

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC Eleutherian Mills

AND/OR COMMON
Eleutherian Mills - Hagley Museum

2 LOCATION

STREET & NUMBER

on Delaware 141 at Brandywine Creek Bridge, north of Wilmington

CITY, TOWN

Greenville

VICINITY OF

STATE

Delaware

CODE

10

COUNTY

New Castle

CODE

3

3 CLASSIFICATION

CATEGORY

- DISTRICT
- BUILDING(S)
- STRUCTURE
- SITE
- OBJECT

OWNERSHIP

- PUBLIC
- PRIVATE
- BOTH

PUBLIC ACQUISITION

- IN PROCESS
- BEING CONSIDERED

STATUS

- OCCUPIED
- UNOCCUPIED
- WORK IN PROGRESS
- ACCESSIBLE**
- YES: RESTRICTED
- YES: UNRESTRICTED
- NO

PRESENT USE

- AGRICULTURE
- MUSEUM
- COMMERCIAL
- PARK
- EDUCATIONAL
- PRIVATE RESIDENCE
- ENTERTAINMENT
- RELIGIOUS
- GOVERNMENT
- SCIENTIFIC
- INDUSTRIAL
- TRANSPORTATION
- MILITARY
- OTHER:

4 OWNER OF PROPERTY

NAME

Eleutherian Mills - Hagley Foundation

STREET & NUMBER

on Delaware 141 at Brandywine Creek Bridge

CITY, TOWN

Greenville

VICINITY OF

STATE

Delaware

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

New Castle County Courthouse

STREET & NUMBER

1100 King Street

CITY, TOWN

Wilmington

STATE

Delaware

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Historic American Buildings Survey

DATE

1936

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR
SURVEY RECORDS

Library of Congress Annex, Division of Prints & Photographs

CITY, TOWN

Washington

STATE

D.C.

7 DESCRIPTION

CONDITION

EXCELLENT
 GOOD
 FAIR

DETERIORATED
 RUINS
 UNEXPOSED

CHECK ONE

UNALTERED
 ALTERED

CHECK ONE

ORIGINAL SITE
 MOVED DATE _____

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Eleutherian Mills were first established on a 95 acre tract on the west bank of Brandywine Creek, just north of Wilmington, Delaware. Within this parcel of land Jacob Broom had erected one of the many mills which utilized the strong waterpower of the Brandywine. The mill had burned in 1797, but the dam remained, as did an earlier, small, two-story stone house which housed the du Ponts while they were engaged in the initial constructions, during the winter of 1802-03. Within the first year, Irène du Pont constructed the greater part of his powder refinery, as well as his barn and "Eleuthèrian Mills," the family house, which was situated on a hill overlooking the saltpetre refinery, and still lower, the mills themselves on the river bank.

The main house (#1, refer to attached plot map), completed by August, 1803, originally consisted of a large rectangular, central section, two-and-a-half stories tall, with a gable roof pierced by three dormers on a side, built of stuccoed stone. The symmetrical wings were added by Irène's son, Henry in 1843. They are slightly shorter than the original section, but are of similar construction with gable roofs, each pierced by one dormer on a side. A central hallway runs the width of the house from the front entrance past a handsome winding staircase to a porch with delicate iron grillwork, which was moved from the front of the house to where it now commands a fine view of the creek below. The many rooms of the mansion are currently furnished, each with the pieces of a different period or style. Below the house, an ornamental garden has been planted over the ruins of the refinery. Nothing remains of the original mills which were situated just beneath the house on the river bank. In front of the mansion, the original barn (#2), and the first company office (#3), used from 1837 to 1892, have been restored to their 19th century appearance and are open to the public. Just north of the mansion is the Eleuthèrian Mills Historical Library (A), a new building which houses du Pont archives and works on industrial and technological history.

Southeast of the original mill location, further downstream, is the old Upper Hagley Yard, acquired by the du Ponts in 1812, where the majority of the industrial remains are located. Here, situated on the river bank, between the Brandywine and the millrace, are twenty-one mills, in varying states of repair, which for over one hundred years performed the operations of powder manufacturing, which included the purification of charcoal, sulphur, and saltpetre, and then the crushing and mixing of the ingredients. With heavy stone walls on three sides combined with light roofs and streamside facades, the design of the mills was intended to vent the blast force of an accidental explosion harmlessly across the water. All of the powder mills were at one time powered by water wheels or turbines which received their flow through individual flumes from the raceway. The water wheel was the traditional means by which the latent force of the millstream was converted into power to move machinery. Many of these mills were constructed in pairs; their equipment driven by a centrally-placed water wheel. The Birkenhead Mills (#4) are one such pair of roll mills, constructed 1822-24, which have had the water wheel reconstructed to power the 10 ton castiron wheels. The Eagle Roll Mills (#5), circa 1886, are similarly operable, but by means of a water

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input checked="" type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input checked="" type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1803-1921

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The Eleutherian Mills were erected on the west bank of Brandywine Creek, just north of Wilmington, Delaware by Eleuthère Irénée du Pont from 1802-1803. For 120 years they served as the original blackpowder works and industrial center of E.I. du Pont de Nemours & Company. Today the several mills, residences and associated structures of the industrial community are maintained by the Eleutherian Mills-Hagley Foundation as a museum complex devoted to American technological and industrial history.

HISTORY

Eleuthère Irénée du Pont, founder and namesake of the Mills, was born in France on June 24, 1731. Samuel du Pont, an economist and a senior administrator under Louis Seize. At the age of 16, Irénée was apprenticed to Antoine Lavoisier, the great French chemist, who was also the director of the French gunpowder industry. By the time he completed his training at the arsenal at Essone, he was familiar with every stage of the manufacture of blackpowder. Young du Pont did not embark upon a manufacturing career immediately, but joined his father in a publishing venture. However, the moderate conservatism that marked the du Pont publications found no favor with extremist revolutionaries, and in 1799, Pierre and his family sailed for the United States. There, in western Virginia, the elder du Pont hoped to establish a colony based on his idealistic economic concepts.

Arriving in the New World on January 1, 1800, Pierre du Pont soon abandoned his plan for colonization, and after settling with his family in New Jersey, he attempted a series of fruitless schemes, while the family capital dwindled.

Irénée however, had learned of the poor quality of American powder, reportedly during a hunting trip, and after he visited the nation's largest powder factory at Frankford, Pennsylvania, he began to consider entering into the industry himself. One year after his arrival in America, Irénée and his brother Victor returned to France where they hoped to obtain financial backing. While in France Irénée also acquired powder-making machinery and information on new techniques. The French officials favorably regarded the proposed venture as a politic enterprise against British interests and so gave their sanction.

Upon his return to America, Irénée quickly implemented his plans. He surveyed many sites for a powder factory and finally chose a site on the Brandywine Creek in Delaware, where one of the first cotton mills in the country had been located in 1795. Already the location of a great flour milling industry, the Brandywine offered an excellent source

9 MAJOR BIBLIOGRAPHICAL REFERENCES

- William Carr, The du Ponts of Delaware (New York, 1964).
 John Chamberlain, The Enterprising Americans: A Business History of The United States (New York, 1963).
 E.I. du Pont de Nemours & Co., Du Pont, The Autobiography of An American Enterprise (New York, 1952).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 191.2

UTM REFERENCES

A	18	450340	4404180	B	18	451300	4404440
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C	18	451460	4404040	D	18	451380	4404280
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

The landmark boundaries for Eleutherian Mills are indicated in red on the enclosed plat map provided by the Eleutherian Mills-Hagley Foundation. The landmark boundaries are coterminus with the Foundation boundaries, except in the southeast corner of the property, where the landmark boundaries include the separately owned C.I. Dupont residence. It must be noted as well that the plat map, dated 1968, does not indicate the Foundation's acquisition of Breck's Mill. These boundaries enclose the significant features of the Eleutherian Mills complex, while excluding the post-historic intrusions.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Richard Greenwood, Historian, Landmark Review Task Force

ORGANIZATION

Historic Sites Survey

STREET & NUMBER

1100 L Street

CITY OR TOWN

Washington, D.C.

TELEPHONE
523-5464

STATE

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665) hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

Designated: Nov. 13 1966
 date
 Boundary Center
George J. Jensen
 date
May 19, 1978

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

DATE

ATTEST

KEEPER OF THE NATIONAL REGISTER

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CONTINUATION SHEET Eleutherian Mills ITEM NUMBER #7 PAGE 2

turbine, a method which began to be practiced on the Brandywine in the 1840's. Aside from these two sets of mills, the other mills, which included glaze and corning mills as well, are unrestored. Between the millrace and the mills, is a section of the narrow gauge railroad track which was used to transport powder to and from the mills.

Across the raceway, on the main Hagley road is the machine shop (#6), built in 1856, which has been converted to house a display on the manufacturing processes which took place at Eleutherian Mills. Additional structures, including the pump house (#7), the press house (#8), the stable (#9), and the more recent steam powerhouse (#10), are all situated along this section of the complex, and all but the powerhouse have been restored or altered, as in the case of the stable, which now houses restrooms. Below the last powder mill is the Hagley dam, and beyond this is the former Henry Clay Mill (#11), now known as the Hagley Museum. This three-story stone building was built in 1814-15 as a cotton spinning mill and then was converted to manufacture metal powder kegs. It has since been gutted inside and converted into the present industrial museum. The adjoining pickerhouse (#12) has been converted into a book store. Below the museum are the ornamental iron gates with the legend, "1802 -- DePont de Nemours -- 1902," and beyond these is the former Lower Hagley Yard. Approximately 200 yards down the road from the gates are two former mills, on either side of the creek. On the western side is Breck's Mill (#13), acquired early in the 19th century by Alfred Victor du Pont, and operated as a woolen mill. It is presently used as an exhibit building. Across the creek is Walker's Mill (#14), a large two story building with a square tower and cupola, which once manufactured woollens but is now used as a workshop and storeroom.

Between the gates to the Upper Hagley Yard, and Breck's Mill there is the former residence of Charles I. du Pont (#15), who built the two-and-a-half story stone house in 1823. A marble slab over the doorway reads, "C.I.D. 1823." This house is privately owned.

The du Pont Company, in 1952, on the 150th anniversary of the establishment of the concern, created the Eleutherian Mills-Hagley Foundation and donated 185 acres, which included all the property mentioned above, with the exception of the C.I. du Pont residence. The property is presently maintained as a museum complex devoted to industrial history, in which most of the above features are utilized. There are a number of buildings which have not been opened to the public, such as worker's residences. These are incorporated within the landmark boundary.

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CONTINUATION SHEET Eleutherian Mills ITEM NUMBER #8 PAGE 2

of waterpower, and the willows which covered its banks were valuable for making charcoal. Furthermore, the site was in proximity to Philadelphia. Du Pont paid \$6,740 for 95 acres bordering the Brandywine, and on July 19, 1802, he began the construction of his factory. By the winter of 1803 he had built a house, a barn, and had completed by the summer of 1803 to enable Irenee to begin preparation of saltpetre.

Irene'e's assumption that America would welcome excellent powder was soon verified. He sent his first shipment of 25-pound sacks of powder to New York in the spring of 1804. The powder won instant approval, and by the end of 1804 he had sold a total of 39,000 pounds. In 1805 he sold triple that amount. John Jacob Astor's American Fur Company bought 25,000 pounds a year, and the Federal government became a regular customer. With the War of 1812 came the first of many expansions, when in 1813, du Pont bought the tract south of his property, known as the Hagley property, and there erected a new mill which doubled his output.

Following the Treaty of Ghent, December 24, 1814, the du Pont works expanded and sometimes exploded. Irene'e du Pont's death on October 31, 1834 did not impede subsequent expansion which resulted from demands in time of the Mexican, Crimean and Civil Wars. During the Civil War alone, the du Pont works supplied the Federal government with 4,000,000 barrels of powder. The railroad building era provided further profits as did the Spanish-American War. The company continued to be run by the du Pont family and it was incorporated in 1899. Although powder continued to be made on the Brandywine until 1921, the company began to diversify and expand in the field of chemicals. Today the concern is one of the nation's major companies, and it maintains its early record for excellence and innovation.

After being closed in 1921, the mills along the Brandywine were abandoned, and the land was parceled out among members of the family. In 1952, however, through the donation of the land by Mrs. Frank Crowninshield and a \$6,000,000 endowment from the Du Pont Company, the Eleutherian Mills-Hagley Foundation was established to create and manage an industrial museum, employing the original residence and the remaining mills. It is presently open to the public.

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CONTINUATION SHEET

ITEM NUMBER 10 PAGE 2

E 18.450560.4402120

F 18.450300.4402160

G 18.450000.4404010

Verbal Boundary Description (See Property Map)

Parcel #1 12.5 Acres

Beginning at a point which is 25' north of New Bridge Road and in the center of Brandywine Creek, proceed northwest approximately 200' to a point; thence west approximately 350' to a point; thence north approximately 150' to a point; thence southwest approximately 225' to a point; thence in a northerly direction approximately 725' to a point; thence west approximately 175' to a point; thence northerly approximately 200'; thence easterly approximately 250' to a point; thence north-easterly 450' to a point; thence east 300' to a point; thence southeast approximately 25' to a point; thence southwesterly approximately 300' to a point; thence east 50' to a point; thence 1100' in a southerly direction to the point of origin.

Parcel #2 178.7 Acres

Beginning in the center of Buck Road, proceed southeast approximately 550' along the west curb of Christ Road to a point; thence east approximately 1250' to a point; thence approximately 1200' southeast to a point; thence west approximately 100'; thence southerly approximately 600'; thence southwesterly approximately 700'; thence north-west approximately 85'; thence southwesterly 550' to a point; thence northwest 85'; thence southwest approximately 150'; thence northwest 50'; thence southwest 550'; thence south 400'; thence southwest approximately 700'; thence south approximately 75'; thence 350' southwest; thence southerly approximately 400' to a point; thence southwest 300'; thence east approximately 400' to a point; thence northeasterly approximately 600' to a point; thence north approximately 50'; thence northeast approximately 950' to a point; thence approximately 50' south; thence northeasterly 1050' to a point; thence northwesterly approximately 400' to a point; thence north-easterly 1150' to a point; thence west approximately 550' to a point; thence 2250' in a north-northwesterly direction to a point; thence north 1200' to a point; thence west approximately 1400' to a point; thence south approximately 1200' to the north curb of Buck Road; thence 300' along the northern curb of Buck Road to a point; thence south 25' to the center line of Buck Road; thence west along the center line to the point of origin.