

United States Department of the Interior
National Park Service

SENT TO D.C.

7-1-98

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If 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

historic name White and Company's Goose Lake Stoneware Manufactory

other names/site number Jugtown / Pottery Works (11-Gr-69)

2. Location

street & number 5010 N. Jugtown Road not for publication

city or town Morris vicinity

state Illinois code IL county Grundy code 063 zip code 60450

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.)

William L. Chel / SHPO 6-25-98
Signature of certifying official Date

Illinois Historic Preservation Agency
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
- public-Federal

Category of Property (Check only one box)

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

Number of Resources within Property

Contributing	Noncontributing	
<u>0</u>	<u>0</u>	buildings
<u>1</u>	<u>0</u>	sites
<u>0</u>	<u>0</u>	structures
<u>0</u>	<u>0</u>	objects
<u>1</u>	<u>0</u>	Total

Number of contributing resources previously listed in the National Register None

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

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat: Industry/Processing/Extraction Sub: Manufacturing Facility

Current Functions (Enter categories from instructions)

Cat: Landscape Sub: Park

7. Description

Architectural Classification (Enter categories from instructions)

N/A

Materials (Enter categories from instructions)

foundation N/A
roof N/A
walls N/A
other _____

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

8. Statement of Significance

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

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

Criteria Considerations (Mark "X" in all the boxes that apply.)

- 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)

Archaeology/ historic-non-aboriginal

Period of Significance 1855-1866

Significant Dates 1855
1858

Significant Person (Complete if Criterion B is marked above) N/A

Cultural Affiliation N/A

Architect/Builder N/A

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

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: Illinois State Museum Research and Collections Center

10. Geographical Data

Acreage of Property 8.89 acres

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

Zone Easting Northing	Zone Easting Northing
1 16 389320 4577880	3 16 389480 4577970
2 16 389480 4577880	4 16 389320 4577970
<input type="checkbox"/> 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 Floyd Mansberger/Excavator & Researcher & Mark Benson/Cultural Resource Technician
organization Illinois Department of Natural Resources & Fever River Research date September 25, 1997
street & number 524 S. Second telephone (217) 524-5462
city or town Springfield state IL zip code 62701

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 _____
street & number _____ telephone _____
city or town _____ state _____ zip code _____

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

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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name of property

Grundy, Illinois
county and State

Narrative Description

This section is excerpted from the 1995 technical report "Early Industrialized Pottery Production in Illinois: Archaeological Investigations at White and Company's Gooselake Stoneware Manufactory and Tile Works, Rural Grundy County, Illinois" by Floyd Mansberger of Fever River Research.

The Goose Lake Prairie State Natural Area is a large (2,538 acre), state-owned (Illinois Department of Natural Resources) marsh and prairie preserve located along the southern bottoms of the Illinois River near the confluence of the Des Plaines and Kankakee rivers. The environmental setting, cultural history, and summary of previous cultural resource investigations in this area has been summarized in Hassen and Schroeder (1987).

Goose Lake is the remnant of glacial Lake Cryder, a 13,000 year old wide expansion of the Chicago Outlet River. Mesic prairie is found on the higher gravel bars associated with the river. Soils within the park consist of High Gap silt loams (which formed under forest vegetation on sandy outwash and sandstone residuum), Calamine-Bryce Variant Complex silty clays (which formed in clayey lake bed sediments) and Faxon silty clay loam (which formed under grasses on shallow loamy deposits over bedrock) (Fehrenbacher et al, 1984).

The first European settlers into what was to become Grundy County began to arrive in the late 1820s. Unlike neighboring areas which were predominately timber, Grundy County was settled slightly later because it was predominately prairie vegetation (Sauer, 1916). In 1828, William Marquis traveled overland from the Wabash country and settled along the Illinois River valley near the mouth of Mazon Creek. In 1833, settlers arrived in what were to become the villages of Wauponsee in Vienna Township and Mazon in Mazon Township. By June 1835, when the government land sales began, only a handful of settlers had located in the region (Warner and Beers, 1874). The first settlers to reach nearby Morris probably did not arrive until 1834 (Sauer, 1916).

The impetus for much of the initial settlement in this region was the speculation and development of the Illinois and Michigan Canal (I & M) which connected Lake Michigan (at Chicago) with the Illinois River at La Salle (Sauer, 1916). Although begun in 1836, the Canal was not completed until 1848. With the completion of the Canal, the region experienced dramatic growth and was directly responsible for the development of Chicago as well as other upper Illinois River communities such as Lockport, Joliet, Morris, Seneca, Marseilles, Ottawa, Utica, LaSalle, and Peru.

The impact of the I & M Canal was both immediate and immense. What had previously been a trickle of commerce between east and west swelled into a continuous flow of people and materials moving in both directions. A major shift occurred as the Midwest's "hub" became Chicago instead of St. Louis. . . (National Park Service n. d.: n. p.).

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Narrative Description (continued)

The decade of the 1850s was a period of tremendous growth for the upper Illinois River valley region. During this period, Grundy County increased from a population of 3,021 (in 1850) to slightly over 10,000 in 1860 (Warner and Beers, 1874)¹.

The large, poorly drained area around Goose Lake was difficult to farm and remained largely undeveloped throughout much of the nineteenth century. During this time, the area was a major sport hunting district, and many prominent individuals hunted waterfowl at Goose Lake, "the famous duck hunting place southeast of Morris" (Morris Herald, January 12, 1909). Unfortunately for the nineteenth-century outdoorsmen, the draining of the lake was detrimental to the wildlife and the recreational activities that it spurred. The Morris Herald Holiday Supplement (1888) noted that Goose Lake

was a hunter's paradise, and known alike west and east as 'Goose Lake.' Many a hunting party came from 'away down East', New York, New Jersey and the land of Penn, to this lake to shoot geese and ducks, but unfortunately for the Nimrods, our friend Osborn became the owner of the fee and concluded it would pay better converted into a pasture to feed cattle than to raise ducks and geese for other men to shoot, and drained the water off, so the place where it stood has become dry land, and the would-be Nimrods must seek other localities to gratify their hunting inclinations.

Although Grundy County was known during the nineteenth century as "mainly a farming county," several significant industries developed in this region at an early date, partially because of its location along the Illinois and Michigan Canal (Warner and Beers, 1874). By 1870, the census indicated over 40 manufacturing

¹ Historical and economic context for the Illinois and Michigan Canal can be obtained in Sauer (1916), Lamb (1987), and Rathbun (1980). Title of the Illinois and Michigan Canal was transferred to the Illinois Department of Conservation in 1974 for development into hiking and biking trails, camping and interpretive programs. In 1984, the Federal government recognized the significance of this corridor and created the Illinois and Michigan Canal National Heritage Corridor, the first of its kind in the United States. The objectives of the Illinois and Michigan Canal National Heritage Corridor Commission is "to coordinate and the assist the State and local governments, in developing the historical, recreational, and economic development of the Corridor. . . ."

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Narrative Description (continued)

establishments which employed 168 hands with a capital investment of \$132,000 (Warner and Beers, 1874).

Coal mining was an extractive industry that played a dramatic role in the development of Grundy County. Warner and Beers (1874) state that "besides many 'strippings', or thin deposits, which supply the farmers with fuel, a continuous coal seam, uniformly three feet thick, underlies the whole county..." The 1877 Grundy County Directory (Lawrence and Thompson, 1877) noted that

The coal measures [of Grundy County] are the grand repositories of mineral wealth, by far the most important and valuable at present known within the limits of the State. They furnish an inexhaustible store of mineral fuel, in addition to the valuable deposits of iron ore, potter's clay, fire clay and building stone, which abound in the same localities...

Throughout Grundy County, so far as demonstrated, the measures contain a single seam, averaging about three feet in thickness, and varying in depth from 30 to 160 feet. This seam furnishes one of the best, if not the best, quality of coal to be found in Northern Illinois.... which is largely in demand in Chicago.

Some of the first coal mined in Grundy County was encountered during the construction of the Illinois and Michigan Canal (Morris Herald Holiday Supplement, 1888). Later several shaft mines were excavated. In 1874, a coal mine shaft was indicated immediately east of the abandoned Jugtown Pottery and Tile Works (Warner and Beers, 1874). Circa 1928, the Northern Illinois Coal Company began strip mining of shallow coal resources in Felix and Goose Lake townships (Morris Herald, undated in Goose Lake Vertical file), an activity that has dramatically altered the Grundy County landscape.²

Quality stoneware clays are generally found in close association underlying coal beds. In Grundy County these clay resources range in thickness from a few inches to ten and twelve feet. As this clay is often quite pure, it forms a valuable material for the manufacture of fire-brick and pottery, and is sometimes fully equal in value to the coal seam which it underlies.... There are several large brickyards in the county using both the clay that overlies the coal beds and also that from beneath, and an excellent quality of brick can be produced." (Lawrence and Thompson, 1877).

²An interesting description of the coal mining industry in Grundy County is available in the Morris Herald (Continued) (February 18, 1909).

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Narrative Description (continued)

One such deposit that became well known was the deposits along the western edge of Goose Lake. As the directory continues to state, "There are also beds of potter's clay in the county, and some years ago there was a large establishment engaged in the manufacture of domestic earthenware, drain tile and sewer pipe." (Ib id)

Worthen, in his Geology of Illinois (1870) discusses the clay resources of Grundy County

The only bed known and worked, is that previously noticed, as occurring near the west end of Goose Lake, and extensively used, at Jugtown, in the manufacture of a good grade of domestic earthenware, together with drain-tile and sewer-pipes. The bed consists of more or less thoroughly decomposed clay shale and fire clay of the coal measures, containing many fragments of coal, thoroughly mingled, and deposited in a low part of the old river channel, which contains Goose Lake, by the current of the river which formerly flowed there. The mixed character of the materials has given much trouble to the potters. The bed has been worked to a depth of about fifteen feet.

William White, a potter from New York state, partnered with financier Charles Walker of Chicago and beginning in 1855 constructed the Goose Lake Stoneware manufactory and began to exploit the rich clay resources around Goose Lake. Similarly, other potters established workshops along the upper Illinois River. Early family-operated workshops such as the Kirkpatrick pottery near Vermillionville were established by the late 1830s (Gums, Mounce, and Mansberger 1994). By the 1870s and 1880s, large factories specializing in stoneware had developed at Utica, Ottawa, La Salle and Morris (Mounce 1988; 1989).

Although the firm of White and Company was not successful, having ceased production in 1866, it established a production system in Illinois that contrasted dramatically to the more traditional ceramic workshops around the state. The following discussion places the Goose Lake Stoneware Manufactory and Tile Works (and the associated company town that developed around it) into a context that stresses workshop organization and ownership, site location and structure, power sources, production methods, kiln technology, and the seasonality of production.

The Pottery Works Site (11-Gr-69)

Today, the remains of White and Company's Goose Lake Stoneware Manufactory and Tile Works is represented by two separate archaeological sites, the Pottery Works site (11-Gr-69) and the Tile Works site (11-GR-70) located only 230 meters apart. The Pottery Works site is located on the north side of Pine Bluff Road immediately east of its intersection with Jugtown Road. When conducting our initial field investigations during the summer 1991, this field was in agricultural production. Shortly after our fieldwork, this land was planted in prairie grass. This site is a very large, dense scatter of historic debris consisting predominately of kiln furniture, waster sherds, and occasional brick, stone and domestic debris typical of the middle to late nineteenth century.

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Narrative Description (continued)

Controlled Surface Collection

In 1991, a controlled surface collection was conducted at this large, complex site. At that time, the site was gridded off into hundreds of five meter squares. Within each five meter square, all rim, base, and marked sherds as well as all domestic material, brick, stone and clinkers were collected and removed to the laboratory. Upon arrival in the lab, the brick, stone and clinkers were counted and weighted. The waster sherds, kiln furniture and domestic artifacts were then inventoried and surface distribution maps of the various class of artifacts were produced.

Over 14,000 artifacts were collected from 1,497 five-meter-square collection units and inventoried to produce the surface distribution maps presented here. Although representing a gargantuan task, the results were well worth the effort and have given us detailed insights into the structure of this site. The results of the computer-generated surface distribution maps are summarized in Figures 4 through 7. By overlaying various maps, hypotheses about the complex structure of the site could be made and compared with the archival information (Figure 8). For detailed explanation of this strategy refer to Mansberger and Halpin (1991).

Table 1
Functional Classes of Artifacts,
Controlled Surface Collection,
Pottery Works Site (11-Gr-69)

	<u>Number</u>	<u>Percent</u>
I. Architectural Items	866	6.2
II. Domestic Items	1,990	14.4
III. Kiln Furniture	3,562	25.7
IV. Drainage Tile and Collars	928	6.7
V. Crockery Wares	6,520	47.0
	<u>3,866</u>	<u>100.0</u>

The Pottery Works site was very large, encompassing over 36,000 square meters (over 8.89 acres). It is the size and density of this surface scatter of industrial waste (kiln furniture, waster sherds and brick) that immediately catches one's attention at this site (Figure 4 and Table 1). Although the industrial areas within this

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Narrative Description (continued)

site had an extremely heavy artifact density, those areas associated with the domestic component had a very light density. Although the artifact density for the entire site was 0.39 artifacts per square meter, the density ranged from one artifact per collection unit (0.04 artifacts per square meter) to 220 artifacts per collection unit (8.80 artifacts per square meter). Another interesting characteristic of this scatter is its inverted U-shape and lack of artifacts in the south central portion of the site.

The waster sherds, although distributed over the entire site, were concentrated in two locations (Figure 5). The largest and densest concentration (containing as many as 70 sherds per collection unit) was located near the far northwestern edge of the site. This scatter of waster sherds was approximately 55m by 55m in size with the densest sherds located along the western edge of the area. The location of this scatter corresponds well with the location of the Pottery Workshop at the northeast corner of the Public Square as indicated on the Winterbottom map (an undated, late nineteenth century hand-drawn map depicting Jug Town in 1858). The second concentration of waster sherds is located in a long narrow band along the northeast edge of the site. This area is much more difficult to interpret and may represent a dump or a roadway leading towards the Tile Works Site. Future research should be directed at understanding this second concentration of waster sherds.

The distribution of kiln furniture mirrors that of the waster sherds (Figure 2). The greatest concentration of kiln furniture (also consisting of 70 fragments per collection unit) was located in the same area previously identified as the location of the Pottery Workshop, except in a slightly more confined area (approximately 30m by 55m in size). Similarly, a secondary deposit of kiln furniture was located along the northeast edge of the site.

Clinkers, a waste by-product of the coal-burning kilns and steam boilers, although not overly dense were distributed widely across the site. The densest concentration of clinkers (consisting of 1300 gms/collection unit) occurred in the area believed to represent the Pottery Workshop, as well as the area along the northeast edge of the site suspected as being a dump or roadway.

Unlike the adjacent Tile Works site, building stone was very poorly represented at the Pottery Works site. An occasional large, water-worn boulder was encountered during the surface collection. Although these may represent remains of structural piers, they may also represent glacial outwash. Similar glacial erratics are located in the adjacent field to the west and thus would suggest that they may represent non-cultural remains.

Brick was very plentiful at this site (Figure 6). Although some of the brick were refractory brick, the majority of the brick recovered were common, soft-mud brick typical of the nineteenth century. A single fragment of a marked refractory brick was recovered which was impressed "N. White & Son/ Firebrick Works/ Utica N.Y." Although both brick weight and number were compared, the most relevant data appear to be in the form of number (not weight). Brick weights varied from 1 to 5,750 grams per collection unit. Brick numbers

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Narrative Description (continued)

varied from 1 to 16 per collection unit. The brick concentration was very similar to the waster sherds and kiln furniture distribution. Within that dense scatter located at the northwest corner of the site, we were able to isolate three distinctive concentrations of brick oriented in a straight north-south line along the western edge of the area identified as the Pottery Workshop. We hypothesize that these concentrations of brick may represent three kilns aligned as at the Tile Works.

Another concentration of brick was identified approximately 20-25 meters east of the northern most "kiln" signature. This concentration of brick was also associated with a dense concentration of domestic debris and has been interpreted as the location of another structure, potentially William White's house.

Although the numbers were small, the distribution of architectural (particularly machine-cut nails and window glass) and domestic artifacts was extremely enlightening (Figure 7). In both cases, five nearly identical concentrations of artifacts were defined and have been labeled A through E (Figure 7). The architectural items range from 1 to 30 artifacts per collection unit whereas the domestic items range from 1 to 72 artifacts per collection unit. Although the window glass ranged in thickness from 1.11mm to a high of 3.15mm inches, the vast majority of the glass clustered between 1.66mm to 2.25mm inches. The domestic artifacts from these five areas consisted of typical middle nineteenth-century items. Ceramic tablewares consisted predominately of undecorated whitewares.

The distribution of both these artifact classes (architecture and domestic) clearly identifies two domestic scatters each side of the "Public Square" with a fifth concentration centered along the north end of the square immediately east of the industrial complex (at the "head of the square"). The concentration at the north end of the square, believed to represent William White's residence, is recognized for both the quantity (particularly with domestic items as well as smoking pipes) and quality (particularly the presence of porcelain and ironstone tablewares) of artifacts over the other four domestic signatures. The close association of William White's house and the Pottery Workshop is in keeping with the structure of sites associated with traditional farmer/potters and/or small family operated workshops (and inconsistent with that associated with more industrialized, large-scale factories).

Based on a comparison with the Winterbottom map, it is suspected that Domestic Area A was occupied by William White, Area B was occupied by the Vanarsdale family as a boarding house, Area C was occupied by the Laws family, Area D was occupied by the Chambers family, and Area E was occupied by the Brown family. It is interesting to note that two additional domestic areas identified on the Winterbottom (n.d.) map were not identified within the field. It is possible that the low-density domestic scatters are present within the very wide grass and brush area bordering the field along the south edge of the site.

The distribution of smoking pipes was also intriguing; these were recovered only at Domestic Areas A

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Narrative Description (continued)

and E. The extremely light concentrations at Area E suggest that a family member probably smoked at some point in time. What is perplexing is the sheer density of pipe fragments at Domestic Area A where they were as high as 44 fragments per collection unit. This high density of smoking pipes in this area raises the question as to whether this domestic scatter may be more complex than initially thought and might represent more than just William White's house. It is possible that this scatter may represent the pottery workshop as well as domestic quarters of the White family. If so, the sheer number of pipes may suggest the location of the pottery workshop where potters were smoking during the work day.

Excavations

During the summer of 1991, a single 1-m-by-2-m test excavation unit was excavated within this field to assess the potential of intact subsurface features. For the location of this single test excavation unit, we selected an area that appeared to represent the remains of a demolished building (based on the presence of plaster on the ground surface). After producing the surface distribution maps, it was determined that this test was located within the center of Domestic Area B (see figure 7).

After removing the plow zone, this excavation unit encountered a substantial feature that appears to be the edge of a cellar depression filled with demolition debris (see figure 14). This feature appears to be a shallow basin that extended approximately 1.10m below the surface. The artifact density within this feature was low (See Table 2). Although the single excavation unit did not shed much additional light on the structure of this site, it has suggested intact subsurface features are indeed present at this site and that subsurface integrity is good and has the potential to contain a wealth of information regarding both the domestic and industrial activities that were conducted at this location.

Table 2
Artifacts from Feature (Test 1)

7 stoneware sherds
1 stoneware tile fragment
4 aqua window glass
5 machine cut nails
9 sheet metal fragments
2 unidentified iron fragments
1 kaolin pipe stem
3 small soft-paste brick fragments
1 yellow paste refractory (fire) brick fragment
- mortar
- plaster

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Narrative Description (continued)

Summary of Site Structure

The archaeological information correlated well with the existing archival information available for this site. The detailed controlled surface collection, combined with the archival information available for this site, has led to detailed understanding of the structure of this short term industrial community. Using this strategy, several distinctive activity areas were defined and help decipher the structure of this middle nineteenth-century industrial complex. Figure 8 is an attempt at summarizing these activity areas.

The industrial component was located in a strategic location immediately west of William White's house at the north end of the Public Square. Although the Winterbottom map suggests that only one kiln was present at this site, the archaeological data suggests that three large stoneware kilns were arranged in a north-south line along the western edge of the complex. Whereas the sketch of the Tile Works site gives a view looking east at the kilns, the sketch at the Pottery Works Site appears to be looking due north at the line of kilns and thus only illustrates a single kiln in profile. Whether this site had one or three kilns has significant interpretive implications. As such, future research should be conducted to address this issue (number of kilns present) as well as the structure of the industrial component at this site and the exact size of the kiln(s). It is theorized that the size of these kilns will be close to the size of the kilns at the Tile Works site (11-Gr-70), approximately 8m. That area immediately west of the kilns appears to have been used as a dump. Another area, located along the northeast edge of the site, may also have functioned as a dump and/or road leading to the nearby Tile Works. The pottery workshop appears to have been situated immediately east of the kilns adjacent to William White's residence.

The domestic component consists of five distinctive domestic scatters that appear to represent three or four workmen's houses, White's house and potentially the boarding house. William White's house was located immediately adjacent to the workshop in a strategic location at the head of the Public Square. The size, density, as well as quality of artifacts present distinguish this scatter from the other domestic scatters present at this site. Future research should focus on distinguishing the structure of these domestic components --especially how they differ from that associated with William White's residence and the communal boarding house.

Additionally, other domestic scatters associated with this middle nineteenth-century site are probably located south of Pine Bluff road in private ownership immediately outside of the project area. Future research should address the potential integrity of domestic components in that area and would entail shovel testing at these privately owned locations (with owner permission). After further investigation these areas might be added to the area now covered by the site number and National Register Form.

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name of property

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Statement of Significance

White and Company's Goose Lake Stoneware Manufactory (11-Gr-69) is eligible for listing on the National Register of Historic Places under Criterion D for historic/non-aboriginal archaeology for the information potential about the stoneware industry, and lives of the workers associated with the community that was established around the Stoneware manufactory. The site is locally significant for listing in the National Register. The period of significance for this site is 1855, when the company began operating, to 1866, when the company closed.

William White's Goose Lake Stoneware Manufactory, organized in late 1855, closed in 1866, in rural Grundy County, represents one of the first (if not the first) attempts at large-scale production of stoneware and drainage tile in Illinois. Contemporary ceramic workshops were generally small, non-mechanized family affairs that produced wares for local markets. In contrast, White and Company's workshops were large, industrialized affairs which employed over 40 individuals with a substantial company town that developed around the industrial works. The site's history is significant at the local level.

Research Questions

The archaeological work done at the White and Company's Goose Lake Stoneware Manufactory (11-Gr-69) can contribute the following primary questions, which can be answered using available data. Secondary questions asked here can only be answered with information that can only be gained through further excavation of the site.

Primary Questions

Q. What was the method of stoneware production done?

A. Predominately hand production methods, with White and Company introducing industrialized production methods to the area as explained below in the section: Production Methods: Crockery.

Q. Was there a style variability amongst the workers?

A. Industrialization resulted in product standardization, and a lack of individuality in wares, a uniformity in vessel form and style as explained below in the section: Wares Produced.

Q. What was the result of industrialization?

A. The community was composed of mainly low income immigrants as explained below in the section: Site Structure and Community Organization

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Q. What type of wares were produced at the Stoneware Manufactory?

A. Hand-produced jars and bowls predominated with minor production of jigger-molded wares as explained below in the section: Wares Produced.

Q. Did the wares produced here vary from other manufactories regionally?

A. The Stoneware Manufactory wares were very similar to those being produced elsewhere in the Upper Illinois valley region as explained below in the section: Wares Produced.

Secondary Questions

Q. What type of kiln was used for production of the Stoneware?

A. This can only be determined with further excavation which will reveal the kiln foundations.

Q. What was the exact layout of the community associated with the Stoneware Manufactory?

A. The Winterbottom map is assumed to be correct, but further excavation revealing foundations is the only way to prove this.

Site Location

In the middle 1830s, with the speculation brought on by the construction of the Illinois and Michigan Canal, potters began to eye the upper Illinois River valley. One such potter that located in this area in 1836 was John Kirkpatrick --one of the first potters to recognize the stoneware production potential of this area (Gums, Mounce and Mansberger, 1994). With the completion of the canal in 1848, it was not long before potters began to realize the economic potential of a pottery workshop along this transportation corridor. The excellent transportation facilities that it provided, especially to the booming community of Chicago, were unequalled in northern Illinois. By the 1870s, several potteries had become established in both Grundy and LaSalle counties (Mounce, 1988, 1989).

The primary reason that the Goose Lake Pottery was situated at this rural Grundy County location was because of the quality stoneware clay resources discovered at Goose Lake, presumably by Charles Walker. This was one of the most extensive stoneware clay deposits within close proximity to Chicago and easily accessible by the Illinois and Michigan Canal. The presence of extensive coal resources nearby was also of interest to the potters. With the establishment of the partnership with Charles Walker, William White began construction of the pottery and tile works near the clay source.

White's selection of a site near the Illinois and Michigan Canal was no doubt influenced by his previous knowledge of his father's pottery works along the Erie Canal in Upstate New York. White's Utica Pottery in New York State was situated at a very successful location. Not only were raw materials moved into the region via the canal, but finished products were moved out of the region via the Erie Canal into a market area

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dramatically increased by the canal's presence. Similarly, other major pottery centers, such as at East Liverpool (Ohio), had been established along successful transportation corridors during the 1840s and early 1850s (Fryman, 1983).

Ultimately, White's selection of a site near the clay source at Goose Lake was detrimental to the success of the company. Unfortunately for William White, the pottery workshop was located several miles, via poorly developed roads, from the port community of Morris, which made it difficult to transport the finished product to the canal at Morris. Had White established his pottery works at the canal and transported the raw materials to his workshop, the history of this firm may have been significantly different.

Summary of Archival Information

There are multiple sources of information regarding the middle nineteenth century structure of this industrial community. The Doran map (Doran, 1863; see Figure 1) indicates a row of three structures arranged each side of an open area, presumably a public square. Situated at the north end of this open area is a large rectangular structure indicated simply as "Pottery". North of the pottery workshop was a large orchard. Three additional structures, presumably part of this industrial community, were located immediately across the road to the south.

The most detailed insights into the structure of this community is derived from a late nineteenth century map, prepared by Mrs. Mary Winterbottom (1850-1898), sometime prior to her death in 1898, and is entitled "City of Jug Town in 1858."³ Within the 8.89 acre area now represented by 11-Gr-69, the Winterbottom pencil sketch map indicates five houses (Browns, Chambers, Phalin, Tincome, and Laws families), a large boarding house, as well as "Pottery Shop" and "Residence [of] Wm. White, the owner of the business". The five houses and boarding house appear to be arranged each side of the "public square" recognized on the Doran (1863) map. Situated at the north end of the "Public Square" was the pottery workshop and White's residence. The Winterbottom map indicates the presence of a "flagpole" and "town pump" (a well) at the north end of the area identified as a "public square" on the Doran (1863) map. Four houses (occupied by the Miller, Cody, Beesley, and Lyons families), a school, and the "city garden" were documented south of Pine Bluff Road on this early map of the community. The large garden must have been a favorite of the community as it was labeled "very

³ This map, which came to our attention during the course of this research, was donated to the Illinois Department of Natural Resources by Mrs. James W. Baker of Morris, Illinois.

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fine"⁴.

The 1860 Federal Population Census correlates well with the Winterbottom map. Nine households were enumerated within the census for this area of the community. Based on an analysis of the census, the total population at this site consisted of approximately 55 individuals, ranging in age from a one-year-old infant to a 60-year-old farmhand⁵.

The community was young, with an average median working population of only 37 years of age. The oldest Illinois born child was only three years old. Consistent with the young age of the population, all of the individuals were landless. The only individual to report land ownership to the census taker was William White, with an impressive \$12,000 worth of real estate. Similarly, the personal property values for these individuals was low and many of the workers did not list any personal property. Although William White's personal property was assessed at \$1,300, the average personal property value of the workers was only \$66. Of the workers that listed personal property, the average property value was still only a low \$157.

The working population was represented by seven different nativities. New York State, the home of William White, represented the largest number of workers (50%) followed by Ireland (20%) and England (10%). Vermont, Connecticut, Massachusetts, and Pennsylvania were all represented by 5% of the working population.

⁴ The family names listed on the Winterbottom map correspond very well with those in the 1860 Population Census. The slight discrepancy between the two sources can be explained by either, 1) a lapse in memory by Mrs. Winterbottom, or 2) the two-year difference within the two sources. The correspondence between the census and Mrs. Winterbottom's map does suggest that her memory may have been very good. As such, it appears that the turn-over rate in the community of "Jugtown" between 1858 and 1860 was fairly low (and that there was a continuity in the families that lived in this community).

⁵ Future research should address what happened to these individuals after the pottery closed. Although we suspect some of the families remained in the immediate area and pursued other trades (such as farming), we suspect many others followed their trade and moved to another pottery location.

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This census lists 12 different occupations within this community (Table 3). Although "potter" was the most common (representing 25% of the working population), farmhands (representing 20%), farmers (10%) and domestics (10%) also comprise a major percentage of the population. Other occupations represented include teamsters, apprentice shoemakers, laborers, gardeners, clerks, house keepers, and potter's apprentice.

Elizabeth VanArsdale, listed as "housekeeper," apparently was the innkeeper at the boarding house. Besides her four sons (potter, potter's apprentice and farm hand) and single daughter, only one other individual (James Pratt, a 21-year-old potter from New York State) was living in the boarding house at the time the census was taken. In contrast, the boarding house at the Tile Works site appears to have been much more utilized, with eight boarders. William White's household consisted of his wife (Caroline), three young children (ages one to six), as well as a 22-year-old clerk, 60-year-old farm hand, and two domestic servants (listed as "helpers"; one 18-year-old and the other 50 years old). It is possible that White also may have taken in boarders.

Apparently, a roving newspaper writer visited the village of "Jug Town" in 1879, nearly 13 years after the Pottery Works had been abandoned. This writer described "a party of Wauponsie" who "had occasion to visit the thoroughfares of Jug Town" and apparently was not overly impressed. When asked about the location of the Jug Town School, he was informed where the Jug Town Seminary was located. The newspaper correspondent had this to say about the town:

it, no doubt, appears strange to country people and strangers, visiting Jug Town, that sufficient room should not have been allotted to the streets to enable the people to transact their commercial affairs without going up in a balloon or down in a tunnel. But the old Rip Van Winkles and Knickerbockers who laid out this burg, only constructed the streets by following the cow-paths, and now that real estate is up, and the buildings up, Jug Town is too poor to pay for broad straight, thoroughfares and under ground railways to relieve the cluttered up and wonderfully overburdened streets (Emma Williams scrapbook, circa 1879; presumed Morris Herald, 1879).

In response to this article pertaining to the lowly character of Jug Town, another individual wrote

we have known of the place for the past twenty-five years, and have seen it in its pride; though then not more than sixteen years of age, we remember the "square" and "liberty pole," as though but last night. And things are lively in town yet...

This same writer noted that the "seminary" was

a fine institution, for 'finishing off', ... for pupils receive a polish there not derived in many

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colleges.

Besides the school, this writer noted the presence of the communal "Potter Hall", a "Club Room", a "Music Store," another store referred to as the "Oldest Store," and the "Avenue Hotel" where three meals a day, including stewed oysters were served. It is presumed that the "hotel" was the boarding house identified on the Winterbottom map. Additionally, the newspaper correspondent noted the presence of the Jug Town Brass Band (Emma Williams Scrapbook, ca. 1879; presumed Morris Herald, 1879).

Apparently, the housing and ruins of the pottery workshop sat unattended throughout much of the late nineteenth-century. As Ray Rogers (personal communication; 6/16/1991) noted, "there were 6 to 12 or more foundations which were removed in the 1910s to 1920s for farming..."

Ownership Organization

Contemporary pottery workshops, whether redware or stoneware, generally were owned and operated by a single master craftsman. With the introduction of industrialized workshops, more machinery, larger physical plants and a larger work force all required capital investments generally greater than the average craftsman could afford. In an effort to separate the financial and technical aspects of the business, potters and merchant middlemen became common business partners (Myers, 1980, 1984). As Ketchum (1987) notes, these merchants supplied capital to invest as well as the necessary market for sales.

William White, although coming from a successful pottery family from New York State, relied on the financial well-being of Charles Walker, a Chicago businessman, for investment capital. With Walker's financial backing, William White was able to establish a system of production that was valued at over \$20,000. In contrast, in 1859, when Decius Clark and Christopher Fenton established the American Pottery Company in Peoria, they incorporated and went public with their stock company selling shares to whoever would buy them. With both early attempts at industrialized production, outside capital was necessary and was a dramatic contrast to the small farmer/potter who often worked with little investment capital. (Ibid)

Site Structure and Community Organization

In Illinois during the 1850s, industrial production similar to William White's Goose Lake Stoneware Manufactory and Tile Works were uncommon. Few potteries in the state employed as many men. Even more dramatic, those few endeavors that were of this size were located in an urban fringe setting, such as at Peoria or Upper Alton. Without an available community to draw upon, it was necessary for White to establish a company town to supply the numerous workers and their families with housing and other necessary services such as schools and stores. The result was the establishment of an industrial company town centered around ceramic production --one of the few of its kind in Illinois. As the Morris Herald Holiday Supplement (1888) noted, "Quite a little town sprang up here, which was called Jug Town."

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Jugtown was not a planned community. The community, consisting predominately of small single-family houses with an occasional store, school and boarding house, was scattered around the two industrial facilities (pottery and tile works) that were the focal point of the community. Around the pottery works, an informal square developed with workers housing on two sides, White's house and pottery workshop on the north side, and a road on the south side. A flagpole and public well were located in the square. Across the road was the community's garden and a few additional houses.

Table 3
Nativity of Working Population at Jugtown, 1860
(1860 U.S. Census of Population)

<u>Occupation</u>	Pottery Works		Tile Works		Combined Works		
	#	%	#	%	#	%	
New England							
Vermont	1	5.0	0	0.0	1	2.3	
Connecticut	1	5.0	0	0.0	1	2.3	
Massachusetts			1	5.0	0.0	1	2.3
Total	3	15.0	0	0.0	3	6.9	
Mid-Atlantic							
Pennsylvania	1	5.0	0	0.0	1	2.3	
New York	10	50.0	8	34.8	18	41.9	
Total	11	55.0	8	34.8	19	44.2	
Midwest							
Ohio	0	0.0	2	8.7	2	4.7	
Foreign Born							
Scotland	0	0.0	2	8.7	2	4.7	
Germany	0	0.0	4	17.4	4	9.3	
England	2	10.0	6	26.1	8	18.6	
Ireland			4	20.0	1	4.3	5 11.6
Total	6	30.0	13	56.5	19	44.2	
TOTALS	20	100.0	23	100.0	43	100.0	

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At its height (circa 1860), the community of Jugtown consisted of approximately 114 individuals living within 21 households. Beside potters (who comprised 55.8% of the working population), a potter's apprentice, domestics (servants), coal miners, teamsters, an apprentice shoemaker, laborers, a gardener, farmers and farmhands, a clerk, and a boarding housekeeper were all living within the community. Although the small population was of mixed nativity, the individuals living within Jugtown were predominately foreign born or from the Mid-Atlantic Region of the United States (predominately New York State), each comprising 44.2% of the population (See Table 3). Foreign-born workers hailed from Scotland (4.7%), Germany (9.3%), England (18.6%) and Ireland (11.6%). New England and Midwestern workers were rare and comprised only 11.6% of the population.

Additionally, the community's population was young, with little accumulated personal nor real property wealth -- a characteristic indicative of the formative years of development for this region and community. Except for William White, who was enumerated as a farmer, none of the community owned property. Potters, whose median age was only 27 years, had a median personal property value of only \$17.50. In comparison, William White had a personal property valued at \$1,300. Others, such as coal miners, laborers, gardeners, farmhands, and housekeepers had personal property values much higher than the potters, ranging from \$87.00 to \$139.00.

The industrial component at this community consisted of two distinctive localities --one apparently devoted to crockery production while the other was devoted to tile production. Each facility was an independent production center with its own workshop, drying sheds, kilns and worker's housing. Each site appears to have had three kilns present and represents an industrial pattern distinctively different from earlier farmer/potters or farmer/tile manufacturers who generally had only a single kiln. Although areas of concentrated industrial waste (such as broken pottery and tile as well as kiln furniture and clinkers) were identified during the 1991 and 1993 archaeological investigations conducted by Fever River Research at the Tile Works site (11-Gr-70) and the Pottery site (11-Gr-69), waste disposal was haphazard around the site.

Work Schedule and Seasonality

Increased mechanization of the pottery industry had an impact on many aspects of the trade. One such change that occurred early in the industrialization process was the modification of the seasonal work cycle associated with the farmer/potter and small workshop to a continual year long production cycle. The schedule of traditional farmer/potters, like their rural farming neighbors, was ruled by the passing seasons. As such, potters often worked during times of slack agricultural activity. Like his Illinois counterparts, Daniel Clark (a potter from New Hampshire), turned ware during the summer and early fall, glazed as time permitted, and generally fired the kiln sometime thereafter, "most commonly in June" (Myers, 1984).

Additionally, cold weather made potting very difficult. Besides making it tough on the potter, who

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constantly had wet hands, the clay became difficult to work --particularly if it froze. As an anonymous Alton potter wrote in the 1840s, "The weather is milder now than it was at this time last year, for we were obliged then to cease work, from the frost being so severe..." (Foreman, 1941).

With the capital investments associated with industrialized production, it became necessary to extend the work season to maximize on the production output. Factory systems attempted to make the work season as long as possible, and as close to a 12-month work cycle as possible. Unfortunately, this was not easy to accomplish in the northern part of the state where winters can be harsh. More industrialized workshops attempted to alleviate the effects of the cold weather by venting heat from the cooling kilns to the workshops. With multiple kilns in operation, heat could be constantly channeled into work rooms to extend the work season throughout the winter.

With increased industrialization and a longer work season, the potters schedule was influenced more by market demands --although still often tied strongly to the agricultural cycle (i.e. need for fruit jars during fall harvest season), than by their need to tend to crops. Unlike conditions with the traditional farmer/potter when seasons could be predicted, economic shifts and lack of sales could not be predicted and made for irregular work schedules with the industrialized potter.

Although an economic need existed for continual year round production, weather did not always allow such a luxury, even during the more industrialized late nineteenth century. Apparently, employees of White and Company worked a 10-month work season (U.S. Industrial Census, 1860). Although White and Company had employed three kilns at the Tile Works Site (and potentially also at the Pottery Works Site), he apparently had not channeled the heat from the cooling kilns into the workshop to extend the work season. None-the-less, some evidence does exist that an effort was being made to extend the work season into the cooler months. Spacers with fabric impressed finger indentations indicate the use of gloves to protect the hand from the cold weather when loading the kilns. The presence of kiln furniture with fabric glove impressions at the Pottery Works Site emphasizes the attempt to continue working through cold weather.

Power and Fuel Sources

The switch from a family-operated craft industry to a factory system of production was also paralleled by a change in power requirements. More intensified industrial activity required more efficient sources of energy. The farmer/potter generally relied on horse and hand power. His simple horse-driven pug mill, a simple device used to grind and mix clay, may have been supplemented with a foot-powered kick wheel. More mechanized production was generally associated with steam power. Although wood fired steam engines were available, they were most efficiently used with coal. By the late nineteenth and early twentieth centuries, natural gas and fuel oil played a major role in the ceramic industry. The 1860 Federal Industrial Census indicated that both coal and wood were being used by the White and Company potters. The 1991 and 1993 archaeological investigations

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revealed an abundance of coal clinkers at the Stoneware Manufactory site.

Production Methods: Crockery

As with the vast majority of the ceramic production centers in Illinois during the 1850s, the majority of the wares produced at the Goose Lake Stoneware Manufactory were made by traditional hand-production methods. The forming of the vessels was generally conducted by hand, turning the ceramic container on either a kick or treadle wheel. The tools of the potter, which were predominately wooden, were few in number and simple in character. As such, few have survived. Tools of the trade are well illustrated in Lasansky (1979), Powell (1972) and Hough (1901). Although White and Company's tile works were highly mechanized (with its 10-horsepower steam engine, pug mill, and tile extruder), the associated pottery works appear to have been operating as a traditional, non-mechanized workshop (U.S. Industrial Census, 1860). As late as 1860, the firm had not installed a steam engine at this plant. With increased industrialization (and the presence of a steam engine), overhead belting systems could be installed to turn the potter's wheel as well as drive additional machinery such as grinders, pug mills and jigger-molding machinery, tasks that all were done with either human or horse power at the Goose Lake Stoneware Manufactory.

The manufacture of stoneware containers such as jars, jugs and bowls required several stages of production and began with the acquisition and preparation of the clay. Clay was generally excavated from a nearby pit dug into the side of the hill or river bank. With White and Company, the clay was mined from the banks of nearby Goose Lake.

Once excavated, it was transported to the pottery works by wagon, where it probably was allowed to "winter over", often in a clay pit. Passing through a freeze/thaw cycle greatly increased the workability of the clay. The clay was then worked with a horse- (or mule-) powered pug mill to mix the clay. Once the clay had been properly mixed, it was separated into appropriate-sized lumps (often by weight; known as "balling the clay"), kneaded to remove air bubbles, and then transformed into a container on the potters wheel.

The Galena Daily Courier (August 20, 1860) described the manufacture of a wheel-thrown vessel at the Galena pottery works, which were located in Jo Daviess County.

The clay is first put into a large box, and water thrown on to soften it, after which it is thrown into the 'mixer', which is turned by horse-power. After it is thoroughly worked smooth, it is taken out and worked into large lumps about fifteen inches long, ten inches wide, and eight inches thick, when it is laid aside for use. When ready for manufacture, it is taken by a workman, laid on a table, and cut into horizontal slices of one half inch thickness. The hard lumps are carefully picked out of both sides of each slice. Another workman takes them, weighs out the clay in lumps, according to what articles are to be made. For instance, for a half gallon

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jug, four pounds; a gallon jug, six pounds; a six gallon crock, twenty-two pounds, etc., These lumps are then taken, rolled and worked, squeezed and thumped, by hand until the air is worked out, and then it is ready for turning.

The Galena Daily Courier continued by describing the formation of the pottery vessel on the potter's wheel.

We will suppose a half gallon jug is to be made: The turner straddles his seat, before him is a sort of table, through which is a perpendicular shaft attached to a horizontal circular plat of iron, about twelve inches in diameter and one inch thick; this is made to revolve by a wheel beneath, worked by the foot; he takes his lump of clay, spats it forcibly down on the plate, the wheel and clay revolves, he claps his hands on it; it assumes the form of a solid cylinder; Now, one hand outside, the other inside, the sides are reduced to an equal thickness; pretty soon it begins to bulge out jug form; the outer and inner hands are brought together towards the top, the inner hand is taken out, the finger is inserted, and the top is narrowed to a neck, the finger is taken out, and after this lump of clay has been revolving, perhaps two minutes, it is a jug --all but the handle.

After the potter had completed turning the vessel, the newspaper described how the vessel was cut from the wheel and the handle applied.

The wheel is now stopped, and the turner takes a small wire and draws it over the surface of the plate, cutting the jug from it, and it is then carefully taken and placed on a stand, the handle is soon made, stuck on, and there is a jug, for whiskey or molasses.

Knowing thus much of 'the way how', our readers can easily imagine the method of making other kinds of pottery ware.

Production methods were nearly identical at the Goose Lake Stoneware Manufactory. For the production of utilitarian crockery, such as that produced by White and Company, traditional hand-production methods had not changed dramatically for many generations. But the industry was on the threshold of change. To increase production over the contemporary farmer/potter, the industrialized pottery workshop could either 1) increase the size of the shop and add more workmen (i.e., intensification), or 2) mechanize the production methods.

At Jugtown, it appears that William White had intensified ceramic production by pulling together six skilled craftsmen. The number of craftsmen was in keeping with the Ripley Model. In 1860, the Ripley pottery workshops in Brown County, Illinois had an average of 5.2 workmen earning \$33.27 per month average wage.

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In contrast, the workmen at the Goose Lake Stoneware works were averaging \$42.50/month wage --suggesting that White was paying considerably more for his skilled workmen than the average pottery works in Ripley. In contrast, the small farmer/potters such as Wallace Kirkpatrick, who had 10 relatively unskilled assistants, were being paid only \$3.50/month in wages (truly very low compared to the other skilled pottery workers). Similarly, the less skilled workers at the nearby tile works operated by White and Company were earning an average of \$26.00/month wage.

Although open for debate, based on the analysis of the controlled surface collection at the Pottery Works site, Mansberger (1994) has speculated that three kilns (similar to those at the Tile Works site) were in operation at the Goose Lake Stoneware Manufactory. The presence of three kilns suggest a division of labor organized around skilled (potting, kiln burning) and unskilled (kiln loading) tasks. By the early twentieth century other pottery works used as many as seven downdraft kilns often were used in sequence (two always cooling or drawing, one being drawn, one being set, one preheating, one watersmoking, and one under hot fire). Built in a triangle, loop or line, these multiple kilns allowed the heat to be rechanneled from one kiln to another in sequence and dramatically cut fuel costs (Ceramic Products Cyclopedia, 1928). Such industrialized systems of production are indicative of a well-developed division of labor. Unlike the small farmer/potter workshop or the workshops associated with the Ripley Model of production where only a single kiln was in operation at any one time, an established division of labor between skilled and unskilled workers was probably beginning to develop at the Goose Lake Stoneware Manufactory --particularly during the later years of production. Further research, which is needed at identifying the presence of multiple kilns at this site, would be very enlightening.

Prior to the closing of the Goose Lake Stoneware Manufactory, mechanized production of bowls (milk pans) and jar lids was introduced. Although molded wares were being produced by the 1820s in the eastern United States (cf. Myers 1980), the successful introduction of molding technology for the production of ceramic wares in the United States has been attributed to David Henderson and his American Pottery Manufacturing Company. During the late 1830s and early 1840s, Henderson produced molded yellowwares and Rockingham glazed wares from his Jersey City (New Jersey) pottery works (Spargo, 1926). During the early nineteenth century, except for the drape molding of plates (common among redware potters with an English heritage) and the molding of smoking pipes, few potters produced utilitarian wares by molding.

It was not until the 1850s that many small workshops (particularly those within the more industrialized eastern markets) began to convert to more mechanized production, particularly the jigger molding of large bowls or milk pans, a process that was not common in Illinois until the late 1860s and early 1870s. Large straight-walled containers were more difficult to mold, particularly because of the presence of handles and the inability to remove such items from a mold. It was not until the turn-of-the century and the introduction of more intricate molding machinery did jigger technology remove the hand-turned jars from the repertoire of the Illinois pottery manufactory. By the late 1870s and early 1880s, a wide range of wares were being molded. The 1890s

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Peoria Pottery Company catalog advertised many mold-decorated flower pots, bowls, butter pots, jars, umbrella stands and cuspidors as well as two-piece constructed jugs and canning jars (Mansberger and Mounce, 1990).

Jiggering gets its name from the machine used in the process, namely, the jigger. It is the process of shaping most commonly used for tableware. The machine used in jiggering consists of a spindle provided with a head, into which the mold is fitted and which must run perfectly true. Attached to an iron support behind the wheel is a counterbalanced arm, that swings up and down on a pivot. This lever may be pulled down until it is about in a horizontal position, where it is stopped by a set screw. The arm carries a tool holder and tool. The latter consists of a steel plate, the outlines of which corresponds to the profile to be shaped and which comes to rest above the head of the spindle. In flat work, such as plates and saucers, the plaster mold forms the face and the steel tool or profile the back or exterior. In hollow ware, such as cups and bowls, the mold forms the exterior and the tool the interior. By placing the sheet of clay firmly upon the revolving mold and lowering the tool the desired shape is quickly produced. The thickness of the piece is readily adjusted by means of the set screw determining the position of the arm. "When the piece is formed, the mold is removed from the head of the jigger and placed in the drying room..." (Department of Commerce, 1915).

Although jigger molding greatly increased production output, it required a far greater capital investment than most farmer/potters were willing to invest. Besides the additional machinery it also required an extensive collection of molds. Besides increasing production, the jigger wheel also had a dramatic affect on the skilled potter and his quality of life. With the introduction of this equipment, the demand for the skilled potter dropped dramatically. Pierce (1926) noted that the introduction of jigger machinery in 1899 to the White Hall Pottery "marked the beginning of the end of the old kick wheel in the turning of ware by hand. At the present time, all ware is made in moulds. All small pottery shops have disappeared, and with them have gone the turning of ware by hand on the old kick wheel."

At the Goose Lake Stoneware Manufactory, the initial ceramic production was nearly all hand-turned wares. Speaking of Noah White's Utica Pottery Works in New York State, Ketchum (1987) noted that "as far back as the 1860s White's had made some cast stoneware." Additionally, Ketchum (1987) noted the potential relationship of Jonathan Coxon, (probably the son of well known English potter Charles Coxon) and the White family in Utica in the early to middle 1840s. Coxon (as Coxon and Company) was later to produce refined tablewares at Trenton, New Jersey. Ketchum (1987) has raised the question as to whether Noah White "was attempting to branch out into the making of finer earthenwares". At any rate, it appears that William White probably was exposed to the intricacies of molding technology through Coxon, a skill he may have put into practice in Illinois.

The first molded wares at the Goose Lake Stoneware Manufactory probably were large, decorated jar lids as well as more refined wares (such as bowls, pitchers, and spittoons). The extremely small number of the refined

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wares suggests that these items may only have been in the experimental stage.

The first commercially successful jigger molded wares in Illinois were large utilitarian bowls (often referred to as milk pans). At the Pottery Works site, the presence of numerous hand-turned bowls suggests that jigger-molded bowls were a minor production item, probably not initiated until late in the life of the factory. Although difficult to put into a temporal perspective, the low volume of the jigger-molded bowls and jars suggest that they dated to the latter years of production at the site.

Other molded wares were few in number. The question must be raised as to whether some of these items were manufactured at this site, or just part of the domestic household inventory of the inhabitants of this site (and brought onto the site from elsewhere). The presence of bisque sherds (or underfired ware) firmly establish that some of these items (such as the eagle-decorated wares as well as potentially the hound-handled pitcher) were manufactured on site.

It is interesting to note that prior to the introduction of jigger-molding machinery at the Goose Lake Stoneware Manufactory, the local potters had modified their everted bowl rim profiles to emulate the jigger-molded bowls being produced at more industrialized eastern factories. It appears that the earliest bowl rims were a hand-turned, everted style. By the middle 1860s, sometime prior to the closing of the factory, the bowl rims took on the look of a collared, jigger-molded bowl, even though jigger-mold technology had not yet been installed at the factory. Although jigger molding was not practiced at this location, local market pressure may have required that the local potters produce a bowl more in keeping with the newer jigger-molded wares being produced in more industrialized eastern markets. The result was a hand-turned bowl with a rim that emulated the collared rim of a jigger-molded bowl. A similar process has been documented at redware centers in northwestern Illinois (Mansberger, 1994).

Kiln Structure and Firing Technology

Once pottery has been shaped into its desired form, it must be air dried to remove water and burned (or fired) to harden the clay. A kiln is "a furnace or chamber, or series of chambers, in which clay products are burned" (Ceramic Products Cyclopedia, 1928). As Barka (1973) points out, all kilns have at least four main components which include 1) a base or kiln floor to place the pottery upon, 2) a source of heat, 3) a means of transferring the heat from the source to the ware through fireboxes and flue system, and 4) an envelope or chamber to confine the heat to the ware. The following discussion will center around the combustion chamber (consisting of fireboxes and flue system), upper or ware chamber, and chimney.

Unlike the low temperature firing technology associated with earthenware production, stoneware production utilized high temperature firing technology. Generally, keeping other factors such as fuel type equal, the greater the temperature desired, the more fireboxes needed. When discussing kiln structure and firing technology, three

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variables are of significance and include 1) firing duration, 2) kiln temperature, and 3) kiln atmosphere (presence or absence of oxygen) (Rice, 1987).

Kilns are classified in several different manners. Kilns that are loaded with ware, fired, allowed to cool, and then unloaded are referred to as periodic kilns. Continuous kilns have chambers that are constantly hot with a conveyor system for transporting wares through the kiln. The product enters the kiln in a green state and leaves it fired. During the nineteenth century, the vast majority of kilns were of the periodic variety. It was not until the development of natural gas as a fuel during the early twentieth century that continuous kilns became practical.

Another way of characterizing kiln structures is by the method of heat dispersal through the kiln. Early, less efficient kilns are known as updraft kilns. In an updraft kiln, the hot gases exit the fire box, pass directly through the chamber floor, around the ware stacked in the chamber and directly out the ceiling of the chamber which acts as the chimney. Updraft kilns were known for their "hot spots" and non-uniform heating. Later, sophisticated subfloor flue systems were developed, particularly with the more sophisticated updraft stoneware kilns, to better distribute the heat around the entire kiln chamber.

More sophisticated updraft kilns attempted to prevent the hot gases from coming into contact with the pottery ware. These kilns, which have walls that completely encompass the ware and prevent the hot gases from contacting it, are known as muffle kilns (Ceramic Products Cyclopedia, 1928). Muffle kilns, which prevent flashing or bluestoning, were seldom used in nineteenth-century stoneware production.

To alleviate many of the problems with heat control, more sophisticated downdraft kilns were developed during the late nineteenth century. In a downdraft kiln, the hot gases leave the fire box, hit a bag wall within the kiln chamber which deflects the heat up the wall of the kiln chamber where it is deflected off the ceiling of the kiln and is drawn down the center of the chamber. Located within the center of the floor of the chamber is the mouth of a sub-floor flue that is connected to a large free-standing external chimney. A distinctive characteristic of downdraft kilns is the tall chimney (with multiple kilns arranged around it) necessary to create the draft to draw the hot gases up the outer wall and back down to the floor of the chamber. Unlike updraft kilns where the subfloor flue system directs heat to the chamber floor, the subfloor flue system in a downdraft kiln directs the heat away from the chamber floor.

Downdraft kilns, although more uniform in heat distribution, were much more difficult to fire than the simpler updraft kilns and were not utilized in Illinois until at least the 1880s. Traditional stoneware updraft kilns, with their multiple fireboxes (generally 8), continued in use throughout the late nineteenth century. The industrialized Monmouth Pottery continued using updraft kilns until 1904-05. With the availability of natural gas, the final transition was the installation of continuous tunnel kilns, which in 1935 could be installed at a cost

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of \$40,000 (Martin and Cooper, 1983).

During the early to middle nineteenth century, two forms of periodic, updraft kilns were utilized by the earthenware potter. One was rectangular in plan while the other was circular (Figure 9). Both kiln forms have great antiquity. Rectangular kilns were common with the Romans for burning brick and tile while small round kilns (with either one or two fireboxes) were used for fine earthenware production. Throughout the Middle Ages, rectangular kilns were commonly used for tin-glazed earthenware production, especially on the Continent. By the seventeenth century, German stoneware production relied heavily on rectangular kilns (Greer, 1977, 1979; Rhodes, 1968; Musty, 1974). Barka (1973) implies that the circular kiln has an English heritage while the rectangular kiln may have a Continental European or Germanic heritage.

The rectangular, periodic, updraft kiln has been documented all along the eastern seaboard for both earthenware and stoneware production (i.e., Rupp, 1978-80; Russ, 1990; Barka, 1973). One of the earliest documented stoneware kilns in the United States is a rectangular kiln that was in operation during the early to middle eighteenth century in Yorktown, Virginia (Barka, 1973). A specialized form of rectangular kiln which is often constructed into the side of a hill and associated with southern alkaline-glazed stoneware production is the groundhog kiln (Greer, 1977, 1979). Ketchum (1987) notes that the earliest kilns within New York State were rectangular shaped. Watkins (1968) also notes that rectangular kilns were often used for redware production. Although the rectangular, updraft kiln was presumably easier to construct than the round updraft kiln, it was less uniform in heat distribution than its round counterpart.

Although more common with brick and tile production, rectangular kilns for ceramic production were rare in Illinois, and when present were associated with specialized production (i.e. yellowware). An anonymous English-born potter working in Alton described the 1840s rectangular kiln constructed in that community:

We have built our new kiln, and a very pretty one it is, too; and, as Americans say, "I guess it will shine when it is fired full of glost ware:" which circumstance will not be long before it takes place; and then I should like for the whole of you to be here, that you may see the reward of a persevering industry. Our old slip kiln, not being large enough for our present purposes, we have built another this week, which is 21 feet long by 5 feet wide (Foreman, 1941).

The rectangular kiln described in use at Alton presumably was associated with the manufacture of a specialized product (refined yellowwares). Other than rectangular kilns being used for the production of tile and brick, no other rectangular kilns are known that produced ceramic wares in Illinois.

The most common form of kiln used in Illinois throughout the nineteenth century was the round, periodic, updraft kiln, which was often referred to as a "bottle" (with its distinctive chimney) or "beehive" (lacking the tall

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chimney) kiln because of its distinctive shape. In the United States, one of the earliest documented round kilns (with five fireboxes) was excavated by Alain Outlaw near Asheboro, North Carolina. This kiln, used for the production of earthenwares, was in operation during the late eighteenth century (Outlaw, 1975). The earliest redware in the Midwest appears to have been manufactured using round, updraft kilns (Mansberger, 1994).

Unfortunately, little documentary or archaeological information is available detailing kiln structures in early Illinois or the greater Midwest. Besides the White and Company Tile Works kilns (11-Gr-69), the only other kiln structures that have been excavated in Illinois are the Ebey/Brunk Pottery kiln and the Elizabeth kiln. The Ebey/Brunk Pottery kiln was located in the central Sangamon River Valley immediately southeast of Springfield and was used for the production of redwares during the late 1820s through middle 1850s⁶. The Elizabeth Pottery kiln, in Jo Davies County near Elizabeth, was a large, late nineteenth-century redware kiln excavated by the senior author for the Illinois Department of Transportation (Mansberger, 1994).

Archaeological data suggests that early redware kilns in Illinois were small, two-firebox affairs. Data on early redware kilns suggest that they averaged approximately 10' in outside diameter with a interior chamber area of approximately 62-64 square feet. These early kilns appear to have free standing chamber walls with a simple frame structure surrounding them. At the Ebey/Brunk Pottery Site, the frame structure had been supported on stone piers surrounding the brick-walled kiln. Compared to the later redware kiln excavated at the Elizabeth Pottery site, these early structures were relatively impermanent (less substantially constructed), lacking the massive stone outer support walls and subfloor structure that was present at the Elizabeth Pottery site. With an outside diameter of 25', the early stoneware kilns such as those uncovered at the Tile Works site were much larger than the redware kilns. Additionally, they were much more substantially constructed to withstand the tremendous heat associated with stoneware production.

The early redware kilns had a chamber that was approximately 25% smaller than the post Civil War kiln excavated at Elizabeth. In contrast, contemporary mid-century stoneware kilns, such as those present at the Tile Works site (11-Gr-70), were even more substantially constructed than the Elizabeth Pottery kiln and had a floor area which was over 200% larger than the early redware kilns and 139% larger than the late redware kilns⁷.

⁶. This site was excavated by Robert Sherman, with Sangamon State University, in 1976. Artifacts and notes from these excavations are currently located at the office of Fever River Research, Springfield.

⁷ It is difficult to compare chamber volume (ware holding capacity) between kilns based on archaeological data. Although we can determine the floor area of the chamber based on its

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Additionally, unlike the redware kilns which only had two fireboxes per kiln, the stoneware kilns excavated at the Tile Works site all had eight fireboxes. Few studies on kilns are available for the surrounding states. Besides the Frankfort, Kentucky kiln excavated by Genheimer (1989), no other redware kilns are known to have been professionally investigated in the Midwest. Similarly, the only known stoneware kilns investigated by professional archaeologists have been in Iowa (Gradwohl, 1974; Reynolds, 1967, 1969; Schroeder, 1979; Schulte, 1974; Finney and Rogers, 1955)

The number of fireboxes present gives a clue as to the temperature reached in firing the kiln. Earthenware needed fewer fireboxes, stoneware needs more. Redware kilns generally had two opposing fireboxes. White's Tile Works kilns all had eight fireboxes. Besides the number of fireboxes, the type of fuel also affected firing temperatures. Redware kilns used wood. Only the stoneware kilns at Goose Lake used coal. Wood-burning stoneware kilns may require more fireboxes than a similar kiln that burned coal. The multiple fireboxes present on the stoneware kilns also assisted in producing a more uniform heat compared with a two-firebox arrangement.

With more sophisticated downdraft kilns, the number of fireboxes generally range from 8 to 12, according to the kiln diameter (Ceramic Products Cyclopedia, 1928). According to the Ceramic Products Cyclopedia (1928), the number of fireboxes was about one-third the diameter of the kiln in feet and the type of firebox was dependent on the ware to be burned and character of fuel used (see also Hamell, 1978-80). Additionally, during this period, sophisticated subfloor flue systems, such as that associated with the kilns at the Tile Works site, were developed for even heat distribution. The kilns at the Stoneware site remain unexcavated, and it is uncertain as to what type of construction they are.

Firing failures were catastrophic to the potter and often resulted in the total loss of the wares within a kiln. Kiln failure was caused by several factors, including both under and over-fired conditions. Another source of firing difficulty, was caused by the potter bringing the kiln up to the proper temperature too quickly. The early phase of firing the kiln, known as "watering off" or "smoking", resulted in driving off the remaining water within the clay. If brought up to temperature too quickly, moisture expands explosively, often causing defects in wares and even causing collapse of the kiln. Excessive moisture can originate from multiple sources, including the ground surrounding the kiln.

Glaze Characteristics

diameter, we cannot assess the chamber wall heights. The Ceramic Products Cyclopedia (1928:106) notes that the usual rise of the walls is one fourth of the diameter of the kiln.

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By the middle 1850s, lead-glazed earthenware production in Illinois was quickly becoming a thing of the past. Since the early 1830s, salt-glazed stoneware production had been practiced in Illinois. Salt-glaze technology is slightly more complicated than the low-fire lead-glaze technology. To salt glaze pottery, the potter gets the kiln to the proper temperature and then introduces salt into the kiln through special holes along the upper wall or ceiling of the kiln structure. Upon coming into contact with the hot gases, the salt (NaCl) vaporizes and the sodium (Na) adheres to the exposed surfaces of the crockery as well as the kiln.

Although long-term exposure to lead-glaze technology also has its detrimental health concerns for potters (Mansberger, 1994), salt glazing had a more immediate affect on careless potters. The by-product of salt glazing is chlorine (Cl) gas, which is extremely poisonous and was known for overcoming many a careless potter throwing salt into the hot kiln chamber.

Unlike lead glazing, which is a slip glaze applied to the surface of the crockery, salt glazing is applied as a vapor in the kiln chamber. The kiln operators do not have control of where the vapor adheres or does not adhere. As such, salt glaze accumulates on the interior surfaces of the kiln and is also detrimental to the longevity of the kiln structure, unlike lead glazing. Similarly, the hotter temperatures associated with salt-glazed stoneware production are also much harder on the kiln structure than low temperature redware production.

With the introduction of more sophisticated downdraft kilns, new glazes were introduced in the Midwest. Bristol glaze derives its name from the English port city by the same name and consists of a thick, white enamel glaze that was introduced into the eastern U.S. markets during the 1880s. Bristol glaze was first introduced into the Illinois market during the 1890s. The last salt glazed wares produced in Illinois were manufactured during the early twentieth century. At the Monmouth Pottery the last kiln of salt-glazed wares was fired in 1902 (Martin and Cooper, 1983). Only salt-glazed wares were produced at the Goose Lake Stoneware Manufactory and Tile Works.

Wares Produced

Industrial production at William White's workshop consisted of both stoneware crockery and drainage (sewerage) tile. Based on the 1860 Federal Industrial Census, tile production comprised nearly 85% of White and Company's revenue. This was a dramatic contrast to contemporary potters who were producing minor amounts of drainage tile.

The stoneware crockery produced by William White was fairly typical of middle nineteenth-century production. The wares produced consisted predominately of minimally decorated salt-glazed jars, bowls (milk pans) and jugs. White was somewhat atypical with his production of molded wares, particularly the ornate jar lids. Some thought must be given to the fact that White may have been interested in producing more refined,

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molded wares. White's introduction of a jigger molding machine was one of the earliest applications of this technology in Illinois.

As Walthall et al. (1991) note, "the degree of product standardization is frequently used to distinguish traditional potters and potteries from their more technologically industrialized counterparts....potters working together form a cohort and the output of their labor should display uniformity when contrasted with the output of a different kiln cohort... For potters who are apprenticed or employed by a kiln owner, it is assumed that they operate under mandates established by the owner and thus are not free to apply idiosyncratic stamps to the product" (Walthall et al., 1991). Although the assemblage at the Pottery Works site was not systematically analyzed using statistical methods like Walthall et al. (1991), extreme variability in rim styles was recognized within this assemblage and was in contrast to what was expected in this assemblage. The great variability in rim styles supports the notion that this "factory" was not as mechanized as one would suspect and that production relied on many individual craftsmen producing wares, typical of the Ripley Model. Few, if any rim templates were used to produce a standardized product and the workers were probably trained by a wide range of individuals. The result was wide variability in rim, and, presumably body, styles. With increased mechanization during the late nineteenth century, these wares became much more standardized.

Failure of the Goose Lake Stoneware Manufactory and Tile Works

As discussed earlier, the location of the pottery works at the clay source, not along the transportation route (i.e. railroad and canal at Morris), was a major problem to the success of White's pottery. The transportation of the bulky finished product over poorly developed, swampy roads was extremely costly. But this was not the sole reason that the firm failed. Another factor that apparently had a dramatic affect on the failure of this company was the Economic Panic of 1857 and the depression that followed. Money was tight for both consumer and producer and probably contributed to the inability of Charles Walker to meet the demand on the \$10,000 note that he had taken to fund the pottery.

Another potential reason for the failure of this firm may have centered around partnership difficulties between Charles Walker and William White. Although an important aspect of large industrial operations was the separation of technical and financial management, it is important that both parties meet their obligations. It is not known whether the failure of the firm to meet the conditions of the note was due to production difficulties at the factory, marketing problems caused by the location of the factory, or poor expectations on the ability to repay the \$10,000 note taken by Walker.

It is interesting to note that the Morris Herald Holiday Supplement (1888) had its own perspective on the demise of the local pottery works. Although the paper cites the transportation problems as the primary reason for the pottery works decline, it also notes that the Civil War may have made it difficult to find able-bodied workmen. It is unlikely that this conflict had a direct impact on the failure of this firm, since it appeared to

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survive through 1866. Additionally, after the legal battles between White and Walker, mentioned above, it is unlikely that they would have entered into another partnership, during the dissolution of the first partnership. Walker's death occurred soon after the abandonment of the Jugtown Pottery Works.

SUMMARY AND CONCLUSIONS

Our research has documented that the Pottery Works site (11-Gr-69) retains a high level of archaeological integrity and has the potential to yield significant information regarding this early industry. As such this site is eligible for inclusion on the National Register of Historic Places under criterion D for archaeology. The stoneware manufactory and connected community are eligible under Criterion D for historic/non-aboriginal information potential about stoneware kiln architecture of the, and lives of the workers associated with the community that was established around the Stoneware Manufactory. The period of significance for this site is 1855, when the company began, to 1866, when the company closed. The site contains detailed surface data (artifact scatters) as well as subsurface features (such as filled cellars and foundation remains) that contribute to our detailed understanding of this early industry as well as the quality of life associated with the inhabitants of this community. The presence of these features allow us to gain insights into the structure of this community, the mechanics of stoneware production, and the quality of life associated with both the workers, associated townspeople, and the community leader (White) that is not readily attainable through the documentary records. It is recommended that this site be preserved as an important document relating to the early development of the industrialized pottery workshop in Illinois. Further research comparing this assemblage to other stoneware production sites will allow a better understanding of the regional pottery centers as well as the idiosyncratic behavior of various potters. Unfortunately, few contemporary urban or farmstead sites have been investigated in this region, making statements about the market catchment very difficult. Future studies of regional farmstead and urban sites may shed light on the market areas exploited by pottery centers such as White and Company's Goose Lake Stoneware Manufactory and Tile Works.

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THIS TOWN SPRANG UP IN

CITY OF JUXTOWN IN 1858

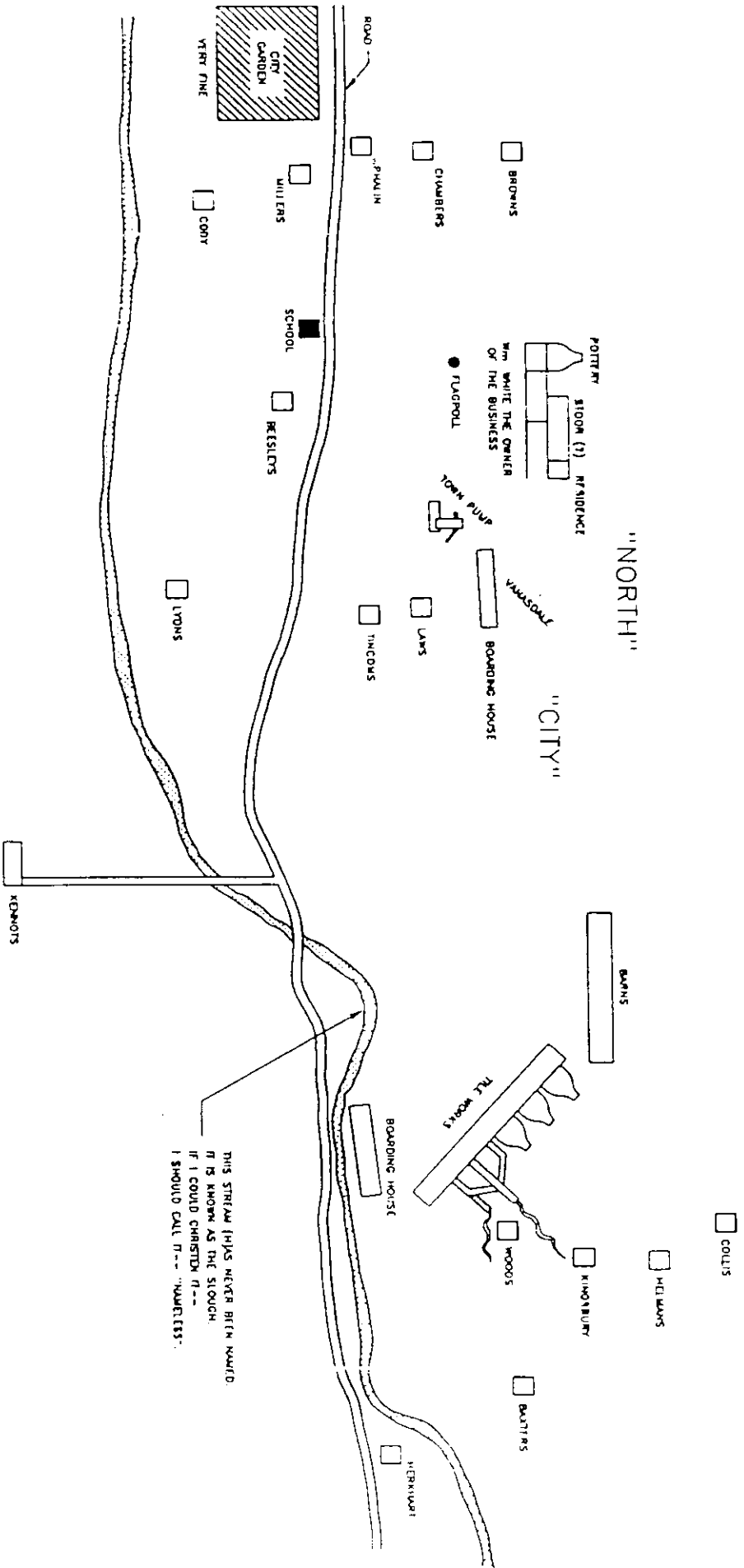


Figure 3. Clarification of hand drawing of "Juxtown" done by Mrs Mary Winterbottom.

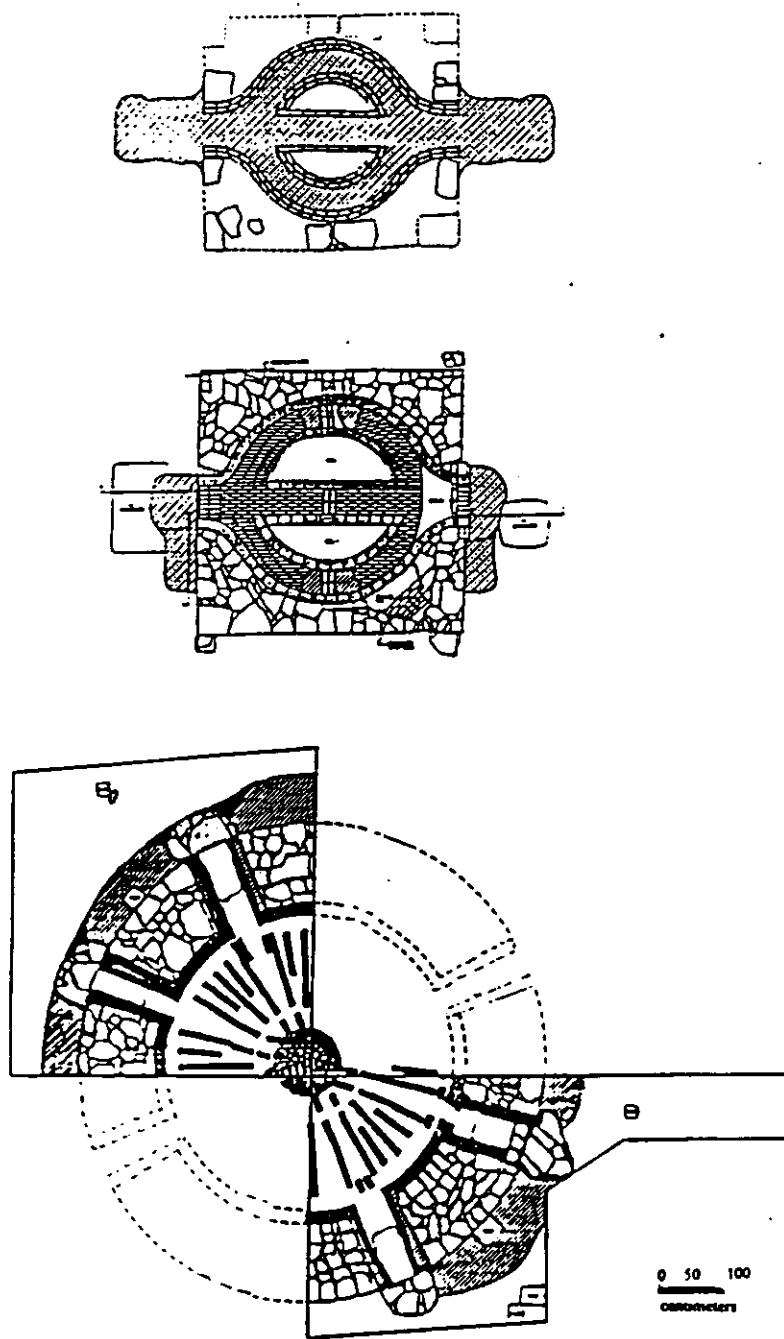


Figure 9. Comparison of early redware (Ebey/Brunk), late redware (Elizabeth), and stoneware (Jugtown) kilns in Illinois.

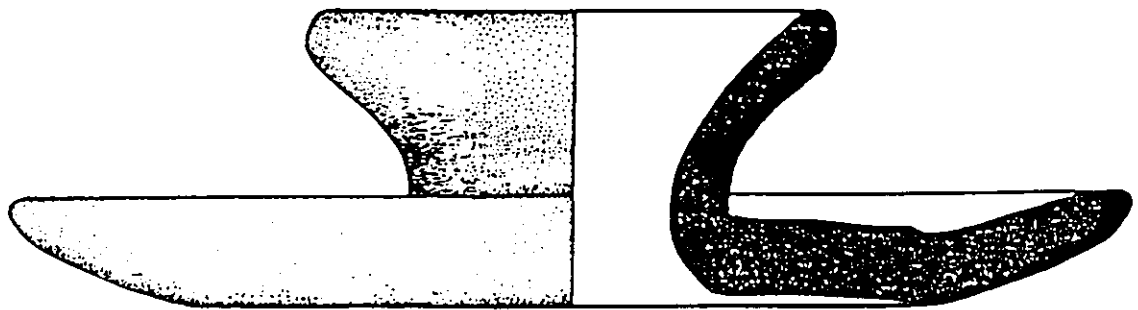


Figure 10. Reconstructed churn lid from Pottery Works Site, Grundy County, Illinois.

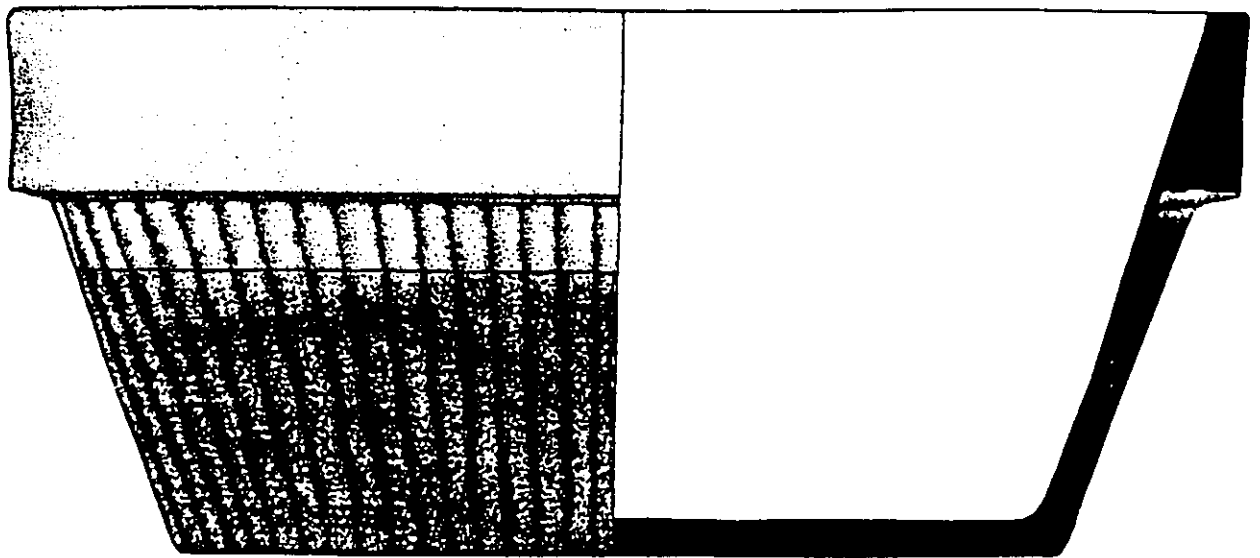


Figure 11. Reconstructed jigger molded bowl from the Pottery Works Site, Grundy County, Illinois.

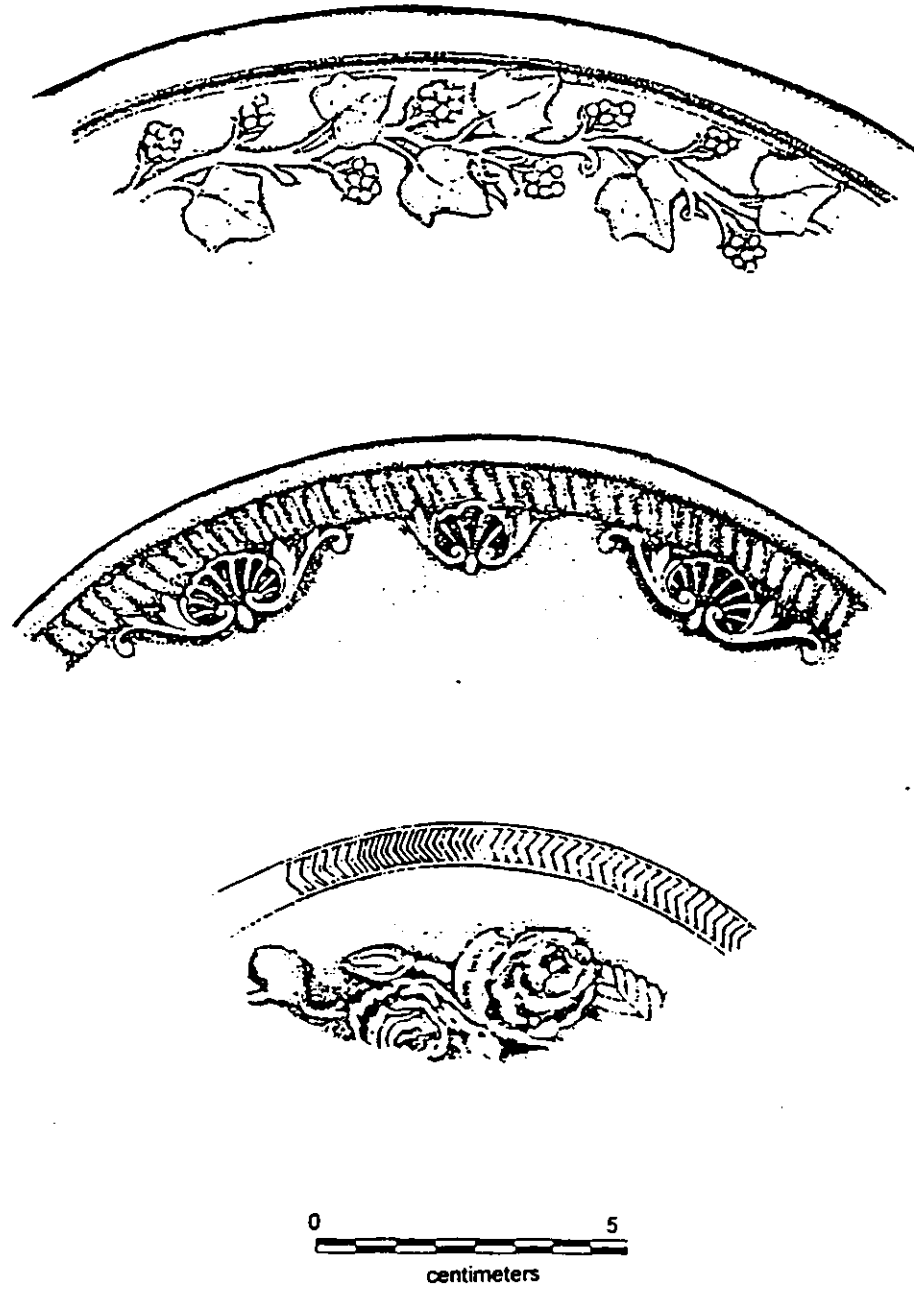


Figure 12. Variability in molded lid design from the Pottery Works Site, Grundy County, Illinois.

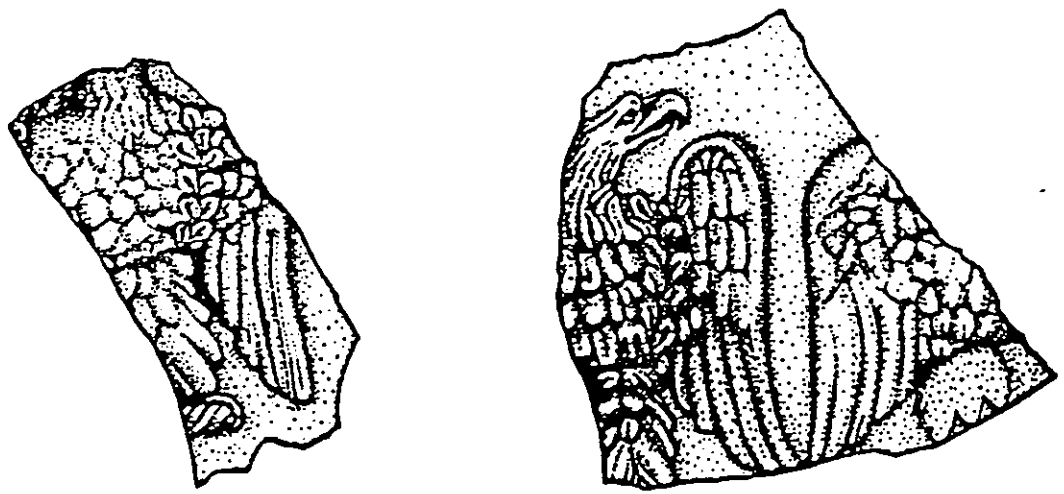


Figure 13. Mold decorated, octagonal container (top; potentially representing the remains of a spittoon) and small, refined bowl (bottom) recovered from the Pottery Works Site, Grundy County, Illinois.



United States Department of the Interior

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AUG 14 1998

WEEKLY LIST OF ACTIONS TAKEN ON PROPERTIES: 8/03/98 THROUGH 8/07/98

KEY: State, County, Property Name, Address/Boundary, City, Vicinity, Reference number, NPL, Action, Date, Multiple ~~Key~~

CALIFORNIA, LOS ANGELES COUNTY, House at 1011 S. Madison Ave., 1011 S. Madison Ave., Pasadena, 98000959, LISTED, 8/06/98
(Residential Architecture of Pasadena: Influence of the Arts and Crafts Movement)

CALIFORNIA, LOS ANGELES COUNTY, House at 1050 S. Madison Ave., 1050 S. Madison Ave., Pasadena, 98000960, LISTED, 8/06/98
(Residential Architecture of Pasadena: Influence of the Arts and Crafts Movement)

CALIFORNIA, LOS ANGELES COUNTY, House at 1233 Wentworth Ave., 1233 Wentworth Ave., Pasadena, 98000962, LISTED, 8/06/98
(Residential Architecture of Pasadena: Influence of the Arts and Crafts Movement)

CALIFORNIA, LOS ANGELES COUNTY, House at 380 W. Del Mar Blvd., 380 W. Del Mar Blvd., Pasadena, 98000961, LISTED, 8/06/98
(Residential Architecture of Pasadena: Influence of the Arts and Crafts Movement)

CALIFORNIA, LOS ANGELES COUNTY, House at 574 Bellefontaine St., 574 Bellefontaine St., Pasadena, 98000958, LISTED, 8/06/98
(Residential Architecture of Pasadena: Influence of the Arts and Crafts Movement)

CONNECTICUT, HARTFORD COUNTY, Old North Cemetery, 1921 Main St., Hartford, 98000964, LISTED, 8/06/98

GEORGIA, BANKS COUNTY, Fort Hollingsworth--White House, Wynn Lake Rd., 2 mi. SE of Hollingsworth, Hollingsworth vicinity, 98000973, LISTED, 8/06/98

GEORGIA, FULTON COUNTY, Ashby Street Car Barn, 981 Ashby St. NW, Atlanta, 98000972, LISTED, 8/06/98

GEORGIA, FULTON COUNTY, Freeman Sporn Building, 75 John Wesley Dobbs Ave., Atlanta, 98000958, LISTED, 8/06/98

GEORGIA, GREENE COUNTY, Bethesda Baptist Church and Cemetery, Jct. of City Rd. 120 and City Rd. 129, Union Point vicinity, 98000957, LISTED, 8/06/98

GEORGIA, NEWTON COUNTY, Covington Historic District, Roughly Covington City S of US 278, Covington, 98000969, LISTED, 8/06/98

GEORGIA, NEWTON COUNTY, Newborn Historic District, Roughly the entire city limits of Newborn City, Newborn, 98000970, LISTED, 8/06/98

ILLINOIS, CALHOUN COUNTY, Brussels Historic District, Roughly along Main and Community Sts., Brussels, 98000981, LISTED, 8/06/98

ILLINOIS, CLAY COUNTY, Clay County Jail, 195 Main St., Louisville, 98000986, LISTED, 8/06/98

ILLINOIS, COOK COUNTY, Illinois Industrial School for Girls, 733 N. Prospect Ave., Park Ridge, 98000979, LISTED, 8/06/98

ILLINOIS, GRUNDY COUNTY, White and Company's Goose Lake Tile Works, 5010 N. Jugtown Rd., Morris vicinity, 98000976, LISTED, 8/06/98

ILLINOIS, GRUNDY COUNTY, White and Company's Goose Lake Stoneware Manufactory, 5010 N. Jugtown Rd., Morris vicinity, 98000982, LISTED, 8/06/98

ILLINOIS, HARDIN COUNTY, Cave-In-Rock, 0.5 mi N of the town of Cave-In-Rock, Cave-In-Rock, 98000984, LISTED, 8/06/98
(Caught in the Middle: the Civil War on the Lower Ohio River MPS)

ILLINOIS, JACKSON COUNTY, Camp Mather--Camp Logan, 10765 IL 13, Shawneetown, 98000983, LISTED, 8/06/98 (Caught in the Middle: The Civil War on the Lower Ohio River MPS)

ILLINOIS, JERSEY COUNTY, Fulkerson, Col. William H., Farmstead, 1510 N. State St., Jerseyville vicinity, 98000977, LISTED, 8/06/98

ILLINOIS, JERSEY COUNTY, Hamilton Primary School, 200 ft. W of the jct. of Otteville and McClusky Rds., Otteville, 98000975, LISTED, 8/06/98

ILLINOIS, SANGAMON COUNTY, Illinois Route 4--North of Auburn, Curran and Snell Rd., Auburn vicinity, 98000979, LISTED, 8/06/98

ILLINOIS, SANGAMON COUNTY, Lincoln Colored Home, 427 S. Twelfth St., Springfield, 98000945, LISTED, 8/06/98

IONA, WOODBURY COUNTY, Bailey, George A. and Mary Tinkal, House, 423 10th St., Correctionville, 98000929, LISTED, 8/05/98

LOUISIANA, WASHINGTON PARISH, Franklinton Hunt School, 617 Main St., Franklinton, 98000993, LISTED, 8/06/98

LOUISIANA, WASHINGTON PARISH, Greenlaw House, 613 10th Ave., Franklinton, 98000997, LISTED, 8/06/98

MASSACHUSETTS, HAMPSDEN COUNTY, Carreau Block, 640-642 Chicopee St., Chicopee, 98000993, LISTED, 8/06/98

MICHIGAN, CHARLEVOIX COUNTY, Porter, John J. and Eva Reymier, Estate, 01737 MI 66 S. South Arm Township, 98000269, LISTED, 8/03/98

MINNESOTA, KOOCHECHING COUNTY, Bridge No. 5721, MN 65 over Little Fork R., Silverdale vicinity, 98000717, LISTED, 7/13/98
(Iron and Steel Bridges in Minnesota MPS)

MISSOURI, ST. LOUIS INDEPENDENT CITY, Laclede Building, 408 Olive St., St. Louis, 98000994, LISTED, 8/06/98

NEW YORK, CHERANGO COUNTY, Smithville Valley Grange No. 1197, NY 41, Smithville Flats, 98001009, LISTED, 8/06/98

NEW YORK, LEWIS COUNTY, St. Mark's Episcopal Church, Jct. of West Main and Elm Sts., Port Leyden, 98001003, LISTED, 8/06/98 (Historic Churches of the Episcopal Diocese of Central New York MPS)