and possible exposure to unknown substances and extreme temperatures.

6.2 Authorities and Responsibilities

The key contacts for the Street & Performance site are:

U.S. EPA Contact

Philip Ofosu (6SF-RA)
Site Assessment Manager
U.S. EPA Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75202-2733
Telephone No: 214-665-3178

DEQ Contact

Chelsea Whetstine, Project Manager
Office of Land Resources
5301 Northshore Drive
North Little Rock, Arkansas 72118
Telephone No: 501-683-0822

The Project Manager, Chelsea Whetstine, will be responsible for ensuring that all work performed during the SI sampling event is in accordance with the site HASP, SAP, TWP, and QAPP. The Project Manager will conduct field activities, enforce health and safety requirements, and oversee work practices to verify they are in accordance with this document. The Project Manager will determine all matters relating to schedule, cost, and personnel assignments that are not safety related.

The Project Manager will be present during all the sampling activities and will be responsible for all health and safety issues. The Project Manager will be responsible for implementing this document, monitoring compliance with safety and emergency procedures, giving the safety briefing, and ensuring sampling equipment is properly maintained. The Project Manager is responsible for maintaining a field logbook reflecting potential hazards, exposures, and implementing control procedures. Work activities will be suspended if the health and safety of personnel are compromised. A safety briefing will be conducted by the Project Manager at the start of each field day.

6.3 Site Control

Access to potentially hazardous areas of the site must be controlled to reduce the occurrence of physical injury and chemical exposure to field personnel, visitors, and the public. The following site control measures will be followed at all times:

- The Project Manager must ensure that no unofficial visitors enter the area being sampled and discourage official visitors from entering hazardous areas. Only DEQ personnel and persons authorized by DEQ personnel will be allowed in this area. Authorized persons may be permitted to enter the support zone only if they agree to abide by the provisions of the HASP and sign a safety briefing form. Official visitors must be informed of the potential dangers that could be encountered at this site. If they enter the exclusion zone, they must be accompanied by DEQ personnel trained according to Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120. Official visitors entering the exclusion zone will be expected to wear the appropriate level of protection.
- Any personnel not required for specific site tasks being performed in the sampling areas will remain in the support zone. Vehicles, clean equipment, first aid equipment, and a portable eyewash station will remain in the support zone unless they are needed in the exclusion zone. Prior to initiating field activities, the Project Manager will plan emergency routes and discuss them with all personnel conducting field work for this project.

The Mena Regional Health System is the nearest hospital to the Street & Performance site and is located at 311 Morrow Street North, Mena, Polk County, Arkansas. A map providing the Mena Regional Health System location and driving directions from the site is provided in **Appendix A** of this TWP. The telephone number for the Mena Regional Health System is 479-394-6100. In addition, 911 should be dialed for all emergencies.

6.4 Personal Protective Equipment

Sampling activities at the Street & Performance site will be conducted in modified Level D personal protection. Personnel working within the actual sampling will be required to wear long pants, steel-toed boots, and chemical resistant gloves. In the event field conditions change, the level of protection will be upgraded to an appropriate level. All

contaminated disposable personal protective equipment and sampling equipment will be placed in containers and disposed of in accordance with U.S. EPA guidance on IDW.

6.5 Employee Training Requirements

Workers within the sampling areas are required to have:

- Forty hours of health and safety training for hazardous waste sites
- Eight hours of refresher training within the last twelve months
- Respirator fit test within the last twelve months
- Three days of supervised field experience on a hazardous waste site

6.6 Medical Surveillance

All personnel involved in field sampling will have a medical examination within the past year, including a:

- Physical examination
- Pulmonary function test
- Blood chemistry evaluation
- Urine chemistry evaluation
- Review of employee occupational and medical history

Employees who are clearly unable to perform the required tasks based on medical history and physical examination will be prohibited from working in contaminated areas. Additional medical examinations will be performed whenever there have been actual or suspected exposure to contaminants following injuries or temperature stresses, or upon experience of exposure symptoms. All medical examinations will be performed by an occupational designated or approved physician.

7.0 QUALITY ASSURANCE PROJECT PLAN (QAPP)

This QAPP has been prepared to provide guidance to DEQ personnel for sampling activities specific to the Street & Performance site. All QA issues will be conducted according to *Guidance for Quality Assurance Project Plans, EPA QA/G-5* (Ref. 18) and the DEQ *CERCLA and Brownfield Quality Assurance Project Plan* (Ref. 19). All personnel involved in the sampling event will be required to review the DEQ *CERCLA and Brownfield Quality Assurance Project Plan*. Sections 7.1 through 7.8 of this TWP address site specific QA issues.

7.1 Quality Assurance Objectives

The QA program objective is to provide data that complies with U.S. EPA analytical criteria for environmental measurements. In addition to the documents listed above in Section 7.0, guidelines are found in *Test Methods for Evaluating Solid Waste*

Physical/Chemical Methods (Ref. 20). As discussed in the SAP, found in Section 5.0 of this TWP, chain-of-custody control is required for: (1) all samples and records; (2) all data transmissions, reductions, and transcriptions; and (3) all other types of documentation.

7.2 Quality Assurance and Quality Control

QA/QC samples will be used to assess the precision, accuracy, representativeness, completeness, and comparability of analytical laboratory data. Guidelines for collecting QA/QC samples and achieving Data Quality Objectives are provided in *Systematic Planning: A Case Study for Hazardous Waste Investigations* (Ref. 21). The QA/QC samples will be collected at the frequency specified in Table 5-2 of this TWP. Field duplicate samples will be collected at specified frequencies and used for precision evaluation of sampling. The laboratory will be required to analyze inter-laboratory split samples to assure the precision and accuracy of the analytical laboratory instruments, as specified by the CLP Statement of Work.

For sample data to be valid, samples must be traceable from the time of collection through chemical analysis and final disposition. U.S. EPA has developed CLP chain-of-custody forms for this purpose. DEQ will obtain the necessary paperwork from U.S. EPA Region 6 and complete the chain-of-custody forms. The CLP sample labeling and shipping guidelines will be referenced for detailed information on completing this activity.

7.3 Analytical Procedures

The Contract Laboratory Analytical Services Support Laboratory will be responsible for following specified quality assurance requirements according to the CLP Scope of Work. Strict adherence to the QA guidelines ensures the highest quality of data possible from the laboratory.

7.4 Data Reduction, Validation, and Reporting

Data reduction and validation will be performed by the CLP laboratory, in accordance with CLP Statement of Work and all applicable standards and guidelines. If the analytical data do not meet the minimum data quality objective, the laboratory will carry out the necessary corrective actions. All data falling outside the QC limits will be flagged by the laboratory.

Validation of all measurement data will be based on adherence to method protocol and the prescribed QC procedures. Data validation forms for organic and inorganic contract laboratory data packages will be completed by CLP laboratory data validation personnel. These checklists are used to evaluate all of the steps leading to the calculation of the final analytical results, including: (1) sample holding times, (2) instrument calibration, (3) blanks, (4) check samples, (5) sample dilutions, (6) precision of duplicate analysis, (7)

matrix spike recoveries, and (8) data completeness. All data elements will be qualified as “acceptable,” “provisional with problems noted,” or “unacceptable,” in accordance with U.S. EPA data qualifiers.

After the assigned laboratory has completed the required analytical services, a complete data package will be sent to the designated DEQ Project Manager. The data package will include, but not be limited to, all requested analytical results, QC data, a validation package, copy of instrument readings, and chain-of-custody forms.

7.5 Internal Quality Control Checks

QC checks of work assignment activities are performed internally by the Branch Manager, Inspector Supervisor, and/or QA Officer. The internal QC check includes, at a minimum, the following areas:

- Accuracy of data collection and management procedures
- Adherence to established sampling and collection methods
- Implementation of health and safety procedures
- Compliance with applicable laws and regulations
- Compliance with chain-of-custody procedures

7.6 Performance and System Audits

Audits are routinely conducted in QA programs to assess and document technical performance. Internal QA audits may be based on information contained in the *Uniform Federal Policy for Quality Assurance Project Plans* (Ref. 22), *Guidance on Assessing Quality Systems, QA/G-3* (Ref. 23), or the *Guidance on Technical Audits and Related Assessments for Environmental Data Operations, EPA QA/G-7* (Ref. 24). Audits will be conducted by the QA Officer and documented on checklists adapted to project-specific requirements.

Upon completion of a QA audit, the QA Officer submits a report to the Branch Manager and/or Inspector Supervisor. Deficiencies and recommended corrective actions are referred to the Project Manager for immediate action. Any corrective action taken by the Project Manager will be reported, in writing, to the QA Officer, Branch Manager, and Inspector Supervisor.

7.7 Corrective Actions

An effective QA program requires rapid, effective, and thorough correction of QA problems. Corrective action minimizes the possibility of questionable data or documentation. To provide a complete record of QA activities, all QA problems and corrective actions are documented in writing to the QA Officer.

7.8 Quality Assurance Reports to Management

The Branch Manager, Inspector Supervisor, and Project Manager will report to the DEQ QA Officer and Senior Operations Manager on the status of any required corrective actions and/or any proposed revisions to the QAPP. QA/QC problems and corrective measures are reported to U.S. EPA in accordance with the DEQ *CERCLA and Brownfield Quality Assurance Project Plan* and the Arkansas Pollution Control and Ecology Commission *Quality Management Plan for the Arkansas Department of Environmental Quality* (Ref. 25).

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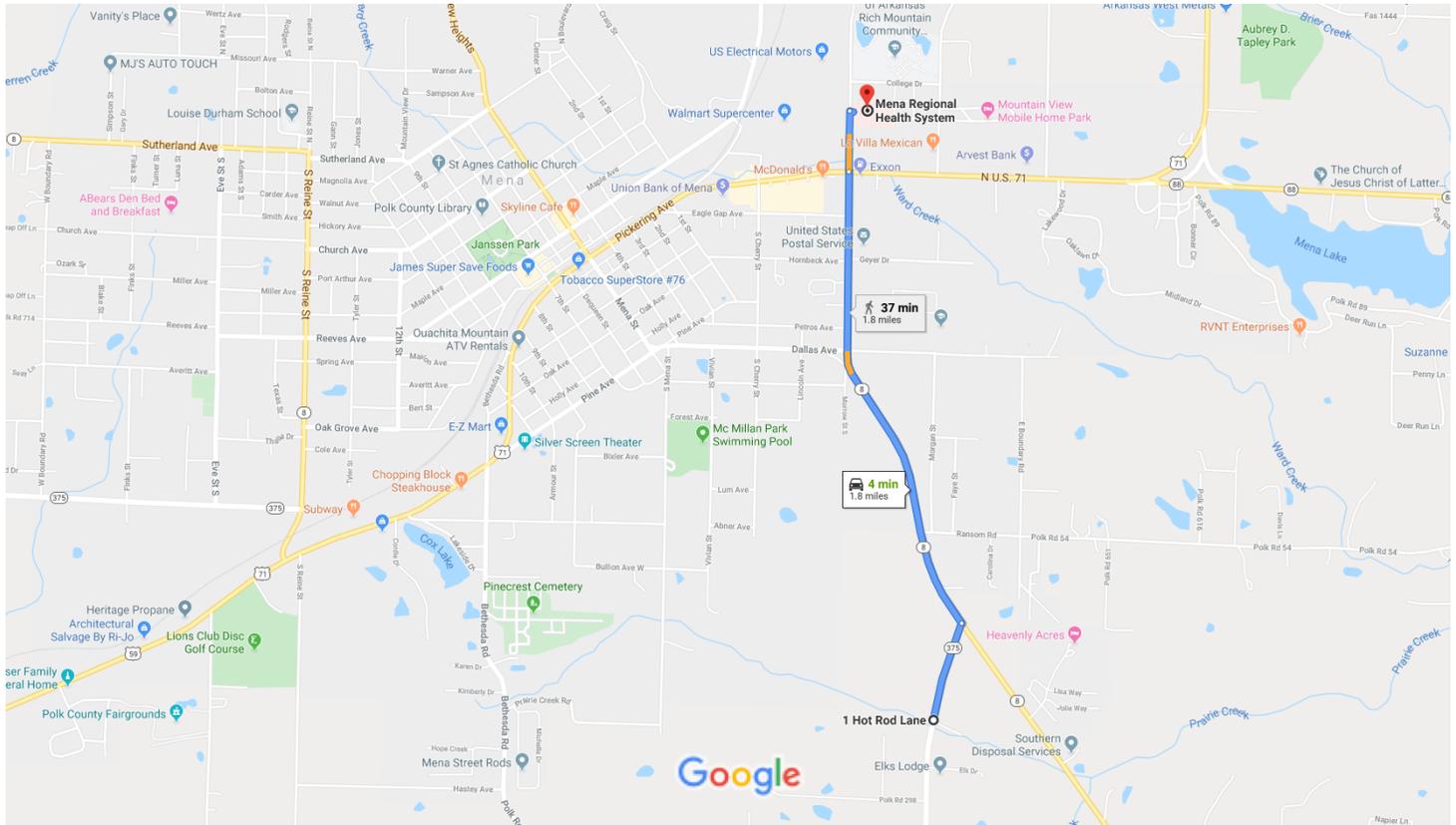
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APPENDIX A
HOSPITAL LOCATION AND DIRECTIONS



1 Hot Rod Ln, Mena, AR 71953 to Mena Regional Health System

Drive 1.8 miles, 4 min



Map data ©2019 1000 ft

1 Hot Rod Ln

Mena, AR 71953

- ↑ 1. Head north on AR-375 N toward AR-8 E
0.3 mi
 - ↶ 2. Turn left onto AR-8 W
1.3 mi
 - ↑ 3. Continue straight onto Morrow St N
0.2 mi
 - ↷ 4. Turn right
52 ft
- [Destination will be on the left](#)

Mena Regional Health System

311 Morrow St N, Mena, AR 71953

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.