

NATIONAL HISTORIC LANDMARK NOMINATION

NPS Form 10-900

USDI/NPS NRHP Registration Form (Rev. 8-86)

OMB No. 1024-0018

LUKENS HISTORIC DISTRICT

United States Department of the Interior, National Park Service

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National Register of Historic Places Registration Form

1. NAME OF PROPERTY

Historic Name: LUKENS HISTORIC DISTRICT

Other Name/Site Number: N/A

2. LOCATION

Street & Number: 50, 53, 76, & 102 South First Street

Not for publication: ___

City/Town: Coatesville

Vicinity: ___

State: PA County: Chester Code: 029

Zip Code: 19320

3. CLASSIFICATION

Ownership of Property

Private: X
Public-Local: ___
Public-State: ___
Public-Federal: ___

Category of Property

Building(s): ___
District: X
Site: ___
Structure: ___
Object: ___

Number of Resources within Property

Contributing

7
2
9

Noncontributing

buildings
sites
structures
objects
Total

Number of Contributing Resources Previously Listed in the National Register: 9

Name of Related Multiple Property Listing: N/A

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4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, 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.

Signature of Certifying Official

Date

State or Federal Agency and Bureau

In my opinion, the property _____ meets _____ does not meet the National Register criteria.

Signature of Commenting or Other Official

Date

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

- ____ Entered in the National Register _____
- ____ Determined eligible for the National Register _____
- ____ Determined not eligible for the National Register _____
- ____ Removed from the National Register _____
- ____ Other (explain): _____

Signature of Keeper

Date of Action

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6. FUNCTION OR USE

Historic:	Domestic Commerce/Trade	Sub:	Single Dwelling Business
Current:	Recreation & Culture Commerce/Trade Vacant/Not In Use	Sub:	Museum Business

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION:

Brandywine: No Style

Terracina: LATE VICTORIAN: Gothic

Graystone/Lukens Main Office Building: LATE 19TH- and 20TH-CENTURY REVIVALS: Late Gothic Revival and Colonial Revival

MATERIALS:

Foundation: Stone, Concrete
Walls: Stone, Stucco, Brick
Roof: Slate, Wood Shingle
Other: N/A

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National Register of Historic Places Registration Form **Page 4****Describe Present and Historic Physical Appearance.****DESCRIPTION OF SITE¹**

The nominated district consists of four buildings: Brandywine; Terracina; Graystone; and the Lukens Main Office Building. All lie on a one block stretch of First Avenue in Coatesville, Pennsylvania. The street is one of the city's main north-south corridors which bisects its prominent east-west thoroughfare, Lincoln Highway, about one block north of the historic resources. All nominated resources are listed on the National Register of Historic Places as part of the Coatesville Historic District.

BRANDYWINE

Brandywine Manor, dating from the latter eighteenth century, is located on South First Avenue, and is nearly flush with the current thoroughfare. Its core construction consists of two sections: a 2½-story, stucco-over-stone (east) section, two bays wide, built circa 1750-70, is attributed to William or Peter Fleming; and a 2½-story (plus basement), stucco-over-stone (west) addition, three bays wide and slightly deeper, built 1788 by Moses Coates. Fronting these two early sections on the south is a two-level, shed-roofed porch (now enclosed). These elements comprise the house in which Rebecca Lukens lived.

Although several substantial additions were added to the house, primarily in the early 20th century when the house became the Lukens Employee Cooperative Store, the essential elements of Rebecca Lukens' house survive, including: the original massing, thick stone walls, roof lines, two out of three chimneys, most of the window and door openings, the floor plans (one room on each floor in the earliest section, a three-room plan on each floor of the 1788 section), interior bearing walls, chimney foundations, fireplaces (now sealed), dormers, the porch (albeit altered), curved bullnose corners on the window openings, and floor and attic framing. Many early 6-over-9 window sash survive as well.

The company store additions now obscure the house's elevations on the north and west, although surviving physical and documentary evidence exists so that an accurate restoration of Lukens' house is entirely feasible should these additions be removed. (They do not contribute to the building's era of primary historical significance). These additions include: a large 2½-story, gabled and stuccoed store built on the north between 1921 and 1928, and a frame "hyphen" that connects the second floors of the original house and the store addition; a

¹ This architectural description was prepared by J. Randall Cotton, Philadelphia Historic Preservation Corporation, and all judgements regarding integrity for these resources are his. The description incorporates information provided by Jane Davidson, Chester County Historic Preservation Officer; the results of a June 1991 site visit by Jill Topolski Mesirow and a May 1993 site visit by Page Putnam Miller and Jill Mesirow to the property; and correspondence between the NCC and the Graystone Society. The architectural description was revised further in August 1993 by J. Randall Cotton, incorporating a NPS critique of the property and additional research conducted by Jane Davidson. A third site visit was conducted by J. Randall Cotton in September 1993.

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shed-roofed 2-story (with exposed basement level) concrete-block addition built between 1928 and 1946 across the rear (west) of the initial store addition; and a corrugated-metal shed addition built sometime after 1946 on the rear of the second store addition.²

In style and type, the two early core sections follow vernacular forms that were well established in the Mid-Atlantic region by the 18th century. The earlier east section, with its single room (pen) on each floor and a gable-end chimney (now gone), was typical of first-generation farmhouses following British vernacular traditions. The later 1788 section is a combination of farmhouse prototypes favored by German immigrants, with its three-room plan (one room deep on one side, two rooms deep on the other), and the British preference for gable-end chimneys (unlike the Germans, who favored interior, or center chimneys). At Brandywine, a large cooking fireplace with a wide rectangular opening (now closed) stands on the outer east wall of the "hall" which abuts the first section, while two smaller heating fireplaces (also sealed) stand back-to-back and diagonally across the corner formed by the outer west gable-end wall and the interior masonry bearing wall dividing the two smaller rooms. These corner fireplaces are connected to a common chimney. The same room and fireplace arrangement is mimicked on the second floor.

In addition, the core sections of the house display 18th-century building traditions common in the Delaware Valley, namely stucco over stone construction, curved bullnose corners on the perimeter window and door openings, and simply molded, shadow boxed eaves. Furthermore, according to local practice, the house is built into an embankment so that the basement is exposed on the down-slope (south) elevation which is fronted by a two-level porch. This porch may have been enclosed with beaded boards in the early 20th century when the house was converted to the Lukens Employee Cooperative Store.

Not surprisingly, given their vernacular origins, the original fenestration of the two early sections is irregular and asymmetrical. While approximately one-third of the existing door and window openings are alterations (mostly dating from the years when the structure was a company store), good surviving physical evidence and early photographs attest to the location and size of the original fenestration. The earliest surviving sash, which is 6-over-9 double-hung, survives at numerous windows. Two gabled, frame dormers with 6-over-6 sash also survive in the first section. (Another dormer was removed to accommodate the "hyphen" which connects the second floors of the original house and the store addition). Two sets of original exterior solid board shutters with wrought-iron strap hinges flank windows on the south.

Although the two exterior additions impact the site's exterior architectural integrity when viewed from the east but not the south, the construction has not influenced the structure's interior architectural integrity which remains extant after two hundred years of use. In addition to the room configurations, plaster walls and ceiling, and sealed fireplaces, other early extant interior features include simply-molded window and door frames; a four-light transom over the south, center door; some surviving raised-panel interior doors; a board-enclosed attic stair; and, most notably, a raised-panel wooden breastpiece over the rectangular fireplace opening that stands in the first floor of the early section.

Floors are narrow oak strips throughout, a later alteration. The main stairway probably dates from the mid-1800s, and features a heavy, turned newel post incised with simple designs and topped by a ball finial.

The attics have beaded-board or plaster partition walls, and the basement retains three chimney foundations with arched or rectangular openings.

² Documentation includes deeds and colonial assessment records as well as Sanborn maps.

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TERRACINA

Terracina is located just north of Brandywine on a terraced embankment behind a cast-iron fence which borders the west side of South First Avenue. In addition to Terracina, four other structures on the site are contributing: a rustic-styled octagonal gazebo standing at the northwest corner of the lot; a brick-arched root cellar southwest of the house; a small, gabled, frame outhouse behind Terracina; and a 1½-story, cross-gabled frame barn (converted to a garage) at the southwest corner. Although the date for the gazebo is not known, it is significant for its use of natural tree limbs for posts, rails, and trusses in the manner illustrated in A.J. Downing's (and other's) publications that are contemporary with the Gothic Revival style Terracina.

Designed by an unknown architect—or inspired by a pattern-book design—and constructed sometime around 1850, the 2½-story, three-bay wide main block of the Gothic Revival building is nearly four-square in dimension, with a two-story, shed-roofed service ell projecting from the rear, right corner. This ell was added soon after the completion of the main block. A one-story, shed-roofed summer kitchen addition extends from the rear of the ell. The material of the main block is stucco over rubble stone, while the ell is stucco over brick.

The main roof is hipped and covered with wood shingles (installed recently, but based on a 1870 photograph). The broad peaked wall dormers that are centered on the roof eave at each elevation are each embellished with distinctive curvilinear bargeboards in a Gothic tracery pattern, a finial which pierces the dormer peak, and a Gothic lancet window with diamond-paned sash. Similar bargeboard also embellishes the widely overhanging roof cornice on all sides.

Other distinguishing exterior features include floor-length, triple-hung sash windows on the front (east) and north elevations of the first floor, flanked by louvered shutters; one-over-one (later replacements) double-hung sash elsewhere, except for the ell which has original six-over-six sash windows. Most first-floor shutters are solid paneled, while upper shutters are louvered. Tall shouldered brick chimneys rise from the center of each dormer gable (except for the front). On the front and north sides are hipped-roofed porches supported on open-fret posts and large, latticed brackets.

Centered on the south, side elevation is a circa 1875 two-story, half-octagonal bay window in the Italianate style which takes advantage of the southern light. This bay has bracketed cornices, tall one-over-one sash, and raised panel spandrels between floor levels. To the left of the bay window, and fronting the south elevation of the ell and summer kitchen, is a shed-roofed porch supported by chamfered posts and filigreed brackets. Rising from the rear of the ell are paired, ornate terra-cotta chimney pots supported by a high brick chimney.

While the exterior has retained architectural integrity in its entirety (except for some window sash), the interior is somewhat altered. Because it was used as a residence as recently as the 1980s, bathrooms, a 1960s kitchen in the service ell, and electrical systems have all been installed. The only substantive architectural alteration occurred in the rear dining room in the late nineteenth century; a servant's staircase was removed, and the room redecorated in the style of the period including the addition of a Victorian-era walnut mantelpiece.

The interior plan consists of a center entry hall with a library to the left, and double parlors to the right. A transverse, side hall which contains the stairway intersects the center hall at a right angle. The dining room is situated behind this side hall. Twelve-foot-high ceilings on the first floor are ornamented with cast-plaster borders and ornamental-plaster center medallions from which hang various 19th-century chandeliers. On the first floor, the main parlor and library have original pine floors, as do most of the rooms on the second floor. The other rooms on the first floor have original pine floors which have been subsequently

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covered with patterned parquet circa 1880.

The sides of the door and window surrounds of the first floor are slightly battered (tapered) with eared lintels in the manner of the Greek Revival style of the 1850s. The top panels of the four-panelled doors have Gothic-arch tops. Each of the double parlors has a faux-marble mantelpiece: an arched opening in the front parlor, a rectangular opening in the rear parlor. The library retains its circa 1850s four-globe chandelier made by Cornelius of Philadelphia. The main stair is typical of its era, with a heavy, tapered newel post with faceted sides and faceted balusters, two per tread.

The plan of the second floor is similar to the first, except the major rooms are bedrooms, and a bathroom is situated over the center hall. The upstairs bedrooms are more simply finished than the rooms downstairs, although the sides of the door and window surrounds are similarly battered, and original marble mantelpieces—one white, one gray—stand in the largest bedrooms, while a later, Queen-Anne-style walnut mantelpiece stands in the southwest bedroom. The attic contains three utilitarian rooms with plaster and beaded-board partitions; under each attic corner, under the hipped roof section, is a storage room illuminated by an interior window which captures light from the exterior lancet dormer windows.

Terracina is now owned by the Graystone Society, a non-profit organization, which is painstakingly restoring the mansion to its original splendor.

GRAYSTONE (Abram Huston House)

The Abram Huston house, known as Graystone, sits in a park-like setting directly across First Avenue from the Lukens Main Office and rolling mills. From its construction in 1889 until the 1930s, it was the estate of the Abram Huston family, thereafter the Coatesville city hall and police station. Although the borough still owns Graystone, the offices recently moved to a new borough hall and the house stands vacant. Despite long governmental use, Graystone retains excellent original integrity and is in good condition.

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Graystone is the design of the renown Philadelphia firm of Cope and Stewardson (1886-1912) which is justifiably best known nationally as the chief purveyor of the Collegiate Gothic style. For Graystone, Cope and Stewardson primarily used a Tudor Gothic idiom with some elements of the Queen Anne style mixed in.

The house sits at the center of an approximately three-acre grassy lot that is surrounded by a cast-iron fence. A curving drive enters from the First Avenue side, and a paved parking lot was added in the rear when the house was the borough hall. Among the notable miscellaneous deciduous and evergreen specimen trees are magnolias and a large weeping beech in the front. At the rear, northeast corner of the property stands the original stone carriage house (which until recently housed the borough's police station) accessible via a drive from Harmony street on the north.

From the exterior, Graystone gives the intentional impression of an irregular, somewhat informally composed compilation of parts, but actually it was logically designed: The living quarters of the Huston family lay within the 2½-story cross-gabled main block whose "footprint" is a broad cruciform. The entertaining spaces occupied the first floor, with private quarters on the second. Extending at an oblique angle from the north arm of the cruciform section is a long 2½-story, hip-roofed service wing which contained functional spaces such as a kitchen on the first floor and living quarters for the servants on the second.

Three other notable "pieces" complete the composition of the house: a 2½-story, conical-roofed turret (which contains the service stairs) wedged between the main block and service wing; a hip-roofed front porch that infills the angle between the western and southern arms of the main block; and a two-story, parapet-walled dining room (bedroom on second floor) section which infills the angle between the southern and eastern (rear) arms. Abutting this last section is a two-story, flat-roofed addition which contains vault rooms, added when the building was used as a borough hall, the only significant alteration to the house. Although a rear porch was removed to accommodate this addition, the use of randomly-coursed, rock-faced micaceous schist as the exterior material matches that of the original building.

The roofs are slate with "kick" (flared) eaves. Miscellaneous weathervanes, lightning rods, chimneys (one has an "1889" datestone), and tiny peaked dormers seem almost randomly placed throughout the roofs. The fenestration of the house is irregular. Most windows are one-over-one sash enframed in flat-topped limestone surrounds. Many of the windows are banded in groups of two or three. Other notable exterior features include: a front porch which is supported on square posts with chamfered edges; paired main doors with a wrought-iron window grate and a carved linen-fold design in the panel below; a second-floor wood-shingled oriel projecting from a second-floor bedroom; and a substantial hip-roofed hood supported on large curved brackets which extends from the end of the service wing.

Interior spaces range from the elaborately ornamented "public" rooms, to the more chastely finished private family rooms, to the completely utilitarian service rooms. The most impressive spaces are four rooms and a stairway which open onto a central "living" hall which has a coffered, wood-beam ceiling. The broad openings between these rooms are topped by low Tudor-Gothic archways. Oak-strip floors are throughout and most windows have interior folding shutters.

The west parlor has a coffered oak-beam ceiling, high oak wainscots composed of square, raised panels, built-in window seats, and the house's most impressive fireplace. Its oak breastpiece is embellished with Ionic pilasters, console brackets, and many intricate moldings; it is also exquisitely carved with linenfold designs and the slogan "Est, West, Haus ist Best" ("East, West, Home is Best") in the frieze.

The north parlor featured an ornamental-plaster ceiling in a delicate, intertwining Gothic

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tracery pattern. Opposite a built-in corner cabinet is a corner fireplace with carved and incised ornament, and mosaics in the hearth and fireplace surround. The fireplace in the south parlor is notable for its carved cherubs and scallop shells which enliven its frieze, and the mosaic surrounds depict Aladdin's lamp and genie. The rear dining room has high, oak-pannelled wainscots, a carved built-in cabinet with leaded glass, and a fireplace with glazed-tile surround and oak mantelpiece.

The oak main stair leads to a mid-level landing which is illuminated by a tall leaded-glass window. Upstairs, bedrooms are characterized by plaster walls, ceilings with narrow plaster crown moldings, oak-strip floors, and Tudor-arched fireplaces with oak mantelpieces ornamented with carved and applied decorations which are simpler than those on the first floor. Several bathrooms retain early marble sinks and tubs, and glazed-tile walls. All the rooms of the service wing, as well as servants' rooms in the attic, are finished with plaster walls and simple door and window trim.

The carriage house is a 1½-story, L-shaped structure with a round conical-roof stair tower situated at the inside angle. Like the main house, it is built of micaceous schist, the fenestration is irregular, and the slate roofs have kick eaves. Although the first floor, originally the stables, was greatly altered when used as the police station, the second-floor spaces—used as the stableman's quarters—are original although very simply finished.

LUKENS MAIN OFFICE BUILDING

The Lukens Main Office Building is a textbook example of the Georgian Revival style as applied to a commercial building. It is situated just north of Terracina on the west side of South First Avenue. The 2½-story, H-shaped structure was built in two sections: the front section (129 feet x 44 feet) and approximately two-thirds of the middle "hyphen" were completed in 1902 from the designs of the renown Philadelphia firm of Cope and Stewardson (1886-1912), and the remaining part of the hyphen and the rear section were completed in 1916 from the designs of Stewardson and Page (1912-1929), the firm that evolved from the original design team. Although Cope and Stewardson is best known as the nation's chief purveyors of the College Gothic, the Lukens Office Building is a superb example of that firm's adeptness with other styles and building types.

The office building is very well maintained and retains excellent original integrity. It stands on the middle of its lot surrounded by grassy lawns on three sides and a paved parking lot in the rear. Four original brick piers and a pair of cast-iron gates allow access from the street and sidewalk to the main central entrance.

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Viewed from the front, the building gives the impression of an oversized English Georgian mansion, despite the fact that it was designed as a well-functioning office whose framework consists of the then-latest technology of steel and concrete. Throughout, the exterior walls are of Flemish-bond brickwork with glazed-black headers, the hipped roofs are slate, and limestone is used for the beltcourses, watertables, window heads, and entrance portico. All outside corners are embellished with brick quoins, and a wooden cornice composed of block modillions over dentils runs continuously around the building. The window fenestration is symmetrical on all elevations, and the windows themselves consist of twelve-over-twelve wooden sash set under flat splayed limestone lintels with central keystones. The window openings on the second floor are slightly shorter than those on the first.

The main facade consists of a seven-bay central core flanked by three-bay wings which are slightly recessed. Three symmetrically placed gabled dormers with round-headed windows project from the central roof. A flat-roofed portico supported on Doric columns and pilasters covers the main entrance which consists of paired oak doors under an arched fanlight.

Pairs of tall brick chimneys rise from each end of the central core at the juncture of the side wings, and additional single brick chimneys rise from the ends of both wings. The 1902 construction date of this section is commemorated in datestones at the ends of both wings, as well as inscribed in the metal scupper boxes throughout.

The 1916 construction date is similarly commemorated on the rear section. This section is identical to the front section in virtually all respects—materials, massing, fenestration, details—with a few exceptions: instead of a center door, there is a window, and, because of lower grade level, the basement wall is exposed and fenestrated with short sash windows.

The connecting "hyphen" section of the H-shaped building also exhibits the same materials, details, and symmetrical fenestration. On the north, at the juncture of the hyphen and the front section, is a circa 1988 glass-panel-enclosed porch and side entrance.

The interior is a successful blend of the functional and the aesthetic. Although some of the lesser spaces now have dropped-ceilings, and some interior doors—originally glass panelled—have been replaced with solid oak panelled doors, to a large degree the interior has retained most of its original plan configurations and Georgian architectural details.

The showplace of the interior is an impressive, finely-detailed lobby which occupies most of the first floor of the central core of the front section. Rising from the center of the lobby is a grand staircase consisting of a wide flight of stairs rising to a mid-level landing off of which flanking flights of stairs continue to the second floor. Both the lobby and staircase are detailed with well-crafted oak in a natural finish.

The lobby has a coffered oak-beam ceiling embellished with block modillions and dentils. The walls have raised-panelled wainscots and fluted Ionic-order pilasters which breakup the plaster walls above. Three doorways in the lobby have substantial Georgian-styled surrounds capped by broken-gable pediments. Other notable lobby elements are two fluted Ionic-order columns that anchor the bottom of the stair balustrades, and the balusters themselves, which are turned and stand three per tread.

Off each side of the lobby, and located on both floors in the wings, are twelve office rooms outfitted, to varying degrees, with encased beam ceilings, oak chair rails, and (originally) working fireplaces all of which add to their "parlor" personalities. Most notable are the mantelpieces, all of which are oak, utilize variations of classical pilaster-and-entablature configurations, and contain such detailing as triglyphs and metopes in the frieze, and egg-and-dart, Greek-key, dentil, or bead-and-reel moldings.

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The hyphen section contains hallways, a rear stairway, and secondary offices. The rear section did not have executive offices originally; not until circa 1985 were spaces converted to such purposes. Nonetheless, the oak fireplaces, oak trim, and beamed ceilings are similar to those in the 1902 section.

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8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:

Nationally: X Statewide: ___ Locally: ___

Applicable National Register Criteria:

A ___ B X C ___ D ___

Criteria Considerations (Exceptions):

A ___ B ___ C ___ D ___ E ___ F ___ G ___

NHL Criteria: 2

NHL Theme(s): XII.

- Business
- B. Manufacturing Organizations
 - 4. Fabricated Metal and Glass Production

Areas of Significance:

- Industry
- Commerce
- Social History

Period(s) of Significance: 1825-1930

Significant Dates: 1825, 1847, 1850, 1889, 1890, 1897, 1903, 1916

Significant Person(s):

- Rebecca Webb Pennock Lukens (1794-1854)
- Charles Huston
- Abram Francis Huston

Cultural Affiliation:

N/A

Architect/Builder:

Unknown; Cope & Stewardson

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State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.**HISTORICAL SIGNIFICANCE**

The historical significance of the Lukens Historic District lies in Rebecca Lukens (1794-1854), her leading role in the 19th-century American iron industry, and her family legacy. The firm she managed and owned, the Brandywine Ironworks (later Lukens Steel Company), was one of the industry's major firms in the decades before the Civil War; she was the only woman in the antebellum period to head a heavy industry that had interstate and international interests. An early start, commitment to a quality product, and careful management allowed her firm to secure and maintain market share. Heavy industry was a field where few women would venture until well into the 20th century and thus, Rebecca Lukens stands out as a remarkable figure. She took advantage of her family background in the industry and chose a path which was far different from the prevailing norms for women of her generation. She prefigures a pattern which would become more common in the late nineteenth and early twentieth centuries in which family business gave women entry to management or ownership of large concerns. Rebecca Lukens served as the matriarch of this industrial dynasty—her family, particularly her son-in-law Dr. Charles Huston and her grandsons Abram Francis Huston and Charles Lukens Huston, continued her commitment of fairness to workers, innovative technology, and her personal interest in fine architecture. Rebecca Lukens headed the firm until her death in 1854. Abram Gibbons, Jr. joined her in 1842 following his marriage to Lukens' eldest daughter in 1841. He remained with the company until 1855 when he withdrew to begin a career in banking. Charles Huston married Rebecca Lukens' younger daughter, Isabella Pennock Lukens, in 1848 and joined Lukens and Gibbons in the company. He became sole proprietor in 1855; his son, Abram Francis Huston succeeded him following his death in 1897 and held the presidency until his retirement in 1925, when he became Chairman of the Board until his death in 1930. Charles Huston's younger son, Charles Lukens Huston, became First Vice-President and Works Manager in 1897; he remained active in the company until his death in 1951.

This nomination reflects Rebecca Lukens and her legacy. The nominated group of properties is most unique in that on one block stands: the modest stone farm house where Rebecca Lukens lived and had her office (1816-1854); the Victorian Gothic house based on patterns of the day built by Rebecca Lukens for her daughter, Isabella, and son-in-law, Charles Huston, in 1850; the elegant mansion designed for Abram Francis Huston by Cope and Stewardson, one of the nation's leading architectural firms, in 1889; and the Lukens corporate headquarters building, also designed by Cope and Stewardson, in 1902. These four buildings are tangible resources that illustrate historical progression and cohesion. The family remained committed to the business and augmented the values initiated by Rebecca Lukens. It was always important to have management in close proximity to the mill; Rebecca Lukens was able to see the iron works from the window at Brandywine. She built her daughter and son-in-law's home equally close to the mill. Furthermore, the progression of homes also reflects the increasing prosperity of the company and the family's growing interest in architecture. Each house is associated with a specific period in the history of the company and reflects the individuality and prosperity of its owners. According to the National Park Service thematic framework, Lukens falls under XII. Business, B. Manufacturing Organizations, 4. Fabricated Metal and Glass Production.

There are four sites connected with Rebecca Lukens and the business she created that are presented here for landmark status: Brandywine, her home from 1816 until her death in 1854, located at 102 South First Avenue, Coatesville, adjacent to the rolling mill (which became Lukens Steel) that she managed; Terracina, the house she gave to her daughter Isabella around 1850 as a wedding present upon her marriage to Dr. Charles Huston; Graystone Mansion, the home of Lukens' grandson; and the Lukens main office building. Attached to Brandywine is a company store built in the mid-1920s. While this addition

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detracts from the appearance of Brandywine, it is a later reflection of the Lukens and Huston family's interest and concern for the mill workers. During the years of the store's operation, Brandywine was used for storage. Both the store and Brandywine are currently vacant. Three buildings associated with Rebecca Lukens and her family are not included in this nomination: the Lukens Steel mill building; Gibbonsdale, the home built for Rebecca Lukens' eldest daughter Martha and her husband Abram Gibbons Jr.; and the Charles Lukens Huston House, home of Lukens' grandson. The buildings associated with the beginnings of the Lukens Steel mill (Brandywine Iron Works) were demolished soon after the Civil War. The second generation of mill buildings built in the latter half of the nineteenth century were replaced twenty-five years ago. Today, all of the Lukens Steel Company buildings, except for the nominated Main Office Building, are modern buildings. Gibbonsdale, the home of Martha and Abram Gibbons Jr., has been altered radically and the Charles Lukens Huston House, located to the north of Terracina, is no longer standing.

The oldest portions of Brandywine date to the mid-eighteenth century. In 1810, Rebecca Lukens' father, Isaac Pennock, purchased the house with over 100 acres of land, a mill site, and water rights on the Brandywine with a partner (whose share he bought out soon thereafter). Pennock built the Brandywine Iron Works and Nail Factory, a rolling mill which he leased to Rebecca and her husband, Dr. Charles Lukens, about 1815-16. They moved into the house in which Rebecca lived for the rest of her life; she took on the full management of her household and the mill following the successive deaths of her father (1824) and husband (1825). Both the exterior and interior retain a substantial amount of the 18th-century fabric.

Terracina is the Gothic Revival style house Lukens built for her daughter Isabella in 1848. Built according to the popular "pattern books" of the day, it is, according to the Pennsylvania State Historic Preservation Office, "an excellent example of a Downing cottage in the 'Gothic Style.'"¹ In her later years, Rebecca Lukens spent much time visiting with Isabella, one of only two children who survived to adulthood. Her gift of Terracina also represented her success in business, for she had acquired more than sufficient assets to pay for the construction of this building and one for her other daughter, Martha. Martha's house is still standing, but major alterations at the turn of the century have compromised the architectural integrity of the structure. Terracina is almost completely unchanged in its exterior and interior, contains family furnishings (including Rebecca's), and will be operated by a non-profit organization as a museum depicting the life of Rebecca Lukens and the history of the steel industry. Hence, it will be possible, through the story told by such artifacts and surroundings, to come to an appreciation of Rebecca Lukens' life and achievements.

In 1889, Abram Francis Huston, Rebecca Lukens' grandson, commissioned Graystone. He continued Lukens' practice of living close to the business. Located just one block from Brandywine Rebecca Lukens' own home, and Terracina, Huston's childhood home, Graystone reflects the progression of the steel company management. The location of this house is significant; situated directly across from the mill, rather than in a new suburb which was fashionable at this point in the nineteenth century, Huston's home stands as a symbol of his role within the structure of the company. Huston carried on Rebecca Lukens' tradition of involvement in workers' lives, stressing a total commitment to the company and its employees.²

¹ Brenda Barrett, Director, Pennsylvania Historical and Museum Commission to Edwin C. Bearss, Chief Historian, National Park Service, September 13, 1991, copy in possession of NCC.

² See National Register of Historic Places nomination form, prepared by Alice Kent Schooler, National Heritage Corporation, and Susan M. Zacher,

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As the Lukens Steel company grew, the need for office space was apparent. Constructed in 1902 by the architectural firm Cope and Stewardson, the Main Office building proved to be an aesthetic addition to South First Avenue. Situated across the street from Graystone and adjacent to Terracina, the office building was designed to simulate a Georgian Mansion, yet the construction materials and structure confirm the buildings's purely commercial use.

Rebecca Webb Pennock Lukens was born January 6, 1794, to Isaac Pennock and Martha Webb Pennock.³ They were Quakers who raised their nine children as members of the Fallowfield Monthly Meeting in Ercildoun, Pennsylvania, just down the road from their home at Rokeby. After the family's return to Chester County (because her mother found the city uncongenial), Rebecca was sent to boarding school for a year at age 12. From ages 13 to 16, she went to school in Wilmington, which "had schools better calculated to meet the views of my friends, and I was placed there to pursue with eagerness the Education I wished much to gain."⁴

Home again, she resumed a more traditional "woman's education" in domestic skills. Her granddaughter records that she had spun the thread for her household linen, which was "marked by herself in cross-stitch." She married Dr. Charles Lukens in 1813; he gave up his successful medical practice to help his father-in-law with the Coatesville iron factory.⁵ Lacking the capital to buy it, Charles leased the (Brandywine) site and under his management, the mill was remodeled and came to roll the first boiler plate in Pennsylvania. In a letter of 1850, Rebecca recalled how much money and hard work were involved in changing the mill from its "forlorn and wretched state": rebuilding the dam, constructing a new water wheel and new head, and fixing most of the other equipment.⁶ Having grown up around her father's business, she understood what was required in the construction and technical needs of the mill.

Just as the new business was really getting off the ground, Charles Lukens died in 1825, a year after his father-in-law had passed away. His deathbed request to his wife Rebecca, mother of five children and pregnant with a sixth, was to continue the business, which she promised him she would even as she confronted substantial debt and family opposition:

Indeed I well knew I must do something for the children around me. The estate shewed [*sic*] an alarming deficiency when the books were examined. I will not dwell on my feelings, when I began to look around me. There was difficulty and danger on every side.... Mother wanted me to leave

Pennsylvania Historical and Museum Corporation, February, 1977.

- ³ The history of the Lukens family and firm is derived from letters and manuscript materials in the Lukens Steel Company Collection, Hagley Museum & Library; manuscript material in the Chester County Historical Society; and manuscript and printed sources at the Chester County Archives.
- ⁴ Typescript copy of "Autobiography," [c. 1825], p. 2. ACC 1441 Collection of Huston-Lukens Family Material, Box 3 Stewart Huston (1898-1971): Copies and Extracts, Hagley Museum & Library.
- ⁵ Clara Huston Miller, *Reminiscences* (London: Privately Printed, 1929), p. 30.
- ⁶ "Statement of Rebecca W. Lukens in Connection with adjustment of her interest in her Father's Estate, and a History of her Labors in conducting her business affairs," ACC 1174 ADD Charles Lukens Huston Papers, Series I, Subseries 1, Box 1, Folder 1, Rebecca Webb (Pennock) Lukens, 1794-1854, Brandywine, September 10, 1850, p. 4.

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Brandywine [the mill and house], and said it would be folly for me to remain. Necessity is a stern task-mistress, and my every want gave me courage, besides I had promised my dying husband I would remain, and where else could I go and live. I pleaded with her and grief made me eloquent. I urged my promise to my husband, my duty to my children, and that in a little while Brandywine would be mine by Father's will [her father had died in 1824].... She offered me no assistance if I left, but thought *as a female I was not fit to carry on such a concern* [emphasis added]. I then firmly but most respectfully told her that I must make the attempt.⁷

Rebecca refused to be trapped by the contradictory position taken by her mother—better poverty than an unfeminine career—and thus became the first woman manager in the iron mill industry.

Rebecca Lukens ran the commercial side of the business while her brother-in-law, Solomon Lukens, directed the mill operations. She faced many difficulties, among them the lack of ready transportation to get raw materials to the factory and to move her products to market, and litigation with neighbors concerning the use of the Brandywine River as a power source. But the difficulties she faced in taking charge were still more complicated. There was the legal confusion surrounding her father's will and disposition of property to his wife and children, and the vagaries of the arrangements that he had made with his son-in-law and daughter concerning the mill property. What followed was years of contention and even litigation with her brothers and sisters until a final settlement was achieved and Rebecca Lukens became the full owner of a mill which she had by then made a success.

She later recounted how many friends of her husband had stood by her, offering advice and credit on supplies, and how the mill's workmen too were "tried and faithful":

...and so with some fear but more courage I began to struggle for a livelihood. I think at this period I must have possessed some energy of character, for now I look back and wonder at my daring. I had such strong, such powerful incentives for exertion, that I felt I must succeed.⁸

She did achieve her goal and continuously rebuilt and improved her mill in the 1830s. Her very success made her the object of attack by "jealous observers" [her family]:

I had built a very superior mill, though a plain one and our character for making boiler iron stood first in the market, hence we had as much business as we could do, prices were then good. I had few competitors, and the opening of the Pennsylvania Railroad gave our iron ready access to market.⁹

The company sold its products to boiler makers in New York, Philadelphia, Boston, Albany, Mobile, Charleston, and New Orleans, and then their products were dispersed through those regions. The firm had an international market too: shipments of boilerplate to England were used in the manufacture of early locomotives.

Rebecca Lukens' decision to accede to her husband's request and run the mill reflects some of the inherent contradictions between the pervasive ideology of separate spheres and the realities of life. The notion of separate spheres essentially circumscribed women's activities

⁷ "Statement of Rebecca W. Lukens. . . ." September 10, 1850, p. 2.

⁸ "Statement of Rebecca W. Lukens. . . ." September 10, 1850, p. 3.

⁹ "Statement of Rebecca W. Lukens. . . ." September 10, 1850, p. 4.

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to private (family) and public (charitable) domestic life, and reserved the public world of business and government to men. At the same time, women were also exhorted to be educated and pious so that they could teach their children and produce a well-educated and moral citizenry.

In this scheme, business was reserved for men by both social norms and legal structures. Women lost control of all property when married and could not sign a legally binding contract. Hence they were unable, in the main, to carry on business activities beyond the stage of the sole proprietorship (i.e. no partnerships or incorporated firms). There were a few exceptions to this. As single or widowed women, they retained or regained their control of property in the law. A particularly important role of widows was to conserve property until their children (read "their sons") were grown. Sometimes this meant administering an estate with a male manager actually handling the business (though women could be appointed executrix); sometimes it meant operating small shops or retail businesses, activity more frequently found in cities and small towns. In the countryside, managing farms (the whole domestic economy of production) brought women into the cash marketplace. And in Pennsylvania there were even women who owned and managed small iron forges and furnaces.¹⁰

Lukens' widowhood gave her control of the business and her experience as a Quaker woman, an active participant in her Women's Meeting, may have given her the self-confidence to manage the affairs of the firm. The inner meaning of Quakerism was unflinching throughout her life. Her pacifism was consistent with Quaker belief. In an exchange of letters with her Boston agents, Curtis Leavins & Co., in September 1842, she refused an order of eight to ten tons of boiler plate iron for the Boston Navy Yard even though it was not intended for war material. Her viewpoint comes through in the agent's letter:

The Iron is for making Boilers for a Steam Engine for the Rope Works--and not for any ships of War as you might have supposed by our first communication, and under these circumstances we hope you may be induced to execute the order at the price we took it at.¹¹

She did not hesitate to forgo profit for her principles in spite of an intensely competitive market where other firms were constantly trying to undersell her.

Even while Rebecca Lukens paid a series of brothers- and sons-in-law to help manage the mill, in the correspondence and account books of the firm, there is incontrovertible evidence of her management of the business itself and of her financial acumen. Her account books reveal all aspects of her business activities. She calculated down to the last penny the cost of producing a ton of boiler plate, including the raw materials (coal, charcoal, blooms), all of the transportation (portage, tolls, freight, insurance, wharfage), the marketing (advertising,

¹⁰ On Quaker farm women, see Joan M. Jensen, *Loosening the Bonds: Mid-Atlantic Farm Women, 1750-1850* (New Haven: Yale University Press, 1986). On women in the 18th-century iron industry, see Arthur C. Bining, *Pennsylvania Iron Manufacture in the Eighteenth Century* (Harrisburg: Pennsylvania Historical Commission, 1938, 1979). On inheritance laws, see Daniel Snyder, "Kinship and Community in Rural Pennsylvania, 1749-1820," *Journal of Interdisciplinary History* 13:1 (Summer 1982, 41- 61 and Marylynn Salmon, *Women and the Law of Property in Early America* (1986).

¹¹ Hagley Museum & Library, ACC 50 Lukens Iron and Steel Company, Series V Sales and Shipping Orders, Box 386, January-December 1842, Letter of September 13, 1842.

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commissions), and the wages.

The running of the firm involved not only buying the raw materials at the best prices and shipping and marketing the finished wares nationally, but also the management of a small community. In a system that was halfway between the southern plantation and what would evolve as the company town, what might be called the patriarchal company village,¹² her workers rented houses from her, received part of their wages in goods, and helped with the farmwork (receiving in turn a share of the crop and wood for heating). She arranged for medical care when necessary and allowed for religious worship (as long as it didn't impinge on the workday). Her daughter Isabella started a reading room for the workers.

She functioned as a banker to friends, family, and workers in an economy where circulating cash was rare and where an elaborate system of credit underlay all business transactions. One neighbor borrowed \$180 in cash and gave Lukens several shares of bank stock as security. Another gave her a check and drew against it for her expenses. Lukens paid her workers' taxes and charged against their accounts. Employees received their salary by way of an

¹² For a detailed case study of a company town see: Anthony C. Wallace, *Rockdale: The Growth of an American Village in the Early Industrial Revolution* (New York: Norton, 1972).

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account held by the company, rather than cash. Occasionally people would overdraw their accounts, yet there is no indication in the company records that disciplinary action was ever taken.

Lukens was her own banker and broker. She constantly sought the best return for her money, whether in notes or mortgages or railroad stocks. She was so astute that by her death, she had accumulated over \$100,000 in her personal estate. This financial success is evident in the houses she built for her two daughters as wedding presents.

One of the main reasons for describing Lukens as the first major figure in the history of women in American business is the national scale of her operations. She understood, for example, the necessity of maintaining a market share. This is apparent in the instructions she gave her agents in Boston in 1843 in the midst of a dull market. She told them to sell as low as possible without incurring a loss, firm in the belief that the quality of her product would prevail, for as her agents noted, "All other circumstances being equal, we can probably sell twice as much iron as any other concern...."¹³ She continuously monitored the Philadelphia market for iron prices because they determined her regional sales.

Lukens may have appeared to outsiders as an "unnatural" woman for taking on a man's business, yet she clearly managed to balance family life and business much as farm women managed their domestic economy. Her granddaughter recalled how she "looked well after her family but never allowed the business to suffer for lack of her personal attention. Even so early in the morning as 7 a.m. she would be found at the Mill Office directing and overseeing all the affairs of importance until the late afternoon."¹⁴

She attended to her home and grounds, altering the house by adding a piazza and making other improvements. Her love of nature found expression in her gardens, which were lushly planted with flowers and shrubbery, and included a greensward, goldfish pond, and summer pond. With her wealth, she had the "leisure to cultivate her literary tastes, for social engagements, and to extend those hospitalities to others, which were so pleasing to her open, generous heart."¹⁵

By 1844, Rebecca Lukens had paid off the debts and rebuilt the mill. Her mother died that year, and after clearing up suits from Pennock heirs and paying the estate, Lukens at last became the legal owner. In 1847, she signed papers of co-partnership with her son-in-law and went into semi-retirement. But her pleasures were darkened by tragedy. Only two of her six children survived. She wrote to her lawyer: "Now our business is dull enough and

¹³ Hagley Museum & Library, ACC 50 Lukens Iron and Steel Company, Series V Sales and Shipping Orders, Box 1483, January-December 1843, Letter of May 24, 1843 from Curtis and Leavins & Company.

¹⁴ Clara Huston Miller, *Reminiscences*, p. 43.

¹⁵ Isabella P. Huston, *Autumn Leaves* (Philadelphia, 1873), p. 25.

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our competition is all around us. In this long and weary struggle to gain a living, the estrangement, and protracted suit so long pending, the very energies of life seem exhausted."¹⁶

Plagued by rheumatism and asthma, Rebecca Lukens finally succumbed from an attack of bronchitis in 1854 at age 61. After her death, the Brandywine works were renamed the Lukens Mills in her honor and were incorporated in 1890 as Lukens Iron and Steel Company. Rebecca Lukens legacy was unparalleled; she paved the way for subsequent generations to carry on the company she built. According to Robert Wolcott, she was able to find "inspiration and wisdom in her environment... it was natural that her community should profit thereby... [the] traditions [she cultivated] still are conserved in a business in continuous existence...."¹⁷ Her bequest was the successful business, financial independence, and an interest in architecture. The homes commissioned by Rebecca Lukens yielded to Graystone, the elaborate home built by her grandson, and the handsome Lukens office building, both of which were designed by noted architects Cope and Stewardson.

During the rapid expansion of American heavy industry in the second half of the nineteenth century, the Lukens Steel Company stood out among its peers. This was due in large part to the leadership of Dr. Charles Huston, son-in-law of Rebecca Lukens and head of the company until 1897. He was known to remark that it was "better to be ahead of the times than one whit behind."¹⁸

Charles Huston had a profound influence on the American iron and steel industry. The findings of his systematic research pointed the way to time-saving innovations in the manufacturing process, such as the installation of a flywheel whose weight and gear configurations enabled it to store power. Under Huston's direction the company took a leading place in the design of machines used for spinning the "heads" or caps for steam boilers. He held several industrial patents for these and other innovations.

Charles Huston conducted extensive metallurgical studies that set international industry standards at a time when the lack of such standards caused confusion and waste. In 1878-79, he wrote a series of articles which codified his findings and appeared in the *Journal of the Franklin Institute*. These articles became standard reference sources in the United States and Europe. In 1877, Huston chaired a federal committee that implemented these standards throughout the industry. During the 1880s and 1890s, the government frequently sought his

¹⁶ "Statement of Rebecca W. Lukens....." September 10, 1850, p. 3.

¹⁷ Robert W. Wolcott, *A Woman in Steel: Rebecca Lukens 1794-1854* (New York: The Newcomen Society, 1940), 15.

¹⁸ As quoted in Centennial of the Lukens Iron and Steel Company's Plant," *Iron Age* (30 June 1910), 1565.

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counsel, as did the companies who insured steam boilers. In 1895, Chauncy Depew selected Huston as the person in the country most able to write an article on the history of the iron and steel industry for inclusion in his *One Hundred Years of American Commerce*.¹⁹

Charles Huston was also concerned with employee relations. During the Civil War, Lukens employees in the Union army left wives in Coatesville who sometimes had difficulty obtaining money sent to them by their husbands or the federal government. The company often answered frantic letters from these women and provided cash advances against the eventual arrival of their money. In 1873, Huston started a "Welfare Fund" for Lukens employees which functioned as a "savings and insurance fund [for] promoting self-reliance and family protection" and survived through the Depression.²⁰

On February 5, 1890, the Commonwealth of Pennsylvania granted a corporate charter to form the Lukens Iron and Steel Company as a stock company. The charter issued 5,000 shares of stock, and on February 8, 1890, an organizational meeting was held at Terracina. Charles Huston was elected President of the newly formed corporation, and Terracina was the setting for the first directors' meeting and several stockholders' meetings.²¹

Abram Francis Huston, son of Charles Huston and grandson of Rebecca Lukens, headed the company after his father's death in 1897. He followed in the footsteps of his successful father and grandmother and took a leading place in the industry. He was elected president of the American Association of Steel Manufacturers in 1902 and also acted as chairman of its executive committee.²² Under the leadership of Abram Huston, the mill more than doubled its steel-making capacity and firmly placed itself among a small group of the nation's largest manufacturers. During the 1890s and 1910s, it frequently exchanged with its competitors the capacity to produce the largest plates in the country. In 1917, the Lukens Steel Company constructed a mill that rolled steel plates 204 inches wide and later 206 inches. Lukens continued to be the world's largest steel plate mill until the 1950s.²³

¹⁹ George P. Donehoo, ed., *Pennsylvania: A History* (New York: Lewis Historical Publishing Co., 1926), 7, 27; "Centennial," *Iron Age* (30 June 1910), 1565; Charles Huston, "The Iron and Steel Industry," in Chauncey M. Depew, ed., *One Hundred Years of American Commerce*, reprint of 1895 edition (New York: Greenwood Press, 1968), 323-24; "Story of Lukens," *Iron Age* (4 July 1935), 47.

²⁰ Julian Callison Skaggs, "Lukens, 1850-1870: A Case Study in the Mid-Nineteenth Century American Iron Industry" (Ph.D. Diss., University of Delaware, 1975), 79, 127-28; "Story of Lukens," *Iron Age* (4 July 1935), 50.

²¹ Eugene L. DiOrio, *Remarkable Past—Promising Future: A Historical Review* (Coatesville, PA: Lukens Steel Company, 1990) n.p.

²² Donehoo, p. 28.

²³ "One Hundred and Thirty Years of Iron and Steel Making," *Iron Trade Review* (30 June 1910), 1268; Lukens Steel Company, *Steel Plates and Their Fabrication* (Coatesville, PA: Lukens Steel Company, 1947), 6; James Bennett Nolan, ed., *Southeastern Pennsylvania* (Philadelphia: Lewis Historical Publishing Co., 1943), 1, 281.

The relationship between management and labor at the Lukens mill has been one of the most positive in the industry. Like other aspects of the mill's success, this too began under the tenure of Rebecca Lukens. She instituted incentive plans to encourage her workers to boost the mill's production. While running the mill, she also oversaw the workings of a farm; this allowed her to retain employees when water shortages prevented the mill from operating. Similarly, the farm enabled her to pay her workers with produce at times when currency was unavailable. This type of practice was carried on in the form of a cooperative store on Lukens property run solely by Lukens employees. The company subsidized the cooperative and helped provide inexpensive consumer goods for its employees.²⁴

Due at least in part to the amiable environment between employees and management fostered by Rebecca Lukens and her family, the mill employed generations of the same local families. It trained these family members to take on increased responsibilities and better-paying positions. In 1910, not a single "outsider" occupied a foreman position in the plant—all men in those positions rose through the ranks of the company.²⁵

The Lukens mill maintained an open shop policy and sought to treat its workers equitably. This is best exhibited in the words of Abram Huston: "If we have a labor policy it is this: Treat all men fairly and in person. Live with the work and the workmen. Pay honest wages for honest work—and pay those wages at the time they are earned. Pay for everything that is earned."²⁶ Thus, at the centennial of the company's founding in 1910, the local Congressman commended both labor and management "upon the evidence of most harmonious relations."²⁷

In 1900, the Lukens management approved construction of a new office building. Architects Cope and Stewardson designed the Georgian structure, and Abram Huston followed every detail of construction. Ready for occupancy by the end of 1903, the building is constructed of brick and stone with a steel foundation and concrete floors. When built, the building was illuminated by gas and electricity and heated by the "vapor system" regulated by thermostats. The first floor was occupied by the treasurer, auditor, purchasing agent, and their assistants. On the second floor were the offices of the President, Vice-President, and general sales agent. The building sits in the center of a large lawn, most of which was raised as much as six feet above the original level. The landscaping consisted of sodded walks, grassy areas, and shrubbery in an attempt to maintain the setting as a small park. A hedge of California privet surrounded the entire lot. In 1916, the building was enlarged by architects Stewardson

²⁴ "Story of Lukens," *Iron Age* (4 July 1935), 50.

²⁵ "Centennial," *Iron Trade Review* (7 July 1910), 1269.

²⁶ As quoted in "Story of Lukens," *Iron Age* (4 July 1935), 50.

²⁷ "Story of Lukens," *Iron Age* (4 July 1935); "Centennial," *Iron Trade Review* (7 July 1910).

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and Page, successors to Cope and Stewardson. The shape of the building was changed from a "T" shape to that of a "H." The building is used today as Lukens' executive offices and the landscaping is in keeping with the original design.²⁸

The Lukens Steel Company continued to grow. Since the mill was accustomed to making boiler plate, it was able to meet railroad industry standards for steel plates used in firebox and combustion chambers of large steam locomotives. Lukens extra-wide plates made it possible to supply firebox sheets in one piece thereby avoiding seams that often split. In 1912, Lukens and the Jacobs-Schupert United States Firebox Company staged elaborate tests of locomotive boilers in Coatesville. In 1914, the company hosted a gathering of boiler makers. The day was highlighted by an elegant luncheon served on the lawn of Graystone, with music provided by the Lukens band—yet another example of the Huston link between home and the mill.²⁹

The Lukens' Directors determined in 1915 that the increasing demand for wider steel plates necessitated a new and larger mill. In 1918, the new 204-inch rolling mill began production. Enlarged again in 1919 to 206 inches, Lukens was at the forefront of the industry. Also in 1919, Lukens expanded its steel-making capacity. The company's third open hearth plant opened in 1918 and had eight 100-ton furnaces, resulting in a total of 24 open hearth furnaces and an annual capacity of more than 500 thousand tons.³⁰

A.F. Huston retired as president of Lukens in 1925, although he remained chairman of the board until his death in 1930. The 1920s proved to be a difficult time for the steel industry as it downsized from the high prosperity during World War I. Lukens suffered losses in 1922, 1924, and 1925. In the late 1920s, business improved, but the 1930s proved to be exceedingly difficult due to the depression.³¹

Although Lukens Steel remains in operation today, this National Historic Landmark district concludes its period of historical significance in 1930 with the death of A.F. Huston. Charles Lukens Huston served the company as first vice-president until his death at the age of 94 in 1951, but the actual management of the company had passed on to the next generation of Hustons in 1930.

Rebecca Lukens' legacy to the iron and steel industry is clear. Lukens Steel grew to be one of the country's major iron and steel manufacturing firms under her direction—a distinction Lukens holds to this day. Rebecca Lukens entered a field where few women would venture until the 20th century. She served as the matriarch of an industrial dynasty—her son-in-law and grandsons played major roles in the management of the Lukens Steel company. They continued her commitment of fairness to workers, innovative technology, and her interest in fine architecture. Rebecca Lukens' influence spanned many more years than she lived. Her legacy continued throughout the lives of her descendants into the mid-20th century.

²⁸ "One Hundred and Thirty Years of Iron and Steel Making," *Iron Trade Review* (30 June 1910), 1269; DiOrio, *Remarkable Past—Promising Future; Historic Homes and Institutions Genealogical and Personal Memoirs of Chester and Delaware Counties Pennsylvania* (New York: Lewis Historical Publishing Co., 1904), 144.

²⁹ DiOrio, *Remarkable Past—Promising Future*.

³⁰ DiOrio, *Remarkable Past—Promising Future*.

³¹ DiOrio, *Remarkable Past—Promising Future*.

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Wolcott, Robert W. *A Woman in Steel: Rebecca Lukens (1794-1854)* New York: The Newcomen Society, 1940.

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 (Specify Repository): Chester County Historic Preservation Office
 Hagley Museum and Library

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10. GEOGRAPHICAL DATA

Acreage of Property: Approximately nine (9) acres

UTM References: Zone Easting Northing
 A 18 429830 4425700
 B 18 429760 4425650
 C 18 429620 4425870
 D 18 429820 4425990
 E 18 429880 4425850

Verbal Boundary Description:

Beginning at the southeast corner of the tax parcel 16-10-20, on the west side of South First Avenue where it intersects with Maple Avenue, then southwest along property line one hundred fifty-seven feet (157), to a point, then north-northwest twenty-four and ninety-nine one hundredths feet (24.99), to a point, then southwest forty-one and sixty-five one hundredths feet (41.65), to a point, then northwest forty-one and sixty-five one hundredths feet (41.65), to a point, then southwest thirty-three and thirty-two one hundredths feet (33.32), to a point, then northwest along property lines for the following three courses: one hundred eighty-two feet (182), sixteen and sixty-six one hundredths feet (16.66), five hundred twenty-four and seventy-nine one hundredths feet (524.79), to the south side of Harmony Street, then northeast along the south side of Harmony Street, crossing over South First Avenue, for the following two courses: two hundred forty-nine and ninety-eight one hundredths feet (249.98), five hundred feet (500), to a point, then south-southeast one hundred seventy-five and one one hundredth feet (175.01), to a point, then southwest to the west side of South First Avenue four hundred sixty-six and sixty-four one hundredths feet (466.64), then along the west side of South First Avenue, three hundred eighty-three and thirty-four one hundredths feet (383.34), to the place of beginning.

Boundary Justification:

The boundary as described is a reverse "L" shape. The district provides for a cohesive unit which includes all four nominated buildings, including outbuildings.

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11. FORM PREPARED BY

Name/Title: Ms. Jill S. Mesirow, Historical Consultant
414 Green Park Court
Deerfield, Illinois 60015

Dr. Page Putnam Miller, Director
National Coordinating Committee
for the Promotion of History
400 A Street, SE
Washington, DC 20003

Telephone: 202/544-2422

Date: October 29, 1993

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PHOTOGRAPH 1

1. LUKENS HISTORIC DISTRICT: Brandywine--south elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Jane L.S. Davidson, July 1990: Historic Research Associates

PHOTOGRAPH 2

1. LUKENS HISTORIC DISTRICT: Brandywine--east elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Jane L.S. Davidson, July 1990: Historic Research Associates

PHOTOGRAPH 3

1. LUKENS HISTORIC DISTRICT: Brandywine- view of Lukens Steel mill from interior
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 4

1. LUKENS HISTORIC DISTRICT: Brandywine- interior, detail of fireplace
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 5

1. LUKENS HISTORIC DISTRICT: Brandywine- interior, main staircase
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 6

1. LUKENS HISTORIC DISTRICT: Terracina- east elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 7

1. LUKENS HISTORIC DISTRICT: Terracina- east elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 8

1. LUKENS HISTORIC DISTRICT: Terracina- northwest elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Jane L.S. Davidson, July 1990: Historic Research Associates

PHOTOGRAPH 9

1. LUKENS HISTORIC DISTRICT: Terracina- west elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Jane L.S. Davidson, July 1990: Historic Research Associates

PHOTOGRAPH 10

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1. LUKENS HISTORIC DISTRICT: Terracina- south elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Jane L.S. Davidson, July 1990: Historic Research Associates

PHOTOGRAPH 11

1. LUKENS HISTORIC DISTRICT: Graystone- west elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 12

1. LUKENS HISTORIC DISTRICT: Graystone- north elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 13

1. LUKENS HISTORIC DISTRICT: Graystone- east elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 14

1. LUKENS HISTORIC DISTRICT: Graystone- carriage house
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 15

1. LUKENS HISTORIC DISTRICT: Graystone- west elevation, front door detail
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 16

1. LUKENS HISTORIC DISTRICT: Graystone- interior, main stair
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 17

1. LUKENS HISTORIC DISTRICT: Graystone- west parlor fireplace
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 18

1. LUKENS HISTORIC DISTRICT: Lukens Main Office Building- east elevation
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 19

1. LUKENS HISTORIC DISTRICT: Lukens Main Office Building- south east elevation

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2. Coatesville, Chester County, Pennsylvania
3. Photographed by Page Putnam Miller, May 1993: NCC, Washington, DC

PHOTOGRAPH 20

1. LUKENS HISTORIC DISTRICT: Lukens Steel Mill; man in derby hat is Dr. Charles Huston
2. Coatesville, Chester County, Pennsylvania
3. Photographed by Unknown, circa 1880: Lukens Steel Company, Coatesville, PA