

United States Department of the Interior
National Park Service

NR 9-20-06

**National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Maumelle Ordnance Works Locomotive #1

other names/site number Site #SB0808

2. Location

street & number 100 South 4th Street

☐ not for publication

city or town Fort Smith

☐ vicinity

state Arkansas code AR county Sebastian code 131 zip code 72901

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☒ statewide ☐ locally. (See continuation sheet for additional comments.)

Cedric Matthews
Signature of certifying official/Title

7/31/06
Date

Arkansas Historic Preservation Program

State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See Continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

☐ entered in the National Register.

☐ See continuation sheet

☐ determined eligible for the
National Register.

☐ See continuation sheet

☐ determined not eligible for the
National Register.

☐ removed from the National
Register.

☐ other, (explain:) _____

Signature of the Keeper

Date of Action

Maumelle Ordnance Works Locomotive #1
Name of Property

Sebastian County, Arkansas
County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

- ☒ private
☐ public-local
☐ public-State
☐ public-Federal

Category of Property

(Check only one box)

- ☐ building(s)
☐ district
☐ site
☒ structure
☐ object

Number of Resources within Property

(Do not include previously listed resources in count.)

Contributing

Noncontributing

	buildings
	sites
1	structures
	objects
1	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of Contributing resources previously listed in the National Register

6. Function or Use

Historic Functions

(Enter categories from instructions)

TRANSPORTATION/rail-related/locomotive

Current Functions

(Enter categories from instructions)

VACANT/NOT IN USE

7. Description

Architectural Classification

(Enter categories from instructions)

N/A

Materials

(Enter categories from instructions)

foundation N/A

walls N/A

roof N/A

other STEEL

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance**Applicable National Register Criteria**

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- ☒ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ **B** Property is associated with the lives of persons significant in our past.
- ☒ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☐ **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- ☐ **A** owned by a religious institution or used for religious purposes.
- ☐ **B** removed from its original location.
- ☐ **C** birthplace or grave of a historical figure of outstanding importance.
- ☐ **D** a cemetery.
- ☐ **E** a reconstructed building, object, or structure.
- ☐ **F** a commemorative property
- ☐ **G** less than 50 years of age or achieved significance within the past 50 years.

Levels of Significance (local, state, national)

Statewide

Areas of Significance (Enter categories from instructions)

Engineering

Transportation

Period of Significance

1942-1956

Significant Dates

1942-1956

Significant Person (Complete if Criterion B is marked)**Cultural Affiliation** (Complete if Criterion D is marked)**Architect/Builder**

Vulcan Iron Works, Builder

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References**Bibliography**

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☐ previously listed in the National Register
- ☐ Previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey # _____
- ☐ recorded by Historic American Engineering Record # _____

Primary location of additional data:

- ☒ State Historic Preservation Office
- ☐ Other State Agency
- ☐ Federal Agency
- ☐ Local Government
- ☐ University
- ☒ Other

Name of repository:

Fort Smith Trolley Museum

Maumelle Ordnance Works Locomotive #1

Name of Property

Sebastian County, Arkansas

County and State

10. Geographical Data

Acreage of Property Less than one.

UTM References

(Place additional UTM references on a continuation sheet.)

1 15 370021 3916640
Zone Easting Northing
2 _____

3 _____
Zone Easting Northing
4 _____

☐ See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Ralph S. Wilcox, National Register & Survey Coordinator

organization Arkansas Historic Preservation Program

date May 3, 2006

street & number 1500 Tower Building, 323 Center Street

telephone (501) 324-9787

city or town Little Rock

state AR

zip code 72201

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location

A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(Check with the SHPO or FPO for any additional items.)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Fort Smith Trolley Museum

street & number 100 South 4th Street

telephone _____

city or town Fort Smith

state AR

zip code 72901

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listing. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20303.

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SUMMARY

Maumelle Ordnance Works Locomotive #1 is a gasoline-powered locomotive built by the Vulcan Iron Works in April 1942. It was operated initially by the Maumelle Ordnance Works in Maumelle, Arkansas, and the U.S. Army at Newport Army Air Field at Newport, Arkansas, until it was purchased by the Augusta Railroad c.1955. After the Augusta Railroad shut down in 1958 it became the property of Glenn and Tommy Taggart, before being donated to the Fort Smith Trolley Museum in June 1988. Although Vulcan Iron Works produced many steam locomotives beginning in 1849, they produced few gas-mechanical or diesel locomotives before production ceased in 1954.

ELABORATION

The general specifications for Maumelle Ordnance Works Locomotive #1 are as follows:

Make:	Vulcan Gas-Mechanical Locomotive.
Builder:	Vulcan Iron Works, Wilkes-Barre, Pennsylvania. (The engine was built by Hercules.)
Horsepower:	Approximately 250 hp.
Length:	21'6".
Width:	9'0".
Height:	10'0".
Weight:	70,000 lbs.

Maumelle Ordnance Works Locomotive #1 is a gasoline-powered 35-ton locomotive built by Vulcan Iron Works in April 1942. It operated initially at the Maumelle Ordnance Works in Maumelle, Arkansas, and the Newport Army Air Field outside of Newport, Arkansas, before being purchased by the Augusta Railroad c.1955. The locomotive sits on four wheels that are connected via side rods to a counterweight at the rear of each side of the locomotive.

The body of the locomotive consists of a rear cab with hood at the front of the locomotive sheltering the engine. Doors along the sides of the hood allow access to the engine for repairs. The sides of the hood contain metal louvers to allow cooling of the engine, and a large radiator area with grille is located at the front of the locomotive. The name "VULCAN" is located at the top of the radiator. A single headlight is located in the center of the top of the radiator. Flat platforms are located along each side of the hood in front of the cab.

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The locomotive is painted yellow, which has faded, and the sides of the cab have the words "AUGUSTA RAILROAD / CO 7" painted in white. Advertisements for Taggart and Taggart Seed Inc. are located below the railroad's name on the cab. The ends of the frame are painted in black and white diagonal stripes.

Integrity

Maumelle Ordnance Works Locomotive #1 possesses good integrity. Since Locomotive #1 was built, parts of the locomotive have been replaced and repaired. (For example, the engine is currently removed from the locomotive for rebuilding.) However, this is a normal practice for railroad rolling stock as parts wear out.

Maumelle Ordnance Works Locomotive #1 currently resides at the Fort Smith Trolley Museum in Fort Smith on a spur of the original Frisco rail line and approximately 500 feet southwest of St. Louis San Francisco Railway Steam Locomotive #4003 (NR listed 07/11/04). It is surrounded by other pieces of railroad rolling stock. As a result, its current setting still reflects Maumelle Ordnance Works Locomotive #1's period of significance while it was in operation by the Maumelle Ordnance Works, U.S. Army, and Augusta Railroad.

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SUMMARY

Maumelle Ordnance Works Locomotive #1 is being nominated to the National Register of Historic Places with **statewide significance** under **Criterion C** for its engineering as the only Vulcan gas-mechanical locomotive remaining in Arkansas. The locomotive was a workhorse in freight service at the Maumelle Ordnance Works, Newport Army Air Field and on the Augusta Railroad for many years until it was retired and eventually donated to the Fort Smith Trolley Museum. As a result, it is therefore eligible for nomination under **Criterion A** for its association with the role of railroad transportation in Arkansas.

ELABORATION

Although the first railroad line in the United States was laid in the late 1820s, very little railroad construction was completed in Arkansas prior to the Civil War. The Memphis & Little Rock Railroad, which had laid some track westward from Hopefield and eastward from Little Rock, and the Mississippi, Ouachita, & Red River, which had laid a few miles of track inland from Chicot and Arkansas City, were the only railroads to complete any construction prior to 1860.¹

The Civil War, however, delayed the building of railroads by a decade, and it was not until the 1870s that railroad building took off again. The St. Louis, Iron Mountain & Southern built a line south from St. Louis to the Arkansas border. They wanted to go to Texas, and purchased the Cairo & Fulton. Although the Cairo & Fulton had not done any construction, they had secured rights-of-way prior to the Civil War. The St. Louis, Iron Mountain & Southern reached Little Rock by 1872, and had completed the first line across Arkansas when it reached Texarkana in 1874.²

The second railroad line to reach across the state incorporated the Memphis & Little Rock Railroad, and the newly constructed Little Rock & Fort Smith, which had reached the coal fields of Clarksville in 1874 and Fort Smith five years later. The Little Rock & Fort Smith was purchased by Jay Gould (who already owned the Iron Mountain lines) in 1882, and became part of the Iron Mountain system – the largest railroad system in the state in the late nineteenth-century.³

From the 1830s onward, steam locomotives were the standard workhorses on American railroads. The earliest locomotives were usually custom, one-off designs and it was not until the 1850s that locomotive builders progressed beyond the experimental stage of locomotive design and construction to the employment of standard designs that were developed to meet the various conditions that railroads faced. By the late nineteenth century, as trains became longer and heavier and the increased demand for railroad traffic brought

¹ Elliott West. *The WPA Guide to 1930s Arkansas*. Lawrence, KS: University Press of Kansas, 1987 reprint of 1941 publication p. 54.

² *Ibid.*

³ West, p. 55.

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about faster and tighter schedules, American steam locomotives became much larger and more sophisticated. The larger locomotives also brought about a change in manufacturing as well with a shift from small workshops manufacturing locomotives to large industrial factories.⁴

Even though larger scale locomotives were built as time progressed, there was still a need for smaller steam locomotives designed specifically for switching duties in yards. Switchers were usually built to conventional designs, but were relatively small, operated at slow speeds, and had high adhesion in order to move long strings of railroad cars.⁵

The development of locomotives powered by internal combustion engines also occurred in the nineteenth century, specifically by 1885 when the gasoline engine had developed far enough to be accepted as a source of motive power. William Patton, who founded the Patton Motor Company in 1887, was the first person who attempted to use gasoline engines to power railroad equipment. Patton's first car was built by the Pullman Palace Car Company of Chicago in 1888 for use on the city-owned street railway in Pueblo, Colorado, where he lived. The cars were equipped with mechanical transmissions, which did not perform well since the cars often stalled under the large loads they carried or on the steep gradients on the railroad.⁶

Patton realized that the deficiency with the test cars was the transmission and not the gasoline engine. As a result, by 1890, another demonstration car, this time with an electric transmission, was completed by Pullman to Patton's design. The electric transmission solved the problems encountered with the mechanical transmission, and a working agreement was developed between Patton and Pullman that would have Patton's company sell the cars that Pullman built to his designs. Between 1888 and 1893 a total of nine cars were built, although most of them were demonstrators. However, the cars did not gain wide acceptance in the railroad industry and the agreement between Pullman and Patton was ended.⁷

However, Patton was persistent with his ideas, and in 1896 he took one of the unsold demonstrator cars and converted it into a locomotive, which was sold to a contractor building a suburban railroad in the Chicago area. It is reported that the locomotive hauled five-car trains carrying ties and rails on flat cars, and it is supposedly the first gasoline-powered locomotive built in North America. Additional locomotives were built by Patton throughout the late 1890s.⁸

⁴ Colin Garratt & Max Wade-Matthews. *Illustrated Book of Steam and Rail*. New York: Barnes and Noble Books, 2002, pp. 24-25 and 28-31.

⁵ *Ibid*, p.78.

⁶ John F. Kirkland. *Dawn of the Diesel Age: The History of the Diesel Locomotive in America*. Glendale, CA: Interurban Press, 1983, pp. 61-62.

⁷ *Ibid*, p. 62.

⁸ *Ibid*.

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Patton focused on marketing his ideas and his cars to the street railway industry, but General Electric saw that the potential market for his product was the steam railroad and not the street railway. General Electric believed that gasoline-powered railroad equipment would be attractive replacements for steam locomotives hauling one or two cars on branch lines or handling local services on main lines. As a result, they took his ideas and developed the motor car into a commercially viable product.⁹

By the beginning of the twentieth century, the gasoline engine had been developed into a reliable source for railroad motive power. Additionally, as engines with higher horsepower ratings were developed, they became attractive to locomotive manufacturers for use in small industrial locomotives. By 1910, gasoline-powered locomotives with conventional mechanical clutches and transmissions began to be sold by established steam locomotive manufacturers including Baldwin, Porter, and Vulcan.¹⁰

Gasoline-powered locomotives, like diesel locomotives, which became popular by the 1930s and early 1940s, presented several advantages over steam locomotives. Gasoline and diesel locomotives are able to start a heavy train from a standstill more quickly than can a steam locomotive. Additionally, gas and diesel locomotives are ready to work at any time, and spend much less time out of service for service and repairs than do steam locomotives. They can also travel greater distances without stopping for fuel. The many advantages of gas and diesel power would have been appealing to many railroads.

Early gas-powered locomotives resembled their steam locomotive counterparts in appearance. They were gear- or chain-driven from the engine and many of them only delivered power to one axle with side rods delivering power to the other axles. Early gas-powered locomotives were usually rated between 35 and 135 horsepower and weighed between five and 25 tons. Early gas-mechanical locomotives were relatively popular, with Baldwin Locomotive Works alone building 1,230 examples between 1910 and 1926.¹¹

Although gas-powered locomotives were popular, General Electric found out early on that there were some drawbacks when compared to their diesel counterparts. General Electric was disappointed in the fuel economy that gas-powered locomotives showed when compared to steam locomotives used on the same routes. As a result, after 1910, General Electric switched to diesel engines in future locomotive production, especially when at the time diesel fuel was about half the cost of gasoline on a per-gallon basis.¹²

Vulcan Iron Works of Wilkes-Barre, Pennsylvania, which built Locomotive #1, was an established company that was founded in 1849 by Richard Jones. Early on, the company specialized in industrial steam

⁹ *Ibid*, p. 63.

¹⁰ *Ibid*, pp. 63-64.

¹¹ *Ibid*, p. 64.

¹² *Ibid*, p. 71.

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locomotives, but it expanded its product line in the 1920s to include internal-combustion engines. Vulcan further expanded its product line in 1938 to include diesel locomotives. However, the company was never a major competitor in the diesel locomotive market, producing only approximately 51 diesel locomotives before the company closed in 1954.¹³

Maumelle Ordnance Works Locomotive #1 was Vulcan construction #4364 and was built in April 1942. The 35-ton model was built for several years, and was illustrated in the 1947 *Locomotive Cyclopedia of American Practice*. The *Cyclopedia* touted its features by saying:

All Vulcan Diesel and gasoline geared locomotives are equipped with a distinctive four-speed, constant-mesh, spur-gear transmission which permits easy gear changes at relatively high speeds. Gears and shafts are heat-treated nickel-chromium steel mounted on anti-friction bearings and operating in an oil bath. Extra-heavy cross-equalized semi-elliptic springs and Vulcan 3-point suspension assure easy riding on rough track and minimize derailments.

Standard sizes range from 3 to 35 tons, wide or narrow gauge. Diesel-engine locomotives can use either diesel oil, fuel oil, or distillate. Gasoline-engine locomotives, in the same range of sizes, can be equipped to burn either gasoline, alcohol, kerosene, propane or butane. Chain drive, instead of side rods, is optional on locomotives weighing 20 tons or less, at a moderate saving in first cost.¹⁴

The *Cyclopedia* went on further to say that "in all cases the purchaser can rely upon securing a locomotive embodying the very highest standards of materials and workmanship, with unusually ample margins of strength and safety throughout the entire design."¹⁵

Although the locomotive was built by Vulcan, the locomotive's engine was built by the Hercules Motors Corporation of Canton, Ohio. The company was founded on November 30, 1915, as the Hercules Motor Manufacturing Company, but was reorganized and renamed in 1923. Hercules emphasized having a diverse product line, and by the 1930s they were in the forefront of engine production.¹⁶

¹³ Information on Vulcan Iron Works found at: http://en.wikipedia.org/wiki/Vulcan_Iron_Works and Louis A. Marre. *Diesel Locomotives: The First 50 Years*. Waukesha, WI: Kalmbach Publishing Co., 1995, p. 405.

¹⁴ Roy V. Wright (ed.) 1947 *Locomotive Cyclopedia of American Practice*. New York: Simmons-Boardman Publishing Corporation, 1947, Sec. 17, p. 1089.

¹⁵ *Ibid*, Sec. 17, p. 1086.

¹⁶ Heather Rudge and Laura Preville. "Hercules Motors Corporation Industrial Complex, Canton, Stark County, Ohio." National Register of Historic Places Nomination Form. From the Files of the Ohio Historic Preservation Office, Ohio Historical Society, 2004, pp. 8-8 through 8-12.

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By the mid-1930s, Hercules started completing work for the War Department, including producing engines for scout cars, searchlights and amphibious tractors. When World War II began, the company devoted 100 percent of its production to war needs, and as a result, more than 750,000 Hercules engines were used to further the war effort. The majority of the engines were used in military vehicles, but Hercules engines were also used in generators for radar, welders, and communication sets and also used in road-building machinery, marine applications, and, of course, railroad and industrial locomotives. (Hercules would continue to provide engines to the military up through the 1980s, but defense budget cuts greatly affected the company and it closed in July 1999.)¹⁷

During the 1940s, when Locomotive #1 was built, Vulcan played to the U.S. war sentiments by emphasizing its role in the war effort. An advertisement in the February 5, 1944, issue of *Railway Age* magazine stated:

Today, hundreds of Vulcan locomotives are rendering vitally important war-time service, both at home and overseas, and our shops are working at top speed to complete urgent orders for Army, Navy and defense plant requirements. Tomorrow, more and larger Vulcan locomotives will be available to help rebuild a war-torn world. Our manufacturing facilities are being enlarged and improved – engineering and executive staffs strengthened – new sales connections established in many countries.

Write us regarding present or prospective requirements for steam, Diesel or Diesel-electric locomotives – any type or size – wide or narrow gauge. Bulletins in either English, Spanish or Portuguese will be furnished promptly on request.¹⁸

Vulcan's role in the war effort would have made a Vulcan brand locomotive the perfect choice for the Maumelle Ordnance Works and the Newport Army Air Field, especially in early 1942 just after America's entry into the war subsequent to the attack on Pearl Harbor.

The Maumelle Ordnance Works main function during World War II was the manufacture of two kinds of explosives, picric acid and ammonium picrate. Picric Acid (2, 4, 6- trinitrophenol) was the modern high explosive to be used extensively as a burster in gun projectiles. It was first obtained by the nitration of indigo, and used primarily as a fast dye for silk and wool. It offered many advantages: when compressed it

¹⁷ *Ibid.*

¹⁸ Information on Vulcan Iron Works found at: http://en.wikipedia.org/wiki/Vulcan_Iron_Works.

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was used as a booster for other explosives, and when cast, served as a burster in explosive shells. It was stable, insensitive, relatively nontoxic, and had a high density when cast.¹⁹

The War Department decided to build Maumelle Ordnance Works on July 11, 1941, after entering into contract W-ORD-525-DA-W-ORD-11 with the Cities Service Defense Corporation. It acquired 7,613.61 acres located near West Marche, Arkansas, for this plant. The plant would exclusively be for the production of picric acid and ammonium nitrate. Approval of the contract for the Maumelle Ordnance Works was granted on July 15, 1941. The contract originally called for an ammonium picrate plant composed of six units with an estimated average daily capacity of 75,000 pounds. After the initial survey and the laying of water and gas lines, work on the administration buildings commenced on September 2, 1941. The main facilities of the Maumelle Ordnance Works contained various buildings associated in the manufacture of ammonium picrate and picric acid, along with a synthetic nitric acid plant, a nitric acid condensing plant, and sulfuric acid reclaiming plant. These facilities also had cooling towers, auxiliary tanks and other buildings. They were interconnected by pipelines, utility lines and a road system. In all there were nine ammonium picrate manufacturing units, dryer houses, auxiliary buildings, tanks and other equipment.²⁰

The plant placed orders for the raw material of the production of ammonium picrate in February 1942. In March 1942, a supplement to the original contract was approved. It called for a fifty percent increase in capacity. A subsequent change order provided for the recovery of nitric acid. The plant was to consist of nine ammonium picrate manufacturing units. Delays in the arrival of equipment slowed work on the plant, but work continued on the facilities. These facilities included 21 storage igloos (bunkers). The first ammonium picrate unit was ready to begin production on March 29, 1942.²¹

The plant was basically completed on May 25, 1942. The first sulfuric acid concentrator started on June 11. On June 25, the War Department asked the contractor to begin the production by July 16, 1942. Capacity was subsequently increased by the addition of the extra three ammonium picrate units on November 17, 1942. Due to the critical supply of the raw material, phenol, the plant was under-utilized with only six ammonium picrate units running by the end of the year.²²

Once Locomotive #1 was built and ready for delivery, it was likely delivered to the Maumelle Ordnance Works on a flatcar. According to the *1947 Locomotive Cyclopedia*, with respect to domestic shipment of Vulcan locomotives, "Narrow-gauge locomotives are usually shipped to their destination on flat or low-sided cars, with all parts liable to injury removed and carefully boxed. Standard-gauge locomotives, from

¹⁹ Timmons, Tina, and Elizabeth James. "Maumelle Ordnance Works Bunker #4, Maumelle, Pulaski County, Arkansas." National Register of Historic Places Nomination Form. From the Files of the Arkansas Historic Preservation Program, 2006.

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Ibid.*

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forty tons upward, are usually forwarded on their own wheels, accompanied by an engineer. In either case all bright work is thoroughly protected against corrosion."²³

A locomotive like the Vulcan 35-ton model would have been ideal for the switching duties required at the Ordnance Works. The relatively few numbers of railroad cars that would have been needed to service the facility would have been ideal for a small locomotive like #1. Railroad cars with supplies or completed ordnance would have been switched around the base by Locomotive #1.

Production of ammonium picrate and picric acid continued at Maumelle Ordnance Works until August 15, 1945, when the War Department notified that all production would terminate. However, an exception was made for the production of special fine ammonium picrate. The next day, the contractor put the plant into standby conditions and they began the decontamination of the plant. Subsequently the production of special fine ammonium picrate ceased on August 23. The contractor finished the decontamination operations of the plant by November 20, 1945.²⁴

The Little Rock District of the U.S. Army Corps of Engineers transferred 2,344.06 acres in the safety zone of the plant to the Federal Land Bank's Surplus Property Board on September 13, 1945. On December 19, 1945, the U.S. Army Ordnance Department continued the decontamination and shutdown of the plant. The contractor provided a final report of its decontamination activities on February 28, 1946. The U.S. Army Corps of Engineers assumed standby operations for the entire plant on April 26, 1946. By February 1947, the safety zone property had either been returned to former owners or sold. The plant remained in a standby status, falling under command of the Arkansas Ordnance Works. Attempts were made to lease parcels of the reservation for grazing purposes. They also used the storage igloos at the Maumelle Ordnance Works to house in-transit bulk explosives. The land and plant were eventually sold to the Perry Equipment Company on March 3, 1961. The Perry Equipment Company performed considerable salvage of the plant facilities. During the 1960s, the Perry Equipment Company sold the property to the Maumelle Land Development Corporation, and it was eventually developed into the City of Maumelle.²⁵

Locomotive #1 was transferred to the U.S. Army and renumbered 8223 before being sent to the Newport Army Air Field northeast of Newport, Arkansas.²⁶ As at the Maumelle Ordnance Works, a locomotive like the Vulcan 35-ton model would have been ideal for the switching duties required at the Newport Army Air Field. The relatively few numbers of railroad cars that would have been needed to service the air field would

²³ Wright (ed.), Sec. 17, p. 1086.

²⁴ Timmons, Tina, and Elizabeth James. "Maumelle Ordnance Works Bunker #4, Maumelle, Pulaski County, Arkansas." National Register of Historic Places Nomination Form. From the Files of the Arkansas Historic Preservation Program, 2006.

²⁵ *Ibid.*

²⁶ Information on the Augusta Railroad found at: <http://donsdepot.donrossgroup.net/dr078.htm> and telephone conversation with Tommy Taggart, 1 March 2006.

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have been ideal for a small locomotive like #1. Railroad cars with supplies would have been switched around the base or brought from the Missouri Pacific Railroad spur that entered the base from the northwest.

In the 1950s, Locomotive #1 was acquired by the Augusta Railroad, and renumbered as Augusta Railroad Locomotive #7.²⁷ The Augusta Railroad was incorporated on April 4, 1918, and grew out of the previous Augusta Tramway & Transfer Company. In the 1880s, the St. Louis & Iron Mountain Railway was building a rail line west from the Mississippi, and the company determined that the ideal place to build a bridge across the White River was at Augusta. When the town was approached about the possibility of building the railroad through the town, the city fathers decided that they did not want the rail line, or at least the undesirable people who came with it. In addition, any goods that the town needed could be imported or exported on the river.²⁸

As the railroad flourished and river traffic decreased, the townspeople realized that they needed to connect to the railroad in order for Augusta to survive. As a result, the people of Augusta built their own railroad, the Augusta Tramway and Transfer Company, in 1887 to connect to the St. Louis & Iron Mountain. Early equipment on the line was primitive at best, mainly primitive freight cars and an old streetcar for passengers, all pulled by mules. However, as the twentieth century dawned, a small steam locomotive was acquired from an Alabama plantation, and a used coach was purchased from the nearby Searcy & West Point Railroad. Business boomed on the Augusta Tramway and Transfer line until just after World War I, when the line was offered to the highest bidder on December 14, 1917.²⁹

When the Augusta Railroad Company took over the line, the tracks began at the intersection of Locust Street and Front Street, ran east along Locust Street, and then turned south to the depot at New Augusta. The total length of the line was 1-2 miles. Although there were sporadic periods of prosperity on the railroad, they were few and far between. By the 1950s, the amount of cotton shipped on the railroad declined from 7,600 bales in 1952 to 1,114 bales in 1957.³⁰ On March 20, 1958, the end of the line was near when the *Augusta Advocate* reported that "The Augusta Railroad Company last week asked the Interstate Commerce Commission for permission to abandon its 3-mile line (three miles, including spur tracks). The Company said the operation was being conducted at a loss."³¹

²⁷ Telephone conversation with Tommy Taggart, 1 March 2006.

²⁸ Hull, Clifton E. *Shortline Railroads of Arkansas*. Norman, OK: University of Oklahoma Press, 1969, pp. 14-16.

²⁹ Hull, pp. 17-18.

³⁰ Hull, pp. 19, 21.

³¹ "World's Shortest Railroad to Quit." *Augusta Advocate*, 20 March 1958, p. 1.

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When Locomotive #1 was brought to the Augusta Railroad, the line was relying on Engine #300 for its motive power, a 1924 Alco 2-6-0 that was purchased second-hand from the Arkansas Railroad Company of Star City in 1926. However, by 1958, Engine #300's days were also numbered, as reported by the *Augusta Advocate*. The newspaper reported that "Old No. 300' engine of the Augusta Railroad Company may have made her last run. The engine has been condemned by the Interstate Commerce Commission because of the number of defects and will not be permitted to be used until repairs are made."³²

An engine like Locomotive #1 would have been ideal for the Augusta Railroad's needs during the 1950s when it was acquired. The amount of rail traffic using the Augusta Railroad's tracks was light and the distance that the locomotive needed to cover was short. Although the tracks that the engine traveled on were technically the Augusta Railroad's "main line," it was really more of a switching operation like the locomotive would have served at the Maumelle Ordnance Works and the Newport Army Air Field.

Although some of Augusta's citizens protested the proposed closing of the Augusta Railroad, the Interstate Commerce Commission granted conditional approval to abandon the lines in December 1958. The December 1, 1958, *Augusta Advocate* reported:

The Interstate Commerce Commission today granted conditional authority to Augusta Railroad Company to abandon its entire line consisting of about four miles of track linking Augusta and New Augusta.

The Commission noted that businessmen in the area have indicated interest in continuing operation of the line. It is said the discontinuance permit was conditioned on the Company's willingness to sell the line to any responsible bidder at not less than net salvage value within 35 days.

The net salvage value was estimated at around \$20,000.³³

The railroad's assets were later purchased by Glenn Taggart and Bing Miller, who were Augusta businessmen. (Taggart was one of the citizens that attended a September 1958 hearing to protest the line's abandonment.) Subsequently, Tommy Taggart purchased Miller's interest in the line.³⁴

In later years, Locomotive #1 remained in the possession of Tommy Taggart. He donated the locomotive to the Fort Smith Trolley Museum in June 1988, along with Augusta Railroad Locomotive #6 (Former U.S. Army Quartermaster Corps Locomotive #821), where it remains today.³⁵

³² "May Have Made Final Run." *Augusta Advocate*, 8 May 1958, p. 1.

³³ "Augusta R.R. Gets Conditional Okay to Abandon Lines." *Augusta Advocate*, 1 December 1958, p. 1.

³⁴ Telephone conversation with Tommy Taggart, 1 March 2006.

³⁵ Information on Maumelle Ordnance Works Locomotive #1 provided by the Fort Smith Trolley Museum.

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Today, Maumelle Ordnance Works Locomotive #1 is a living reminder of Arkansas's rich railroad history. Maumelle Ordnance Works Locomotive #1 is an excellent and rare example of a Vulcan gas-mechanical locomotive in Arkansas, and illustrates the development and use of gasoline-powered locomotives in the early twentieth century. The survival and continued preservation of Locomotive #1 is a monument to the dedication of the Fort Smith Trolley Museum.

STATEMENT OF SIGNIFICANCE

Maumelle Ordnance Works Locomotive #1 is being nominated to the National Register of Historic Places with **statewide significance** under **Criterion C** for its engineering as the only Vulcan gas-mechanical locomotive remaining in Arkansas. The locomotive was a workhorse in freight service at the Maumelle Ordnance Works, Newport Army Air Field and on the Augusta Railroad for many years until it was retired and eventually donated to the Fort Smith Trolley Museum. As a result, it is therefore eligible for nomination under **Criterion A** for its association with the role of railroad transportation in Arkansas.

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VERBAL BOUNDARY DESCRIPTION

From the southwest corner of the Fort Smith National Cemetery, proceed along the western edge of the stone wall for 600 feet to the point of beginning. From the point of beginning, proceed northeasterly along the wall for 40 feet, thence proceed northwesterly perpendicular to the wall for 40 feet, thence proceed southwesterly parallel to the wall for 40 feet, thence proceed southeasterly perpendicular to the wall for 40 feet to the point of beginning.

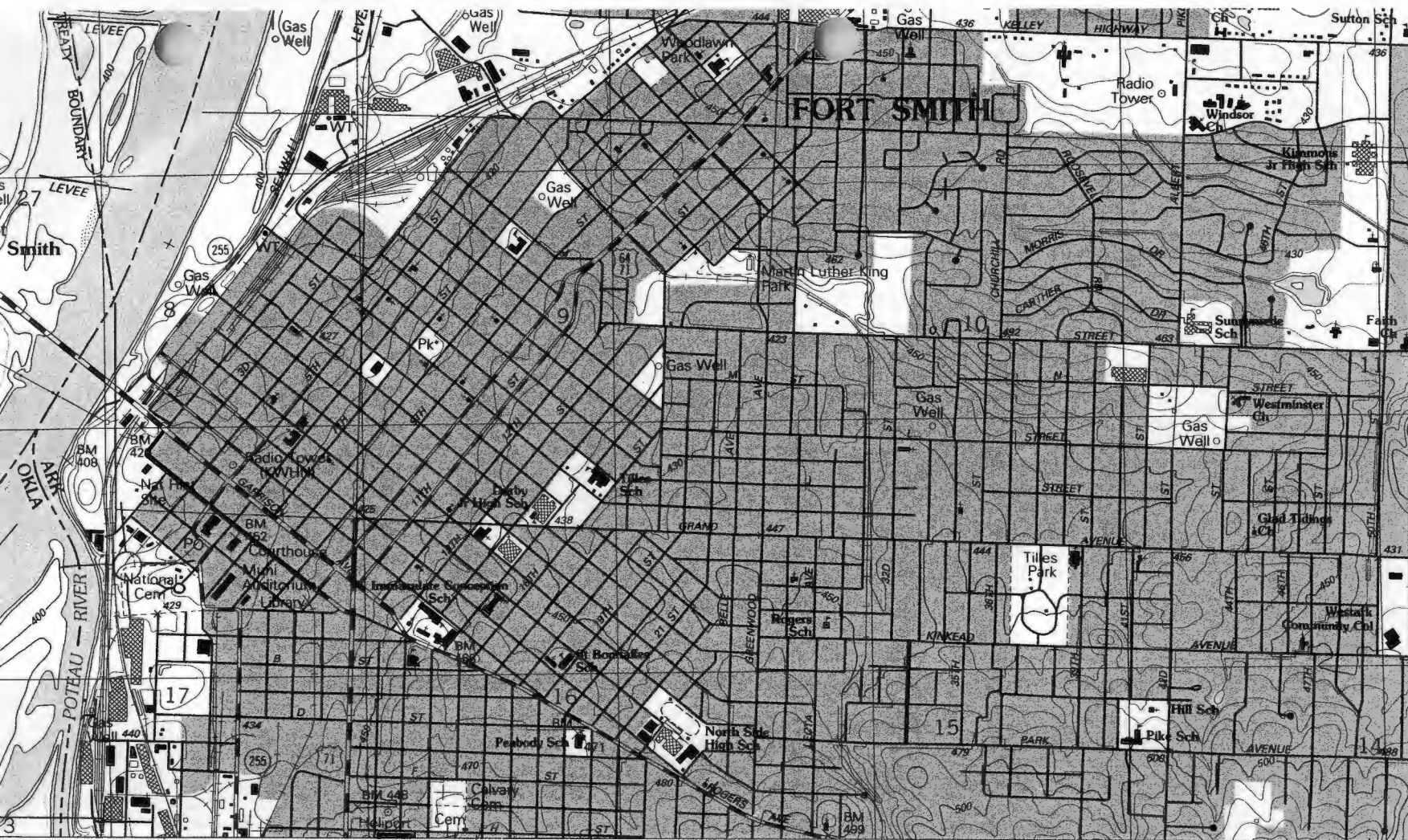
BOUNDARY JUSTIFICATION

The boundary encompasses all of the property that contains Maumelle Ordnance Works Locomotive #1.



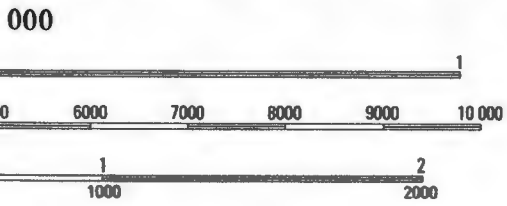






MAUMELLE ORDINANCE
WORKS LOCOMOTIVE #1,
FORT SMITH, SEBASTIAN
COUNTY, AR
UTM:
15/370021/3916640
160 000 FEET
(OKLA. NORTH)

MITH) R 27 E R 32 W 371 25' 3 070 000 (OKLA. NORTH) 22 373 374000E 35° 22' 30" 94° 22' 30"



ROAD CLASSIFICATION

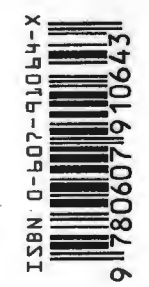
- Primary highway, hard surface Light-duty road, hard or improved surface ...
- Secondary highway, hard surface Unimproved road ...
- Interstate Route ○ U. S. Route ○ State Route

FORT SMITH, ARK.-OKLA.

1997

NIMA 7154 IV NW-SERIES V884

(BARLING)
7154 IV NW



AL 10 FEET
INTERVAL 5 FEET
AL DATUM OF 1929
ERS, MULTIPLY BY 0.3048
MAP ACCURACY STANDARDS
OX 25286, DENVER, COLORADO 80225
LITTLE ROCK, ARKANSAS 72204
Y, NORMAN, OKLAHOMA 73069
SYMBOLS IS AVAILABLE ON REQUEST