NPS Form 10-900
(Rev. 10-90) VLR- 3/17/99

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

DRAFT

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 any 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

85-~~???~~ 51

*historic name* Van Buren Furnace

*other names/site number* King Furnace

## 2. Location

*street & number* Northeast of Route 713
George Washington and Jefferson National Forests

*not for publication* ___

*city or town* Woodstock *vicinity* X

*state* Virginia *code* VA *county* Shenandoah *code* 171

*zip code* ________

## 3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, 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 forth 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.)

________________________________________

*Signature of certifying official* *Date*

________________________________________

*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 commenting or other official* *Date*

________________________________________

*State or Federal agency and bureau*

## 4. National Park Service Certification

I, hereby certify that this 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 Keeper* *Date of Action*

## 5. Classification

*Ownership of Property*
*(Check as many boxes as apply)*

___ private
___ public-local
___ public-State
_X_ public-Federal

*Category of Property*
*(Check only one box)*

___ building(s)
___ district
___ site
_X_ structure
___ object

*Number of Resources within Property*
*(Do not include previously listed properties in the count)*

| Contributing | Noncontributing | |
|---|---|---|
| 1 | 3 | buildings |
| 5 | 1 | sites |
| 5 | | structures |
| | | objects |
| 11 | 4 | Total |

*Number of contributing resources previously listed in the National Register* N/A

*Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)* The Iron Industry of Virginia, 1620-1920

## 6. Function or Use

*Historic Functions*
*(Enter categories from instructions)*
Industry/Processing/Extraction
Iron Furnace

*Current Functions*
*(Enter categories from instructions)*
Vacant/Not in Use

## 7. Description

*Architectural Classification*
*(Enter categories from instructions)*
No Style

*Materials*
*(Enter categories from instructions)*
*foundation*: Limestone
*walls*: Limestone
*roof*: N/A
*other*: Brick-Lined Stack

*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)*

X 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.

X 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.

X 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.)*

___ A owned by a religious institution or used for religious purposes.

___ B removed from its original location.

___ C a birthplace or a grave.

___ 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.

*Areas of Significance*
*(Enter categories from instructions)*

Architecture
Industry

*Period of Significance*

1837-1855 ca.
1873-1884

*Significant Dates*

1837
1873
1884

*Significant Person*
*(Complete if Criterion B is marked above)*

*Cultural Affiliation*

*Architect/Builder*

*Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)*

## 9. Major Bibliographical References

*(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*
_X_ State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
___ Other

*Name of repository:* ________

## 10. Geographical Data

*Acreage of Property* 9

*UTM References (Place additional UTM references on a continuation sheet)*

| | Zone | Easting | Northing | | Zone | Easting | Northing |
|---|---|---|---|---|---|---|---|
| A | 17 | 711575 | 4316925 | D | | | |
| B | | | | F | | | |
| C | | | | F | | | |

___ 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* Heather Crowl; Emlen Myers, Project Archeologist

*organization* Dames & Moore, Cultural Resource Services

*date* 9-30-96

*street & number* 7101 Wisconsin Avenue, Suite 700 *telephone* (301) 652-2215

*city or town* Bethesda *state* MD *zip code* 20814

## 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 the SHPO or FPO.)*

*name* George Washington and Jefferson National Forests, USDA Forest Service C/O Mike Barber

*street & number* 5162 Valley Pointe Parkway *telephone* (450) 265-5100

*city or town* Roanoke *state* VA *zip code* 24019-3050

**Description of Historic Resources**

Van Buren Furnace is situated in Shenandoah County at the intersection of Cedar Creek and an unnamed tributary feeding into it. It is located within the George Washington and Jefferson National Forests, in an area of young deciduous trees. The furnace site is overgrown with vegetation.

**Original**

The iron furnace complex at Van Buren was built in 1837. It included the iron furnace and its support facilities, as well as facilities necessary to support the workers and animals who operated the furnace. The furnace was not productive and was abandoned in the 1850s. The exact dimensions of this early furnace are not known. In 1873 the dilapidated furnace was removed and replaced with a larger furnace that could accommodate a hot blast. The new charcoal stack was about 40' high and 9' across the bosh, with two tuyeres. The outer walls were constructed of dry-laid, dressed local limestone and sandstone. The furnace was connected to a ridge to the north by a charging bridge over which iron ore, limestone flux, and charcoal were wheeled and dumped into the central, brick-lined cavity. A casting house where molten iron was formed into pigs and sows in sand molds was located near the furnace. The tub bellows were powered by a waterwheel, and later by a steam engine, set east of and close to the stack. A contained race emptied into the creek about 300' west of the furnace. Additional wooden structures were located on the adjacent hill and included the iron master's house, workers' dwellings, general store, blacksmith shop, stables, and iron ore and charcoal sheds.

**Present**

Van Buren Furnace remains in good condition. The square, trapezoidal stone furnace is roughly thirty feet at the base, tapering at the top. Most of the overall furnace exterior is intact with clearly defined walls reaching over thirty feet in height. The furnace is built of rough-dressed limestone blocks and sandstone slabs. The arches are clearly defined and in good condition, although two have been reinforced with brick and mortar. The tap hole faces west, and the casting area west of the tap hole has minimal vegetation (grass). The square tap arch is intact with iron lintels supporting an inverse stepped ceiling. An outer flue is also supported by an iron lintel. The entrance has been bricked up, with iron braces added to the brick work. Two smaller square blast arches sit on opposite sides of the furnace; in the southern tuyere arch the blast opening has been reconstructed with brick and mortar. Blast equipment probably supplied both tuyere holes from the rear of the furnace. The north face of the furnace abuts a ridge. All arches are corbelled and have iron lintels. The east face of the furnace is partially collapsed, revealing the inner brick stack.

The north face of the furnace includes a 9' high stone wall attached to and perpendicular to the face. It leads out from the face about 4' and turns ninety degrees to the west to form a support for an earthen terrace. Another less extensive stone terrace support runs parallel to the first. The support for the bridge to the charging deck is located beyond this terrace, and is built on a large natural stone foundation. The bridge support is built up almost to the height of the furnace. The charging deck at the top of the furnace appears intact. A large earthen ramp leads up to the bridge support from the north; the ramp is reinforced on both sides with stones. Beyond this ramp a road bed runs north, northwest across a relatively flat area. Many concentrations of stone are seen in this area and may be evidence of foundations. Most likely, the majority of wooden structures associated with the furnace were located here.

A rectangular, stone-supported, depression is in a heavily overgrown area east of the furnace. The means of producing a blast (bellows, water wheel, or steam engine) was located in this area. A dressed stone foundation is visible on the ridge above the furnace; its original size and function cannot be determined. There are many charcoal deposits on the ridge near the charging deck location. The outflow from a contained race is located about 300 feet west of the furnace. This channel includes collapsed stone walls. A large slag pile is located between the channel and the furnace. The area south of the furnace includes metal rods and two parallel stone walls. Other possible features can be seen throughout the property. The remains of the miniature experimental furnace, Van Buren Furnace No. 2, were not located.

One contemporary standing structure is located about 1000 feet up route 713. This building is currently used as an outbuilding by the occupants of a nearby, non-contributing house. The building is a 2-story, brick, common bond structure with a standing seam, metal gable roof. It has a ventilation cupula on top, and a wooden exterior staircase. There is no access between the first and second floors in the interior of the building. A chimney is located at the rear of the building, which abuts a ridge. The windows have stone lintels above and below them, and have 6/6 sash. The building is located adjacent to a spring, which is currently not draining and has flooded the first floor. Based on field investigation, this building may have been used by the furnace operators as a combination spring house for storage on the first floor, and office on the second floor. In addition to this structure and the modern house, two non-contributing sheds are located in this area.

**History**

Van Buren Furnace was built in 1837 for L. D. and G. W. Sibert on Cedar Creek in Shenandoah County, Virginia. It was named for the eighth president of the United States. The furnace did not run efficiently, and in 1854 the owners tried to increase performance by reducing the diameter of the stack. This and other changes to the design resulted in lower production. Van Buren Furnace also used a low grade ore from West Mine, reducing output. In the middle 1850s Van Buren was shut down because it could not compete with anthracite furnaces in Pennsylvania.

During the Civil War, Van Buren Furnace was owned by Miller and Mayhew of Baltimore, and remained out of service. The furnace was visited by Union troops, but never burned. This may have been because it was dilapidated, or because it was owned by people from the North.

Van Buren Furnace was rebuilt in 1873 on the site of the old furnace, and for some time called King Furnace. This charcoal-burning furnace had a closed top, and used a hot blast produced by steam to extract iron. The owners used hematite ore mined on the furnace property, and produced high quality iron in large quantity. Iron from this furnace was used to manufacture car wheels. The furnace operated until 1884, when financial troubles affected the entire area. During the productive years of Van Buren Furnace, Lorenzo Sibert built a miniature furnace six hundred feet from the older one. This furnace, called Van Buren No. 2, was only three feet in diameter and twenty-two feet high. Sibert planned to use this furnace to experiment with different combinations of ore, and try to produce malleable iron directly from ore. Van Buren Furnace No. 2 ran for only ten days. According to local tradition, a solid block of iron that resulted from the sudden cooling of the furnace remained inside the stack until World War I when it was taken away for scrap.

**Significance and Integrity**

Van Buren iron furnace is representative of the importance of the iron industry in Virginia during the nineteenth century. The furnace reflects the trends in furnace construction in Virginia during this time period. It was built in 1837 on the plan common to the early nineteenth century. In 1873 it was rebuilt to include new technologies like a steam-produced hot blast. The furnace was not, however, converted to using coke, and therefore reflects the tendency of Virginia to be slow in converting to new technologies. Van Buren Furnace was an important part of the iron industry of Virginia. Its activities altered the local landscape through deforestation for charcoal production, and brought money and people into this area of Virginia.

The potential for archeological investigation is significant at Van Buren Furnace. Artifacts including cut nails can be seen on the surface, and foundations of unknown structures are present. Research could provide information about workers' living conditions, ethnicity, and economic background. Transportation of raw materials and finished products could be investigated as well. The furnace and surrounding features would contribute information about iron extraction technology, innovation, and change through time.

Van Buren Furnace retains a high degree of integrity. The area contains intact subsurface and structural remains that could contribute to our understanding of the nineteenth century iron industry in Virginia.

**Bibliography**

Capron, John D.

1969 *Van Buren Furnace, Shenandoah County.* Personal Files of John D. Capron. Typescript dated Nov. 24, 1969. Lynchburg College, Virginia.

**Boundaries**

The Van Buren Furnace property is bisected by Route 713. The boundary extends north beyond the associated features to a small tributary of Cedar Creek, east to the same creek after it bends to head south, south to Cedar Creek, and west to the spring. The boundary includes the furnace, race, spring house, wheel pit and other evidence of supporting structures. All areas that retain a high level of integrity and are likely to yield information about the nineteenth century Virginia iron industry are included in the boundary.