APPENDIX F

ANALYIS OF LOCAL STONEWARE AND KILN FURNITURE FROM THE GRAVE SHAFTS

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Introduction

The stoneware sherds recovered from excavations at the African Burial Ground were divided for the purposes of analysis into two groups: those associated with grave shafts and those not considered to be directly associated with grave shafts. The analysis of sherds not directly associated with grave shafts is discussed in Janowitz and Cheek (2003). The present report is concerned with sherds found within the grave shafts. The analytical division was the result of post depositional factors unrelated to the nature of the sherds themselves. Kiln wasters (sherds from vessels that broke or were otherwise damaged during firing) and kiln furniture (clay pieces used to separate and stabilize vessels within the kiln) recovered from the two types of deposits had the same origin: they were by-products from the pottery manufactories in operation in this part of Manhattan during most of the eighteenth century. They were dumped on land that was the African Burial Ground during part of the time that the Burial Ground was in use (see Chapters 2 and 4).

The two groups of sherds can be considered as one assemblage, part of which (the sherds in the grave shafts) was redeposited after initial deposition. The two reports (the present one and Janowitz and Cheek 2003) are complimentary to each other but, as both might not be available to readers, this appendix will start with a brief summary of the information contained in Cheek's report.

History Summary

The workshops and kilns of the potters who dumped their failed products and used kiln furniture on the land that was the Burial Ground were located near its southeast and northeast corners (see Chapter 2). The potters themselves were members of two related families named Crolius and Remmey. The first Crolius and the first Remmy married sisters, daughters of a stoneware potter, Georg Corcilius, who emigrated from the town of Nordhofen in the former Duchy of Weid-Neuweid in the Rhineland region of Germany. Genealogical research done for Corcilius descendents has established that Georg and his family left the Rhineland for America sometime after 1718, when they are last mentioned in parish records**,** and 1724, when Veronica Corcilius married Johann Willem Crolius, also from Weid-Neuweid, in New York City. Anna Corcilius married Johannes Remmi (whose name became anglicized to John Remmey) in the early 1730s (Ketchum 1991:40-41).

Georg Corcilius and his sons-in-law came to New York as mature men trained in the craft of salt-glazed stoneware pottery making in their German homeland. Emigration of trained craftsmen to America, especially from the regions of present-day Germany, was common in the early 18th century (Bridenbaugh 1950:68; Burrows and Wallace 1999:129-131).

The potters of the extended Corcilius family almost certainly knew that stoneware clay would be available to them in New York before their arrival, but records of how they came by this knowledge have not been preserved. Adrian van der Donck in his 1655 *A Description of the New Netherlands*, claimed that there was clay suitable for "pots, dishes, plates, tobacco-pipes, and the like wares[1]" but we do not know how widely this knowledge was distributed and whether

[1] "The country [New Netherland] has hills of fuller's earth, and several sorts of fine clay, such as white, yellow, red and black, which is fat and tough, suitable for pots, dishes, plates, tobacco-pipes, and the like wares. It is known from experience that bricks and tiles can be baked of the clay, and there is no doubt but that the business would be profitable, and the country be benefited if the trade were driven" (Van der Donck 1968:37).

or not contemporary potters placed credence in his assertions. The ceramic historian Harold Guilland stated that a bank of fine white clay was found in New Jersey "shortly after 1700" and that the same clay was available on Staten Island and Long Island, near present-day Huntington, but he gave no sources for this statement (Guilland 1971:40). During the later 18th century, the best stoneware clay sources in the Middle Atlantic region were controlled by the Morgan family in Middlesex County, New Jersey. The Morgan family first bought land in the area in 1710 but the earliest documented mining and selling of their clay was not until 1764, although there were probably unrecorded purchases before that time (Racine 1997:5-6). The clay on the Morgan property was of high quality and accessible from the surface and the Morgans became suppliers of stoneware clay to potters throughout the Northeast and Midwest in the 19th century (Racine 1997). The Corcilius/Crolius/Remmey potters might have bought clay from New Jersey, or from another source, or might have mined their own clay[2]; it is also probable that their sources changed over time. At the present time there is no definitive answer, as very few business records for Crolius or Remmey have been located, and Laurel Racine found no mention of the New York City potters in the sparse Morgan records (Racine 1997). An on-going project, the New Netherland/New York Chemical Data Archive, might help to resolve this question in the future (Gilbert, Harbottle, and deNoyelles 1983; Gilbert and Janowitz 1990).

In the Rhineland, it was common for related groups of master craftsmen to work co-operatively. A recent study of German stonewares has provided a synopsis of the craft background of the New York City potters (Gaimster 1997). Potters in the Rhineland were full-time craftsmen who worked within an apprentice/workman/master system controlled, after the 17th century, by formal guilds. Before the 1600s, guilds were less institutionalized but their authority to establish standards and regulate prices was still recognized. Under the guild system, production was "organized on a family-unit basis, with the main production centres comprising a number of competing families, each made up of several master-potters with their own kilns" (Gaimster 1997:48).

The 18th century Corselius/Crolius/Remmey potters apparently adhered to the tradition of having several kilns that were operated by different masters: sometime between 1730 and 1745, according to the maps (see Chapter 2), the works were expanded from one to two kilns. By the end of the century, there were at least three kilns, two probably operated by Crolius and one by Remmey potters. The existence of multiple kilns has led some ceramic historians to assert that the families were in competition,[3] but if, as is likely, they followed the Rhenish model, these separate kilns were parts of a "family compound" type of pottery works whose members worked in co-operation with each other.

The business relationships of the families are likely to have changed during the later years of the 18th century, but, by that time, the potters were no longer using Burial Ground lands for disposal of their wasters (see Chapters 2 and 4). In addition, with one possible exception, there are no sherds among the wasters that have motifs that are typical of those used by Crolius and Remmey potters on their marked, post-1800, pieces. Examples of these well known motifs are illustrated in Greer (1981), Ketchum (1991), and Webster (1971), among others.

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[2] Ketchum (1987:39) states that clay was "dug from the banks of the Collect and from the banks of a nearby hillock."

[3] For example, Guilland 1971 (p. 40) the "Remmey … pottery … remained in competition with the Crolius Pottery until 1820."

Inventory Methods

A basic inventory of the stoneware sherds from the grave shafts was compiled, using an Access database, during the initial analysis of the entire grave shaft-related artifact collection. Subsequently, the majority of the stoneware sherds were subjected to a more intensive analysis, which added greater detail to the database, in order to facilitate comparisons between the grave shaft and non-shaft parts of the assemblage and to contribute to the study of early pottery production in New York City.

The initial descriptive fields in the database were the following:
TYPE – stoneware sherds were divided into Salt-Glazed Stoneware (vessel sherds) and Stoneware-Other (kiln furniture and kiln debris)
COUNT – the number of sherds in each entry
DECORATION – a written description of decorative motifs and techniques
FORM – vessel or kiln furniture shape; indeterminate forms were identified simply as Unidentified or Sherd or, if the basic shape could be determined, Hollowware
PORTION – that section of the vessel or kiln furniture that was present
NOTES – any information noted during excavation that referred directly to a specific sherd or sherds
COMMENTS – any additional information or observations
OBJECT – an additional field used to classify materials as Sherds, Kiln Furniture, or Kiln Waste

The more detailed analysis included additional fields, all of which were preceded by the letters "LC" for local ceramics. Contexts that do not include entries in these fields were not re-examined during the detailed analysis.
LCWARE – used to distinguish sherds as Gray Bodied, Buff Bodied, and Brown Bodied. This field was usually not used for kiln furniture.
LCTECHNIQUE – the method(s) used to decorate sherds (painted, incised, etc.)
LCDECORATION – specific motifs (floral, checkerboard, spiral, etc.); if the motif could not be identified, as a rule because the sherds were too small, "Unidentifiable Motif" was entered in this field. (As noted above, the field that is labeled simply "DECORATION" contains descriptions assigned during the initial analysis.)
LCCOLOR – refers to the interior, and sometimes exterior, colors of sherds and not to the color of the decoration, which was almost always blue. The exception was when both blue and purple were used as decoration, which was noted here.
LCDAMAGE – various types of kiln damage (glaze on broken edges, kiln adhesions, etc.)
LCRIM – descriptions of specific rim shapes (everted, full rolled, etc.)
LCBASE – descriptions of specific base shapes (flat with crossed wire cuts, flared, etc.)
ID # – for contexts with large numbers of sherds, each entry was given a sequential number to enable future researchers to correlate sherds with entries in the database. The entries were bagged separately and the ID numbers were written on the bags.
MNV – minimum number of vessels. Minimum vessels are not usually calculated for kiln waster sites, as it is extremely time consuming and difficult to do accurately, given the nature of the depositional processes involved. Nevertheless, an attempt was made to determine the number of vessels represented by the sherds from one context, Grave Shaft 353. The results are discussed below in the *Grave Shaft 353 section*.

Description – Vessel forms

Vessel forms could not be identified for almost 93% of the sherds from the grave shafts (Table F-1 "sherd" and "hollowware"). This percentage is somewhat higher than for the non-grave shaft portion of the assemblage (which was approximately 87%), probably because the grave shaft-related sherds were disturbed and reduced in size during excavation and filling-in of the grave shafts. In both parts of the assemblage, however, almost all of the unidentified sherds came from hollowwares: the most common of the identified forms are jugs and jars, and it is very likely that the majority of the unidentified sherds, in general, and the hollowware sherds, in particular, were also from these types of vessels.

Table F-1 Vessel Forms

Form	Count	Percent
Hollowware	3419	40.54%
Sherd	4421	52.42%
Jug	219	2.60%
Jar	109	1.29%
Porringer	50	0.59%
Handle	49	0.58%
Jar/Jug	43	0.51%
Tankard	42	0.50%
Bowl	21	0.25%
Plate	21	0.25%
Chamber Pot	11	0.13%
Plate/Dish/Pan	9	0.11%
Flatware	5	0.06%
Dish	3	0.04%
Lid	3	0.04%
Pan	2	0.02%
Pan/Bowl	2	0.02%
Pitcher	2	0.02%
Dish/Pan	1	0.01%
Jug/Bottle	1	0.01%
Total	**8433**	

Definitions of vessel forms have been discussed in the report of the analysis of the sherds from the non-grave shaft portions of the site (Janowitz and Cheek 2003**:**Appendix S). Some of that discussion will be repeated here. Definitions of vessel forms were taken from Greer (1981:55-136). Greer based her terminology on extensive documentary research and on conversations with traditional potters; in addition, her terms are compatible with two early nineteenth price lists[4] published by Clarkson Crolius, who was in charge of the Crolius pottery from 1800 to 1838 (Ketchum 1987:47, 50). Most of the terms used by Greer are straightforward but the term "jar" can be problematic. Greer used "jar" for all hollowware vessels with open mouths that were

[4] One, from 1804, is in the possession of the Museum of the City of New York. The other, from 1809, is in the collections of the American Antiquarian Society, and was reproduced in Meyers 1984:55.

used to store various commodities. She distinguished between "wide-mouthed jars," whose mouth openings are as large or larger than their bases and generally as wide as the widest part of the body; "small-mouthed jars," with mouth openings smaller than the mid-point of the vessel and also generally smaller than the base; and "small-mouthed preserve jars," that have collars and even more constricted mouths (Greer 1981:83, 87, and 91). Nineteenth century stoneware potters sometimes called all of these forms "pots" (see, for example, the Bennington price list on page 59 in Greer) while modern collectors often refer to them as crocks, a term very seldom seen in early potters' price lists. Clarkson Crolius apparently made a distinction between "pots" and "jars." Both his 1804 and 1809 lists have prices for "jugs, jars, and pots" of various sizes and the 1809 list includes illustrations of these forms: "pots," as illustrated, are identical to Greer's "wide-mouthed jars;" "jars" include the "small-mouthed" and "preserve" jar forms of Greer's terminology.

As far as could be determined from the small size of the sherds and the lack of crossmending, the general body shape of jars was ovoid, as was the case with the jars from the non-grave shaft related portion of the assemblage (Janowitz and Cheek 2003: Table S-8). Jar rim shapes were defined using the illustrated rims in Greer (1981:63) with two additions: "bulbous" and "bulbous indented." The term "bulbous indented" was used for rims that had a rounded exterior rim above a slight constriction; these rims showed variations in their profiles (Plates F.1, F.2, F.3, and F.4). Rims are often formed using a template and the variations in this basic rim shape are probably indications of the use of several templates. Other jars had plain rims that were slightly everted (Plate F.5). One vessel had a rim shape that was almost an exact match for Greer's "plain everted" shape (Plate F.6a-b), but this was the only example of this precise shape. Another form illustrated by Greer is called a "flattened roll, " as in this vessel (Plate F.7).

Small-sized jars were sometimes made without handles but medium and large-sized vessels almost invariably had two horizontal handles, generally loops or lugs attached to the vessel's shoulders (Plate F.8, bottom). After the first decades of the nineteenth century, horizontal handles were attached to vessel bodies along their entire length, but earlier ones were attached only at their ends, which allows for a more solid grip of the handle. This form of attachment might have made handles vulnerable to breakage in the kiln, however, as many of the handles in this collection appear to have either broken off the bodies at the point of contact or the vessels themselves broke at the handle, as was the case with the vessels in Plate F.8 (top) and Plate F.9. The handle in Plate F.9 is unusual because most of the vertical handles were attached as in Plate F.8 but the Plate F.9 handle seems to have had more of a tail-type of attachment. The majority of the jar and jug handles in this collection had blue coloring around the point where they were attached to the body (identified as "blue at base of handles" in the inventory).

Jars could be used to store both wet and dry supplies but were especially valuable as containers for pickling and salting foods, as they were both waterproof and non-reactive. Jars could be sold to individuals for home use or to those who processed and sold various foodstuffs. For instance, Pehr Kalm, a Swedish naturalist who visited New York in the mid-eighteenth century, observed that the abundant oysters in the harbor were collected both for local consumption and for export: they were pickled and sent to the West Indies in "glass or earthen vessels ... well stopped to keep out the air," or were fried in butter, covered with butter and potted as the pickled variety (Kalm 1987:126).

Jugs, the most common form in this collection, also served as storage and transportation vessels but, given their small mouth openings, for liquids. Jugs had necks of varying lengths and small mouths that could be sealed with a cork or other type of plug. Sherds from jug shoulder sections

can be identified by the sharp interior angle that was formed when the body was turned inward to make the narrow neck PlateF.10. Jug sherds often had light or no salt glaze on their interiors, since their necks were restricted and were encased in jug stackers during firing Plates F. 11 and F.12.
Definitions of jug neck forms were also based on Greer (1981:65). The most common form was a simple roll (Plate F.8). Many early nineteenth century jugs in museum collections have reeded necks, but only two sherds with this type of decoration were identified here.

Jugs had single strap handles with, in this collection, upper attachments near the mouth on most Plate F.8 (top) and on the upper shoulder on some Plate F.13. The lower attachments were well below the shoulders. The upper attachment points were smoothed into the vessel necks, as in Plate F.8; Plate F.13 is unusual in having a push mark. Sherds with lower handle attachments were rare in this collection; two small sherds with V-shaped rat-tail attachments outlined in blue Plate F. 14 might have been from small jugs, although they might equally have been from large round mugs. Horizontally placed loop handles on jars were formed by hand and are oval to round in cross section (Plate F.15, center right). Vertically placed strap handles, used on chamber pots as well as jugs, were ridged (Plates F.15 and F. 16). Ridged strap handles could be extruded but could also be made by hand, with fingers creating the ridges.

The bottom portions of eighteenth-century jugs and jars had similar shapes and it is often impossible to differentiate vessel form for sherds from these parts of vessels; the sherds identified as "jars/jugs" were generally from below the shoulder section (Plates F.17 and F.18a-b). Smaller sizes of jugs and jars often had tooled bases, sometimes colored with a blue band (Plate F.18a-b).

The one sherd identified as a Jug/Bottle was a neck sherd that could have come from either a jug with a long neck or a bottle. No sherds that could be unequivocally identified as bottles were found in either part of the Burial Ground assemblage. Bottles were similar to jugs but they were generally smaller (holding a quart or less) and had no handles (Greer 1981:79). Nineteenth century stoneware bottles for beverages often mimicked the long-necked shape of glass bottles but earlier ones had shorter necks on bulbous bodies.

Identified sherds from chamber pots were a small part of the assemblage (Table F-1). Chamber pots had distinctive flat, everted, rims (Plate F.19). In this assemblage, all of the identified chamber pot sherds were decorated, some elaborately (Plate F.20).

Tableware vessels in the Burial Ground assemblage included bowls, porringers, plates, dishes, pitchers, and tankards. Bowls, as defined here, were curved-sided vessels with straight rims. Eleven of the 21 sherds identified as bowls came from one unusually complete vessel (Plate F.21). This small bowl had thick walls (probably the reason for its relative survival) and spirals that went around the entire vessel. Small bowls were probably used for food consumption rather than food preparation. Porringers also had curved sides but were often deeper than bowls and had one or two handles; they were traditionally used for consumption of liquid or semi-liquid foods, such as porridge, gruel, mush, or soup. Several nearly complete porringers were recovered from the non-grave shaft portion of this assemblage (Janowitz and Cheek 2003:Table S-4), but the vessels from the grave shafts were less complete, although relatively more sherds were from decorated porringers (Plate F.22). In general, sherds from porringers were separated from bowl sherds by their slightly everted rim form (Plates F.22 and F.23). Three small sherds with blue dot decoration might have been from a porringer with an unusual rounded lip or a small bowl with a handle (Plate F.24).

Pitchers had bulbous bodies, wide mouths, and pouring lips. Only two sherds were identified as pitchers but one was a rim sherd with a small pushed-out spout, which is characteristic of this vessel form. Dishes were vessels for serving and possibly for cooking and preparing food. For this analysis, they were defined as straight-sided, deep vessels with a flat rim. These vessels might have been defined as small pans, but their flat rims necessitated the use of a different term. They were similar in form and decoration to the plates in this assemblage and, given the incompleteness of the vessels, it was often difficult to distinguish between deep plates and dishes (Plate F.25). Plate F.26 illustrates three probable plate sherds, including one completely covered in brown slip and a base sherd with very unusual impressed marks on the exterior of the base. Plates and dishes could be thrown or formed using drape or other molds and it is possible that these basal marks were from a mold.

A division was made between mugs (round bodied drinking vessels) and tankards (straight sided drinking vessels) because these two forms have different names in German stoneware catalogues: (*kruik* or *kan* for mugs and *bierpul* or *beker* for tankards, although the terms are not used consistently by all writers, even within individual publications (Hurst, Neal, and Van Beuningen 1986, Klinge 1996, Naumann 1980, Reineking-Von Bock 1981). No mugs were identified among the grave shaft sherds; in the non-grave shaft portion of the collection, only five sherds that were possibly from round mugs were identified. Tankards in this assemblage had plain, straight, tall lips and were generally decorated with ribbing and cordoning around the base and below the lip and incised and filled-in motifs on the central portion of the body (Plate F.27). Tankards with these decorations are often erroneously identified as of German manufacture by archaeologists, but the vessels in this assemblage were clearly wasters, usually underfired and only lightly salt-glazed. Tankards, probably because they were sturdy and kept drinks cooler than glass, continued to be made in stoneware during the nineteenth century, as evidenced by surviving price lists (Greer 1971:26 and 59, for example).

Stoneware tankards, mugs, and pitchers are known from museum and private collections and from excavated assemblages. The other tableware forms – plates, dishes, bowls, and porringers – are not common in excavated or curated collections. As noted in Janowitz and Cheek (2003:Appendix S)**,** archaeologists speculated that Crolius and Remmey were making forms (plates, dishes, bowls, and teawares[5]) that copied those made by English potters in white salt-glazed stoneware in an effort to take advantage of the market for these forms; i.e., they were making non-traditional gray stoneware forms as an innovative marketing tool.

There is some support for this interpretation in data from Germany. Klinge (1996:50) said that

> Whereas crockery for everyday use, in the form of bowls and dishes [*nappen en schalen*], was already being produced at Raeren in the 16th century, no plates seem to have been made in the Westerwald before the 18th century. Those that have been preserved are largely highly decorated and one may probably assume that they were intended not for use, but for decoration.

Gaimster (1997:55), however, noted that, during the first half of the eighteenth century, Westerwald potters introduced "a new range of products for table use" including teawares (teapots and cups and saucers), salts, plates, and terrines, along with "miscellaneous household utensils such as writing sets" because of competition from tin-glazed earthenwares and later from white salt-glazed stonewares. However, from the mid-eighteenth century on, competition from "industrial fineware ceramics" (i.e., creamware and its successors) forced the Westerwald potters

[5] Teawares (small sherds from one teapot and several saucers) were identified only in the larger collection from the non-grave shaft part of the assemblage.

to specialize in utilitarian forms for the "tavern, kitchen and cellar (beer tankards, storage jars, and large jugs…)" (Gaimster 1997:252).

When the vessel forms from the Burial Ground are compared to museum specimens of Crolius and Remmey wares, it appears that the New York potters were following a course similar to that of their fellow craftsmen in their homeland: a greater variety of products made in the mid-eighteenth century followed by specialization in utilitarian vessels in the late eighteenth and into the nineteenth century. What is unknown at the present time is if the New York potters were making this wide variety of forms during their first years of production as part of their standard Germanic-tradition repertoire, or if they began to diversify only when large quantities of English white salt-glazed table and teawares came into the American market after 1740. The most direct indication of English influence on the New York potters is possibly the decoration on a small rim sherd (Plate F.28). This vessel has a line of brown slip around its lip that resembles the brown slip line that is often found around the rims of English salt-glazed tankards, in particular those covered with white slip/engobe.

Porringers were not commonly made in English white stoneware (Mountford 1971) although they were made in the Rhineland in limited numbers (Gaimster 1997:121). Archaeologists expect to find porringers made of red earthenware with lead glaze (often black, sometimes with brown glaze with darker splotches and/or swirled slip decorations) on eighteenth and early nineteenth century Northeastern and Middle Atlantic sites, but stoneware porringers are practically unknown. This is probably due in part to archaeologists' expectations: sherds from stoneware porringers might be misidentified as other forms (probably mugs or small jars) because such vessels are not anticipated. It is also possible that stoneware porringers were not made outside of New York City, but much more research needs to be done. Another possibility is that porringers were not made in great numbers by the Crolius and Remmey potters and that the relatively high percentages of these vessels in both parts of this assemblage is because the excavated sherds represent a limited number of firings that contained specific vessel forms.

A few of the sherds identified as porringers consisted of handles with small parts of the bodies attached; the bodies sometimes had glaze on their broken edges. Glaze on broken edges of vessels or kiln furniture indicates that the object broke in the kiln before firing was complete and thus salt glaze was deposited on the broken surfaces. It is possible that these porringer-like handles were instead made to serve as draw pulls, i.e. pots that could be pulled out of the kiln through small openings to check on the progress of the firing. The edges on these sherds, however, were broken, not cut, so this use is conjectural. No other sherds that could be identified as draw pulls were found.

Description – Decorative Techniques

The sherds discussed in this section come largely from grave shafts, notably those of Burials 333 and 353, which cut into Feature 139. Feature 139, as noted in Chapter 4, was a dense concentration of sherds in the southeastern area of the excavated cemetery. The sherds from Feature 139 and from the grave shafts that were dug into this pottery-laden surface probably came from a limited number of firings, perhaps as few as one. This supposition is based on the concentration of sherds in the feature and the repetition of forms and decorations, some of which – porringers for forms and rouletted motifs for decorations – are not commonly found in archaeological and museum collections.

The decorative techniques and motifs on the sherds from the grave shafts were essentially the same as those on the sherds from the non-grave shaft related portions of the site: tooling, incising, painting, and application of colored slip, all familiar types of decoration on stonewares. The most common technique used to embellish the vessels, as noted in Janowitz and Cheek (2003:Appendix S), was painting with cobalt-colored slip (Table F-2). Another, unusual, technique, seen on sherds from both parts of the assemblage, was the use of a roulette wheel to create impressed designs.

Table F-2 Decorative Techniques

Technique	Count	Percent
Undecorated	6048	71.71%
Painted	1810	21.46%
Coggled/Rouletted	172	2.04%
Tooled & Painted	146	1.73%
Exterior Slip	85	1.01%
Incised and Painted	63	0.75%
Coggled/Rouletted & Painted	27	0.32%
Incised, Painted & Tooled	21	0.25%
Incised (Uncolored)	20	0.24%
Tooled (Uncolored)	17	0.20%
Reeded	5	0.06%
Exterior Slip & Painted	15	0.18%
Exterior Slip & Incised	1	0.01%
Reeded & Painted	1	0.01%
Sprigged	1	0.01%
Stamped	2	0.02%
Total	**8434**	

The painted motifs were varied, although most were too incomplete for identification (Table F-3). (The total of 1971 sherds on Table F-3 includes the categories "painted," "tooled and painted," and "exterior slip and painted" from Table F-2) The spiral was the most common identifiable motif (Plate F.29). As noted in the Janowitz and Cheek 2003: Appendix S, ceramic historians have identified this motif on kiln waster sherds from the New Jersey Morgan potters but it is clear now that New York potters also used this motif. Indeed, many vessels previously identified as of New Jersey manufacture were probably made by the Crolius and Remmey potters and their workers, some of whom are likely to have worked in New Jersey after learning their trade in New York.

Another group of potters who used the spiral motif was the Kemple family in Ringoes, New Jersey. The Kemple potters added notches or “eyelashes” to their spiral designs. Two mending sherds from the grave shaft of Burial 353, however, have a very similar notched spiral motif (Plate F.30). The first Kemple potter probably trained with the New York City potters (Springstead 2004).

Table F-3 Painted Motifs

Painted Motifs	
Unidentifiable Motif	1640
Cordoned and Filled-In w/Blue	135
Blue at Base of Handles	65
Spiral	52
Blue at Base of Handles & Unidentifiable Motif	7
Blue Dots atop Rim	6
Cordoned - Filled-In w/Blue and Blue Handle Base	6
Mottled Ferruginous Slip & Unidentifiable Motif	5
Brown Exterior Slip & Unidentifiable Motif	5
Cordoned and Filled-In w/Blue and Unidentifiable Motif	5
Blue Band Around Base	4
Blue Beneath Rim	4
Unidentifiable Motif, Possibly Spiral	4
Blue Band, Scallop and Dot	3
Splotchy Unidentified Motif	3
Floral	2
Blue Band Around Rim	2
Mottled Ferruginous Slip & Unident. Motif	2
Blue Painted Diagonal Lines	2
Spiral w/ Notches	2
Spiral/Butterfly	2
Unidentifiable Trailed Motif	2
Blue Band Around Base and Unidentifiable	2
Cordoned & Filled In & Mottled Slip	2
Spiral w/Blue at Base of Handles	1
Floral Band	1
Blue Band Along One Edge	1
Mottled Ferruginous Slip & Blue Band	1
Mottled Ferruginous Slip & Cordoned w/ Blue	1
Blue Dash (?) atop Rim	1
Blue Dots	1
Blue Dots & Blue at Base of Handle	1
Exterior Slip & Painted	1
Total	**1971**

Many of the decorations were simple and consisted of tooled cordoned bands filled-in with blue. Sherds with this decoration were most likely parts of vessels that would have had additional decorations, either painted, incised, and/or rouletted (Plates F.5, top, and F.31). The sherds with blue at the base of handles were also parts of vessels that would most probably have had additional decorations (Plate F.32).

A few of the sherds had purple- as well as blue-colored motifs (Plates F.33, F.34, and F.35). On most the purple fired to a bright color, but on the sherds in Plates F.34 and F.35 something went wrong, either in the mixing of the pigment or in the firing and the purple became almost brown.

The sherds in Plates F.34 and F.35 are decorated with incised designs that were filled-in with pigment to enhance the design (Table F-4). This decorative technique is common on German-made drinking vessels; in this collection the vessel forms of most of the sherds with this decoration could not be identified beyond the level of hollowware, but those whose forms could be identified were tankards (Plates F.35 and F.27). (The vessel in Plate F. 27appears to have been overlooked during the decoration process, as it has an incised floral motif that was not filled-in with blue.) Floral and geometric motifs are the most common designs on German drinking vessels; the majority of the motifs in this collection were unidentifiable, due to the small size of the sherds, but the partial motifs present also suggest floral and geometric designs. The sherds in Plate F.36 have remnants of two particular motifs – overlapping circles and pomegranate – found on German tankards.

Table F-4 Incised and Painted Motifs

Unidentifiable Motif	73
Cordoned - Filled-In w/Blue and Unidentifiable Motif	17
Floral/Geometric	3
Cordoned - Filled-In w/Blue and Geometric (?) Motif	3
Intersecting Circles & Unidentifiable Motif.	2
Pomegranate	2
Checkerboard	1
Cordonned & Filled In & Notched	1
Negative Design	1
Simple Lines	1
Cordoned - Filled-In w/Blue and Uncolored Floral	1
Total	**105**

Tankards were highly decorated vessels because they were used at the table and in convivial social situations; they are at the "high end" of eighteenth-century stoneware potters' wares. It is clear that the New York made highly decorated products were in direct competition with those from Germany. Archaeologists have routinely identified all incised and painted stonewares as German but the sherds from the Burial Ground show that this is not always the case.

Sprigged motifs were another decorative technique used on German high-end stonewares, especially drinking vessels. On vessels intended for the British and British-colonial markets, sprigged motifs that included a royal cypher (WR, AR, or, most frequently, GR), were the most common and any vessel with such a motif is assumed to be a European product. Once again, the sherds from the Burial Ground have disproved this assumption. One small sherd with a floral motif was recovered from the non-grave shaft portion of the site and another was recovered from the grave shaft of Burial 333. Both sherds are without doubt kiln wasters manufactured in New York because they are severely underfired and unglazed. The sherd from the grave shaft of Burial 333 (Plate F.37a-b) has part of a letter R, most probably from a GR cypher. The importance of these two small sherds for the study of ceramic manufacture in New York should

be emphasized, for they prove that New World eighteenth-century potters were making wares that were the same, or as close to the same as different clays permitted, as German products.

Some of the sherds, in particular porringers, exhibit a decorative technique that is **not** common on German-made stonewares. In the inventory this technique is called "coggled/rouletted" because some authors use one term and some the other but they will be referred to as "rouletted" here[6]. These sherds have impressed marks on their exteriors that could have been made using roulette wheels to create repetitive patterns. Roulette wheels were used by some of the early nineteenth-century New Jersey potters, particularly Warne and Letts, but their designs are relatively narrow (see Branin 1988:79 and Greer 1981:157 for examples). In contrast, the motifs on the Burial Ground sherds are wide (Plates F.5, F.20, F.22, F.38, F.39, F.40, and F.41.) The wide designs were probably made by multiple passes of the roulette wheel or possibly by using a wider than usual wheel. The designs appear on sherds identified as jugs and chamber pots but most are on porringers.

Roulette wheel-decorated sherds were over 2% of all the sherds in the grave shafts and over 4% of the sherds in the non-grave shaft sections of the site. Although these are low percentages, such sherds are extremely rare in both archaeological and museum collections. Thus, the numbers at the Burial Ground are unusually high. A likely explanation for their presence is that the sherds excavated from the Burial Ground represent a limited number of firings in which sherds with this decoration, especially porringers, comprised a greater than normal part of the potters' output.

Some marked Crolius and Remmey vessels from the latest eighteenth and first quarter of the nineteenth centuries were decorated with stamped motifs, either alone or as part of a larger design, but this technique was apparently not commonly used at mid-century. Only two sherds from the grave shafts and fourteen from the non-grave shaft portions of the site were decorated in this manner. One of the sherds, from the grave shaft of Burial 353, was decorated using a 12-petaled floral stamp that is the same or very similar to one used on marked Clarkson Crolius vessels that probably date circa 1800-1815 (Plate F.42). This is the only sherd with a decoration that closely resembles the later marked Crolius and Remmey wares.

Another characteristic of some of the later Crolius and Remmey wares that **is** found on the mid-century wares from the Burial Ground is the application of interior slips in various shades of brown. These are not Albany-type slips (which are common on nineteenth-century stonewares): their color is lighter than Albany slip and the slips are thinner than is typical for Albany slip. The composition of the Cortselius/Crolius/Remmey slips has not yet been determined but it is likely that they were made from local clays. The colors range from rose/brown through red/brown to light, medium, and dark brown (Plates F.10, F.12, and F.43); the hues were probably affected by firing conditions, i.e. temperature and amount of oxygen in the kiln.

Mottled brown slips on the *exteriors* of vessels were part of their decorations. Brown exterior slips are considered to be characteristic of English-style stonewares but they were also used by some German potters. English potters used brown slip alone for decoration but German potters

[6] According to the potter Daniel Rhodes (1959:174), "The roulette is a small wheel which is held against the revolving damp pot to give continuous bands of texture or pattern. Roulettes may be carved from wood [or] made from wooden spools … the design of roulette wheels must be quite simple to avoid clogging with the damp clay, especially if they are used for wet, freshly thrown pots. Greer (1981:155) defines a roulette wheel as a "small rolling cylinder" and a cog wheel as a narrower tool "constructed from a notched coin or an old clock wheel."

sometimes combined brown slip with blue coloring, as did the New York potters (Plates F.44 and F.45).

The decorative techniques and motifs used by the Cortselius/Crolius/Remmey potters in this mid-century assemblage reflect the German traditions of their training. In some aspects, they bear a closer resemblance to German eighteenth-century wares than they do to the later products of the younger generations of New York potters. By the early nineteenth century, the Crolius and Remmey potters were concentrating on the production of utilitarian forms, albeit some of which were decorated with distinctive incised, stamped, and painted motifs, and the production of tablewares, with the exception of tankards, had ceased. The use of roulette wheels had also ceased. Many vessels were stamped with their maker's names, which served as both decoration and a means of product identification, in contrast to the earlier vessels, which were very rarely marked.

Kiln Furniture

Kiln furniture is used to separate and stabilize vessels in the kiln. It is necessary to separate vessels so that they will not adhere to each other during firing; stabilization is vital to prevent vessel stacks from collapsing. Packing a kiln requires skill and experience in order to minimize loss during this most critical phase of pottery production. Some kiln furniture ("preformed" pieces) is made in more or less standardized shapes and sizes before the kiln is loaded but others ("expedient" pieces) are made on the spot as the kiln is loaded to fit specific spaces. Both types are made of the same clays as the vessels, although differently colored clays are often left unmixed. Furniture pieces are usually covered in sand to reduce adhesion to vessels.

Kiln furniture makes up a substantial part of a potter's waste products, as the pieces are generally only used once. In addition to kiln furniture and broken vessels, potters' waste also includes kiln debris comprised of fragments of burned clay used to seal the kiln, miscellaneous globs of glaze that adheres to the walls and floor of kilns, and amorphous lumps of material made up of glaze, pots that broke in the kiln, and broken kiln furniture (Table F-5). The kiln debris from this collection was generally small but some large chunks of glaze-consolidated material were also present (Plate F.46).

Table F-5 Kiln Furniture and Kiln Debris

Form	Count
Preformed Pads	1212
Expedient Pads	1278
General Kiln Furniture	3230
Kiln Debris	2155
Total	**7875**

The forms of the kiln furniture from the grave shafts (Table F-6) are the same as from the non-grave shaft portions of the site, which were described in Janowitz and Cheek (2003). That information will be briefly summarized here.

Table F-6 Kiln Furniture Forms

Form	Count	Percent
Unidentified Kiln Furniture	1767	30.89%
Undifferentiated Kiln Furniture	1463	25.58%
Preformed Rectangular Pad	431	7.53%
Expedient Pads – General	400	6.99%
Miscellaneous Pad	386	6.75%
Preformed Bent Rectangular Pad	307	5.37%
Preformed Tri-Armed Pad	289	5.05%
Preformed Waisted Rectangular Pad	137	2.40%
Expedient Semi-Circular Pad	134	2.34%
Expedient Roll	131	2.29%
Expedient Wedge	126	2.20%
Preformed Jug Stacker	48	0.84%
Expedient Spool	40	0.70%
Expedient Rolled Wedge	35	0.61%
Stack of Pads	14	0.24%
Expedient Circular Pad	7	0.12%
Expedient Rectangular Pad	5	0.09%
Total	**5720**	**100.00%**

Preformed kiln furniture could be made on the wheel or cut from flat slabs of clay. Wheel-made shapes were jug stackers, which were placed over the mouth of jugs to provide a flat platform for the next vessel in the stack. They had cut out holes to accommodate jug handles that also allowed some salt vapor to come in contact with the vessel neck (Plate F.47). Plate F.48 includes sherds from what might be a very small jug stacker, perhaps for a bottle or flask.

Preformed shapes that were cut from flat slabs of clay were rectangles, bent rectangles (called crescents in the), semi-circles, and a tri-lobed form. These pieces would be placed between vessels in stacks, as can be seen by unglazed scars on vessel rims and bases (Plates F.49a-b and F.50). Rectangles, crescents, and semi-circles are commonly found in stoneware potters' waster piles (Branin 1988, Greer 1981, Schaltenbrand 1996) but the tri-lobed form is rare, except in the New York/New Jersey area. Tri-lobed kiln furniture, both preformed and expedient, was found at the Morgan kiln sites in New Jersey; they were called “trivets” in the reports of these excavations (Hunter et al. 1996, Liebeknecht, Hunter, and Dew 1998). The tri-lobed form appears to have been made by rolling out a flat disc and cutting out sections. The edges of the arms are very smooth and appear to have been cut while the clay was hard enough not to smear the different colored clays that were often combined in kiln furniture.

No complete or even two-thirds complete tri-lobed shapes were found in this collection, probably because they were designed to break as they were removed from vessels after firing. Three were complete enough, however, for estimates of their diameters to be made: one was between 5 and 7 inches; another was 7 inches; and the third was 3 1/2 inches. The tri-lobed shape would have provided a stable platform between vessels while the cut out spaces would allow salt vapor to come in contact with the interiors of jars and other hollowwares.

Rectangular pads with indentations at their waists were possibly also designed to be more easily broken off fired pots (Plate F.50). The slight indentations might also have reduced the weight of the pads. Other pads had straight long edges (Plate F.51). The incised numerals on the pad illustrated in Plate F.51 are extremely unusual; they could have aided the potter in keeping track of numbers of pots or perhaps marked a particular location in the kiln.

Bent rectangular pads were made in a variety of shapes and sizes (Plate F.49a-b). These pads ranged in size from large to rather small; some were almost u-shaped while some were only slightly bent at an angle to form a rough crescent.

Expedient forms were made to fill individual needs during the process of loading the kiln. These "coils, spools, separators and patties" were made of scrap clay mixed with sand and were generally dipped in sand to reduce adherence (Greer 1981:218). They were formed by hand; thus impressions of kiln loaders' fingers and palms are common.

Spools or spacers, rolls of various lengths flattened at both ends (Plate F.52a-b), were made to fit between the upright stacks to balance them (Greer 1981:221). Rolls were simply thin rolls of clay placed around or between vessels. The examples of rolls in Plate F. 53 are varied, as is expected with expedient forms. Wedges were thick, short rolls that were bent in the middle where they were forced in between vessels; they also had a great variety of sizes and shape particulars (Plates F.54, F.55, and F.56). Some wedges approach a roughly square shape (Plate F. 57). All of these forms leave unglazed scars/shadows where they are pressed against vessel walls and they can in turn show impressions of vessel decorations or have patches of blue coloring that volatilized in the kiln and settled on the kiln furniture.

Forms identified as "expedient semi-circles" on the inventory were apparently used between vessels within stacks in the same fashion as preformed pads. They were found in a great variety of widths and thicknesses and most show impressions of vessels, which indicates the clay was still quite soft when placed between vessels.

Kiln pads could be used singly or in conjunction with others of the same or different shapes and sizes as needed. Plate F.58a-b are examples of stacks of kiln pads; in both cases the pads were exposed to high heat that melted and fused them together, probably resulting in the collapse of the stack of vessels they were helping to support.

Intrasite Comparisons

As noted in the introduction to this section, the stoneware sherds from the African Burial ground were divided into two groups: those from the grave shafts and those not thought to be directly associated with the interments at the site. The analysis for the latter group was done using a specially constructed database that was later exported into an Access database (Cheek 2003). Information about the sherds from the grave shafts was entered directly into an Access database.

One of the goals of the present analysis was to determine if there are significant differences between the sherds from the grave shaft fills and from the surrounding areas – i.e., did the people who buried their loved ones and colleagues here deliberately choose particular sherds for inclusion in the grave fill or was the inclusion of sherds and kiln furniture simply because they were already on the ground into which the shafts were dug. At the present time there is no certain indication that human choice consistently influenced the types of stoneware sherds in the

grave shafts: the proportions of decorated and undecorated sherds are not significantly different, nor are the vessel forms (Tables F-7, F-8, and F-9). There are, however, lesser amounts of kiln debris in the grave shafts (Table F-10). In the non-grave shaft-related sections of the site, the proportion of kiln debris and furniture to vessel waster sherds is roughly 2 to 1; in the grave shafts, it is roughly 1 to 1. Most of the difference is accounted for by the larger amounts of kiln debris outside of the grave shafts. It appears that the people who dug and filled-in the grave shafts removed pieces of kiln debris from the grave fill.

The reason or reasons for this cannot be known, but several possible explanations can be offered. One possibility is based on the size of the materials in the grave shafts: the analysts observed that the sherds in the grave shaft fills were, for the most part, smaller than those from outside of the shafts, although this observation was not quantified and remains subjective. There is some objective evidence for the small sherd size, however, in that relatively more grave shaft sherds were too fragmentary for identification of vessel form, a direct factor of sherd size (Tables F-7 and F-9). The people who dug the graves might simply have thrown large pieces of debris, and large stones, away as they dug into the earth, in order to make digging easier. In this case, the lesser amounts of kiln debris in the grave shafts are a matter of exclusion of large fragments rather than inclusion of vessel sherds.

Another possibility is that the people who dug the grave shafts discarded some pieces of kiln debris for esthetic reasons. Kiln debris is composed of generally unattractive lumps of fused vessels, kiln furniture, glaze, and sand with rough, irregular surfaces, which might have been eliminated from grave fills as unsightly objects (Plate F.46).

The principal difference between the stoneware assemblages from grave shaft and non-grave shaft assemblages is the relative amount of sherds with unidentifiable forms, probably, as noted above, due to the smaller size of the majority of the shaft sherds (Table F-7). A greater variety of forms, including the very scarce teawares, was found in the non-shaft assemblage, a factor of the larger size of this collection.

Table F-7 Vessel Forms (sherd counts)

Grave Shaft Contexts			**Non-Grave Shaft Contexts**		
Form	**Count**	**Percent**	**Form**	**Count**	**Percent**
Hollowware *	5643	66.91	Hollowware	9915	71.51
Unidentified	2197	26.05	Unidentified	1766	12.73
Jug	219	2.60	Jug	510	3.68
Jar	109	1.29	Jar	336	2.42
Porringer	50	0.59	Porringer	270	1.94
Handle	49	0.58	Handle	375	2.70
Jar/Jug	43	0.51	Jar/Jug	123	0.89
Tankard	42	0.50	Tankard	273	1.97
			Mug (round-bodied w/cylindrical neck)	5	0.04
Bowl	21	0.25	Bowl	27	0.19
Plate	21	0.25	Plate	19	0.14
Chamber Pot	11	0.13	Chamber Pot	101	0.73
Plate/Dish/Pan	9	0.11			

Grave Shaft Contexts			Non-Grave Shaft Contexts		
Form	**Count**	**Percent**	**Form**	**Count**	**Percent**
			Pipkin	10	0.07
Flatware	5	0.06	Flatware	32	0.23
Dish	3	0.04	Dish	58	0.41
Lid	3	0.04			
Pan	2	0.02			
Pan/Bowl	2	0.02			
Pitcher	2	0.02	Pitcher	11	0.08
Dish/Pan	1	0.01			
Jug/Bottle	1	0.01	Jug/bottle	30	0.22
			Teapot Spout	2	0.01
			Teacup	1	0.01
			Saucer	1	0.01
Total	**8433**			**13865**	

* Here combined with "Sherds" from Table F-1

When only identifiable forms are considered, differences between the two assemblages are augmented, with the greatest disparities in the relative proportions of jugs, porringers, and tankards (Table F-8). However this is probably due to the particular circumstances of the wasters' original deposition, rather than to selection by people filling in grave shafts.

Table F-8 Identifiable Vessel Forms (sherd counts)

Grave Shaft Contexts			Non-Grave Shaft Contexts		
Form	**Count**	**Percent**	**Form**	**Count**	**Percent**
Jug	219	40.86%	Jug	510	28.70%
Jar	109	20.34%	Jar	336	18.91%
Porringer	50	9.33%	Porringer	270	15.19%
Jar/Jug	43	8.02%	Jar/Jug	123	6.92%
Tankard	42	7.84%	Tankard	273	15.36%
			Mug (round-bodied w/cylindrical neck)	5	0.28%
Bowl	21	3.92%	Bowl	27	1.52%
Plate	21	3.92%	Plate	19	1.07%
Chamber Pot	11	2.05%	Chamber Pot	101	5.68%
Plate/Dish/Pan	9	1.68%			
			Pipkin	10	0.56%
Dish	3	0.56%	Dish	58	3.26%
Pan	2	0.37%			
Pan/Bowl	2	0.37%			
Pitcher	2	0.37%	Pitcher	11	0.62%
Dish/Pan	1	0.19%			
Jug/Bottle	1	0.19%	Jug/bottle	30	1.69%

Grave Shaft Contexts			Non-Grave Shaft Contexts		
Form	**Count**	**Percent**	**Form**	**Count**	**Percent**
			Teapot Spout	2	0.11%
			Teacup	1	0.06%
			Saucer	1	0.06%
Total	**536**			**1777**	

One of the questions that this analysis was designed to address was the possibility that decorated sherds were systematically chosen for inclusion in grave shaft fills as part of the burial rituals for people interred at this site. Based on the available evidence, this does not appear to be the case (Table F-9). There are more painted sherds in the shaft contexts, but the overall percentage of sherds with no decoration is also higher in these contexts.

Table F-9 Waster Sherds, Decorative Techniques (sherd counts)

Grave Shaft Contexts			Non-Grave Shaft Contexts		
Technique	**Count**	**Percent**	**Technique**	**Count**	**Percent**
Undecorated	6048	71.71%	Undecorated	8257	61.26%
Painted *	2055	24.37%	Painted *	2685	19.92%
Coggled/Rouletted	199	2.36%	Coggled/Rouletted	564	4.18%
Exterior Slip	85	1.01%	Exterior Slip	1659	12.31%
Incised (Uncolored)	20	0.24%	Incised (Uncolored)	0	0
Tooled (Uncolored)	17	0.20%	Tooled (Uncolored)	197	1.46%
Reeded	6	0.07%	Reeded	37	0.27%
Exterior Slip & Incised	1	0.01%	Exterior Slip & Incised	51	0.38%
Sprigged	1	0.01%	Sprigged	1	0.01%
Stamped	2	0.02%	Stamped	14	0.10%
Other	0	0.00%	Other	13	0.10%
Total	**8434**			**13478****	

* "Painted" encompasses all decorative motifs that include color, i.e. painted and incised; painted and tooled; painted and slipped, etc.
** The total sherds are less than on Table F-7 because not all sherds had a decorative technique identified. These sherds were probably undecorated but, as most of this collection was lost in the destruction of the World Trade Center, this can no longer be corrected.

As noted, the ratio of kiln furniture and debris to vessel waster sherds was very different in the two contexts (Table F-10). The much larger amount of kiln debris in the non-shaft contexts accounts for the greatest part of the disparity (Table F-11).

Table F-10 Kiln Wasters, Kiln Furniture, and Kiln Debris (sherd counts)

Grave Shaft Contexts			Non-Grave Shaft Contexts		
Form	**Count**	**Percent**	**Form**	**Count**	**Percent**
Preformed Pads	1212	7.4%	Preformed Pads	3885	9.77%
Expedient Pads	878	5.4%	Expedient Pads	4384	11.03%
General Kiln Furniture	3630	22.3%	General Kiln Furniture	5175	13.02%
Kiln Debris	2155	13.2%	Kiln Debris	12446	31.31%
Sub Total	*7875*	*48.3%*	*Sub Total*	*25890*	*65.12%*
Waster Sherds	8434	51.7%	Waster Sherds	13865	34.88%
Total	**16309**		**Total**	**39755**	

Table F-11 Kiln Wasters and Kiln Furniture (sherd counts)

Grave Shaft Contexts			Non-Grave Shaft Contexts		
Form	**w/debris**	**w/o debris**		**w/debris**	**w/o debris**
Preformed Pads	7.40%	8.56%	Preformed Pads	9.77%	14.23%
Expedient Pads	5.40%	6.20%	Expedient Pads	11.03%	16.05%
General Kiln Furniture	22.30%	25.65%	General Kiln Furniture	13.02%	18.95%
Sub Total	48.30%	40.41%	Sub Total	65.12%	49.23%
Waster Sherds	51.70%	59.59%	Waster Sherds	34.88%	50.77%
Total			**Total**		

Grave Shaft 353

Minimum numbers of vessels (MNVs) were calculated for the sherds from Grave Shaft 353. This feature was selected because it cut into Feature 139, an area that seemed to contain large numbers of sherds from a very few, possibly only one or two, kiln firings (Janowitz and Cheek 2003). MNVs were determined on the basis of unique characteristics of form and/or decoration. The task was complicated by the large amounts of small, undecorated sherds that could have been part of several vessels. These sherds were not assigned to any vessels. MNVs were calculated in order to assess what the original numbers of vessels might have been, compared to the sherds found at the Burial Ground.

The ratio of sherd to vessel counts was very low for identifiable forms (Table F-12), i.e., each vessel was represented by only a few, or even just one, sherds. This is characteristic of an assemblage that has been severely affected by depositional factors, as was expected. Vessels were broken during firing and separated during removal from the kiln, transport to and dumping at the Burial Ground, and excavating and filling-in of grave shafts. It would have been interesting to try to calculate MNVs for the entire feature, including the grave shafts dug into it, but the loss of most of Feature 139 precludes this analysis.

Table F-12 Sherd and MNV Counts

Form	Sherds	MNV
Bowl	2	1
Chamber Pot	3	3
Dish	2	1
Jar	29	24
Jar/Jug	21	14
Jug	47	20
Plate	13	8
Porringer	15	11
Tankard	18	15
Handle	22	0
Sherd	1958	0
Hollowware	1240	236
Total	**3370**	**333**

Jars and jugs were by far the most common identifiable vessel forms in this context. These and tankards and porringers, the next best represented, were also common in the rest of Feature 139.

The most common decoration on jars and jugs was tooled lines around the base, and beneath the rim of jars, colored blue ("Cordoned and Filled-In with Blue") (Table F-13). Porringers from other contexts were often decorated with rouletted designs, but in this context they had painted motifs while the rouletted diagonal motifs were found on small jugs, although some of the unidentifiable hollowwares might have been porringers.

Table F-13 Vessel Forms and Decorations

Form	Technique	Motif	MNV
Bowl	Painted	Blue Dots atop Rim	1
Chamber Pot	Painted	Blue at Base of Handles & Unident.	1
Chamber Pot	Tooled & Painted	Cordoned and Filled-In w/Blue and Unidentifiable Motif	2
Dish	Painted	Unidentifiable Motif	1
Jar	Unknown		13
Jar	Painted	Blue at Base of Handles	1
Jar	Painted	Unidentifiable Motif	3
Jar	Tooled & Painted	Cordoned - Filled-In w/Blue and Blue at Base of Handle	2
Jar	Tooled & Painted	Cordoned and Filled-In w/Blue	5
Jar/Jug	Unknown		3
Jar/Jug	Exterior Slip	Mottled Ferruginous Slip	1
Jar/Jug	Painted	Unidentifiable Motif	1

Form	Technique	Motif	MNV
Jar/Jug	Tooled & Painted	Cordoned - Filled-In w/Blue and Blue at Base of Handle	1
Jar/Jug	Tooled & Painted	Cordoned and Filled-In w/Blue	8
Jug	Unknown		4
Jug	Exterior Slip	Mottled Ferruginous Slip	1
Jug	Coggled/Rouletted	Diagonal Motif	1
Jug	Coggled/Rouletted	Diagonal Motifs (more than one)	1
Jug	Coggled/Rouletted & Painted	Diagonal Motif	1
Jug	Exterior Mottled Slip & Painted	Unidentifiable Motif	1
Jug	Painted	Blue Beneath Rim	4
Jug	Painted	Spiral	1
Jug	Painted	Unidentifiable Motif	5
Jug	Stamped & Painted	Stamped - Daisy (12 Petals) and Floral	1
Plate	Unknown		1
Plate	Painted	Floral Band	1
Plate	Painted	Unidentifiable Motif	6
Porringer	Unknown		4
Porringer	Mottled Slip	Mottled Ferruginous Slip	1
Porringer	Painted	Unidentifiable Motif	5
Porringer	Painted	Unidentifiable Motif, Possibly Spiral	1
Tankard	Incised, Painted & Tooled	Cordoned - Filled-In w/Blue and Uncolored Floral	1
Tankard	Incised, Painted & Tooled	Cordoned - Filled-In w/Blue and Unident. Motif	4
Tankard	Painted	Unidentifiable Motif	1
Tankard	Reeded	Reeded and Cordoned Filled-In w/Blue	1
Tankard	Tooled & Painted	Cordoned and Filled-In w/Blue	8
Unidentifiable Hollowware	Unknown		71
Unidentifiable Hollowware	Coggled/Rouletted	Diagonal Motif - Small Scale	1
Unidentifiable Hollowware	Coggled/Rouletted	Diagonal Motif and Incised	2
Unidentifiable Hollowware	Coggled/Rouletted	Mottled Ferruginous Slip	1
Unidentifiable Hollowware	Coggled/Rouletted	Stepped Motif	1

Form	Technique	Motif	MNV
Unidentifiable Hollowware	Coggled/Rouletted	Unidentifiable Motif	2
Unidentifiable Hollowware	Exterior Mottled Slip & Painted	Unidentifiable Motif	1
Unidentifiable Hollowware	Exterior Slip	Brown Exterior Slip	2
Unidentifiable Hollowware	Exterior Slip	Mottled Ferruginous Slip	19
Unidentifiable Hollowware	Incised	Unidentifiable Motif	2
Unidentifiable Hollowware	Incised ?	Mottled Ferruginous Slip	1
Unidentifiable Hollowware	Incised and Painted	Negative Design	1
Unidentifiable Hollowware	Incised and Painted	Unidentifiable Motif	13
Unidentifiable Hollowware	Incised, Painted & Tooled	Cordoned - Filled-In w/Blue and Unident. Motif	6
Unidentifiable Hollowware	Mottled Slip	Brown Band Around Rim	1
Unidentifiable Hollowware	Mottled Slip	Mottled Ferruginous Slip	1
Unidentifiable Hollowware	Painted	Blue at Base of Handles	2
Unidentifiable Hollowware	Painted	Blue at Base of Handles & Unident.	1
Unidentifiable Hollowware	Painted	Blue Dots & Blue at Base of Handle	1
Unidentifiable Hollowware	Painted	Mottled Ferruginous Slip & Cordoned w/ Blue	1
Unidentifiable Hollowware	Painted	Mottled Ferruginous Slip & Unident. Motif	3
Unidentifiable Hollowware	Painted	Spiral	9
Unidentifiable Hollowware	Painted	Spiral w/ Notches	1
Unidentifiable Hollowware	Painted	Spiral w/Blue at Base of Handles	1
Unidentifiable Hollowware	Painted	Unidentifiable Motif	86
Unidentifiable Hollowware	Tooled & Painted	Cordoned and Filled-In w/Blue	6
Total			**333**

Table F-14 Decorative Techniques

MNV	Technique
137	Painted
32	Tooled & Painted
23	Exterior Slip
14	Incised and Painted
11	Incised, Painted & Tooled
9	Coggled/Rouletted
3	Mottled Slip
2	Exterior Mottled Slip & Painted
2	Incised
1	Coggled/Rouletted & Painted
1	Incised
1	Reeded
1	Stamped & Painted

By far the most common decorative technique was painting with cobalt blue. The motifs included simple circular bands around handle bases, a variety of spirals—(including the notched example (Plate F.30)—and a floral band on a plate. Floral bands were a distinctive feature of nineteenth-century Remmy vessels and this plate might be an early example of the use of this motif.

The vessels from Grave Shaft 353 provide a more detailed picture of the wares manufactured by the Crolius and Remmey potters that can be used in the future for comparative purposes when studying other eighteenth-century stoneware potters.

Summary

The sherds from the grave shaft contexts at the African Burial Ground are very similar to those from the non-shaft contexts at the site. No firm evidence for selection of particular sherds for inclusion in shaft fills has been demonstrated, although there is evidence that kiln debris was systematically excluded from fills. There is no significant evidence from the sherds to support the separation of grave shaft stonewares from those in other parts of the site. The stoneware sherds from the grave shaft fills and the other parts of the African Burial Ground constitute an assemblage deposited sometime in the mid-eighteenth century by potters working on the edges of the Burial Ground. The sherds most probably have no direct relationship to the Burial Ground as a place of interment.

The potters were a group of related craftsmen trained in the Rhenish tradition of stoneware manufacture. Neither the dates for this assemblage nor the number of times that kiln waste was deposited at the Burial Ground can be precisely determined; however, the time frame is likely to be between 1730 and *circa* 1760 and there are some indications that the artifacts in at least one location (Feature 139), which contained a dense concentration of sherds, were the by-products of a very limited number of kiln firings.

The potters made a variety of forms of vessels, decorated in largely traditional fashion. The exceptions were vessels embellished with patterns from what was probably a series of wide roulette wheels, a technique not common on German stonewares. Their pots were in direct competition with German products. The products of the New York City potters are undoubtedly wide spread along the East Coast of the United States, particularly in the greater New York metropolitan area, and are now beginning to be identified by archaeologists working with eighteenth-century ceramic collections.

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Appendix --- Kiln Furniture Measurements:

All measurements are in millimeters, except where noted. The following measurements were taken:

Rectangular Pads:

1. Width at midpoint of thickness at intact end.
2. Width at midpoint of thickness at broken end or other intact end.
3. Maximum width – note where measurement taken.
4. Minimum thickness – note where measurement taken.
5. Maximum thickness – note where measurement taken.

Bent Rectangular Pads:

1. Minimum width.
2. Maximum width.
3. Minimum thickness.
4. Maximum thickness.
5. Length through center.

Expedient Circular Pads:

1. Width at end, if possible.
2. Width at break, if possible.
3. If not 1 or 2, width at midpoint of arc.
4. Minimum thickness.
5. Maximum thickness.

Tri-Armed Pads:

1. Diameter range, repeat for each arm.
2. Arm length from center, if possible.
3. Arm width at exterior arc.
4. Arm thickness: minimum and maximum.

KILN PAD MEASUREMENTS	*in millimeters except where noted*		*often in vessel impressions*		
BENT RECTANGULAR PADS	**minimum width**	**maximum width**	**minimum thickness**	**maximum thickness**	**length through center**
341.1 whole	28.87 at center	37.28 near one end	19.74 at center interior curve	22.26 at one end	3.3 INCHES
341.2 whole	44.38 at center	56.29 at one end	32.08 at one end	34.09 at other end	4.4 INCHES
341.3 fragment	42.77	42.77 (only one meas. poss.)	15.85 at center	18.52 outer edge of center	--
341.4 fragment	43.77 at end	48.11 near end	20.02 at center	22.34 inner edge of end	--
333.1 fragment	29.67 at end	31.32 at center	12.65 at outer edge at end	14.62 at inner edge	--
333.2 fragment	37.8 at end	48.26 at center	17.81 at center	19.59 outer edge of center	--
333.3 fragment	43.63 at end	48.00 btwn end & center	17.78 at end	19.06 outer edge of center	--
333.4 fragment	27.02 at end	33.32 btwn end & center	15.66 at inner edge at end	17.85 outer edge of center	--
333.5 fragment	31.3 at end	37.33 btwn end & center	18.23 at center	18.90 outer edge of center	--
333.6 fragment	40.46 at end	50.52 at break	17.10 at center of break	18.83 outer edge of center	--
333.7 fragment	43.53	43.53 (only one meas. poss.)	16.96 at center of end	17.72 outer edge of bend	--
333.8 fragment	23.11 at end	31.74 at break	12.99 at center of break	15.45 at outer edge, middle	--
333.9 fragment	29.99 at end	33.99 near bend	13.22 at bend/break	15.98 at inner edge near end	--
333.10 fragment	25.67 at end	31.70 at the bend/break	12.71 at center of end	14.66 at inner edge near break	--
333.11 fragment	37.38 at end	46.04 at break near bend	16.23 at center of break	17.71 at corner of inner edge	--
333.12 fragment	33.87 at end	43.83 at midpoint	17.37 at center of break/bend	18.16 at outer edge near bend	--
333.13 fragment, both ends broken	42.62	42.62 (only one meas. poss.)	15.41 near inner edge	17.28 at inner bend	--
333.14 fragment	31.10 at end	38.79 at bend/break	12.42 groove near outer edge	15.53 at inner edge at end	--
333.15 fragment	41.98 at end	46.53 at bend/break	15.74 at center of bend/break	17.10 at outer edge at end	--
333.16 fragment	21.65 at end	28.25 at bend	13.2 at center of break	15.48 at center of bend	--
333.17 fragment	29.33 at end	36.76 at midpoint	11.85 at end near outer edge	14.24 at outer edge, midway	--
333.18 fragment	38.97 at end	48.24	15.55 at center of break	17.26 at outer edge and end	--
333.19 fragment	35.36 at end	52.83 mid btwn end & break	14.45 in hdnprnt 16.73 end	18.12 at outer edge and end	--
333.20 fragment	27.36 at end	40.22 mid btwn end & break	13.9 at center of end	16.32 at inner edge near bend	--
333.21 fragment	39.11 at end	45.95 at mid btwn end & break	12.43 crnr of otr edge & end	16.32 at center	--
333.22 fragment	24.49 at end	33.36 at crest of bend	14.55 at center of bend/break	15.85 at crest of bend	--
333.23 fragment	31.56 at bend	36.83 at mid btwn end & break	14.65 at bend/break	17.19 at outer edge, midway	--
333.24 fragment	29.29 at end	34.15 at crest of bend	12.81 at break (past bend)	16.02 at crn of inr edg & end	--
333.25 fragment	27.06 at end	33.54 btw end & break	16.27 at center of break	17.38 int nr crn otr edg & end	--
333.26 fragment	25.13 at end	35.29 at crest of bend	14.9 at center of end	17.4 at otr edg & bend	--
333.27 fragment	20.55 at end	38.90 at crest of bend	14.11 at break (past bend)	16.89 at center of end	--
333.28 fragment	22.23 at end	32.65 at crest of bend	13.41 nr cntr of break	15.32 at inr egde nr bend	--
333.29 fragment	25.48 at end	31.36 btw end & bend	11.86 at end, nr crn outr edge	14.81 at crest, outer edge	--
333.30 fragment	25.33 at end	41.04 at break/bend	12.01 at break nr outer edge	16.18 at crn of end 7 inr edg	--
333.31 fragment	24.51 at end	36.14 at crest of bend	12.34 at end nr crn of otr edge	14.49 at otr edge nr end crn	--
333.32 fragment	19.24 at end (brkn)	33.45 at crest of bend	13.63 at cntr of break (crest)	14.93 at crn otr edg & bend	--
333.33 fragment	28.21 only one measurement possible		13.31 at center/corner	16.46 at crn of end & inr edg	--

RECTANGULAR PAD, PREFORMED	width at end	width at break	maximum width	minimum thickness	maximum thickness
341.1 one end broken (possibly waisted)	38.21 (at midpoint)	35.08 at midpoint break	46.33 near center	17.56 at end	22 near break
341.2 fragment, broken both ends	38.81	38.75	39.15	14.54	15.99
341.3 one end broken	34.79	46.29	47.43 near break	12.9 at break	14.72 at center
341.4 one end broken	30.44	37.96	37.96 at break	14.29 at end	15.86 at end
341.5 one end broken	44.74	41.58	46.49 near narrow end	16.2 near narrow end	18.28 near narrow end
RECTANGULAR PAD, EXPEDIENT	**width at end**	**width at break**	**maximum width**	**minimum thickness**	**maximum thickness**
341 whole	42.21	50.36	50.36	27.78 at break	29.03 near break
EXPEDIENT SEMI-CIRCULAR PAD	**width at end**	**width at break**	**minimum thickness**	**maximum thickness**	
341.1	--	33.64 near break	15.7 at break	16.85 at midpoint of arc	
341.2	--	43.48 at midpoint of arc	12.41 at vessel impression	14.52 at outer arc, broken end	
341.3	--	34.61 at midpoint of arc	8.11 at impression at int arc	13.05 at outer arc	
341.4	--	--	12.17 w/in vessel impression	14	
TRI-ARMED PAD	**diameter range**	**arm length from center**	**arm width (at ext.arc)**	**arm thickness-minimum**	**arm thickness-maximum**
341.1 (parts of 2 arms present)	5-7 inches	65.66 58.27	51.47 43.4	20.83 20.2	21.58 21.56
341.2 (one arm present)	7 inches	--	--	13.26	14.88
341.3 (central portion)	--	--	--	10.65	12.33
341.4 (fragment)	3.5 inches		35.19	11.11 at groove from vessel	12.63 near center break

LOCAL STONEWARE - PLATES

Plate F.1

Jar rim with bulbous indented profile. Grave shaft of Burial 333.

Plate F.2

Jar rim with bulbous indented profile. Grave shaft of Burial 333.

Plate F.3

Jar rim with bulbous indented profile. Grave shaft of Burial 353.

Plate F.4

Jar rim with bulbous indented profile. Grave shaft of Burial 353.

Plate F.5

Jar with slightly everted rim and rouletted motif. Grave shaft of Burial 355.

Plate F.6 a-b

Two views of a small jar with a plain everted rim. Heavy salt glaze, kiln adhesion, and slumping of the rim beneath the adhesion. Grave shaft of Burial 333.

Plate F.7

Rim and body sherds from a small jar; extremely underfired with very thin salt glaze. decorated with a spiral motif. grave shaft of Burial 242.

Plate F.8

Top: Jug mouth with strap handle. Bottom: large loop handle broken where it attached to the body. Grave shaft of Burial 366.

Plate F.9

Close-up view of the underside of a vertical handle attachment with unusual push mark. Grave shaft of burial 353.

Plate F.10

Vessel interiors with various shades of brown slip from grave shafts of Burials 397 and 341.
Top row, left to right: two jug sherds with rose/brown slip; jug sherd with red/brown slip.
Bottom row, left to right: dark rose/brown slip; dark brown slip; medium brown slip (with interior glaze); dark brown slip. Bottom left and upper right sherds have bloated interiors.

Plate F.11

Base, neck, and shoulder sherds from a large jug. Note crescent shaped kiln scar on the base. Grave shaft of Burial 353.

Plate F.12

Interiors of sherds in Plate F.11 with rose/brown slip. Glaze does not extend down into the basal portion.

Plate F.13

Jug handle attachment with thumb push. vessel exterior covered with a mottled brown slip. Grave shaft of Burial 397.

Plate F 14

Small jug or mug sherds with handle attachments outlined in blue. Grave shaft of Burial 333.

Plate F.15

Loop and strap handles. loop handles are at center right. Grave shaft of Burial 333.

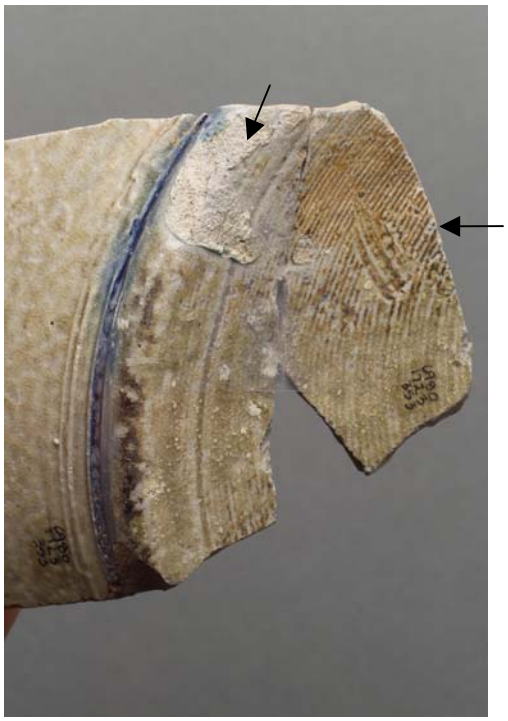
Plate F.16

Strap handle attachment at rim of chamber pot. Grave shaft of Burial 353.

Plate F.17

Base and body sherds from a large jar or jug. Grave shaft of Burial 353.

Plate F.18a-b 7069 and 7067



Two views of a base sherd from a medium-sized jar or jug with tooled base and blue band. Note wire cut marks and kiln pad adhesion. Grave shaft of Burial 353.

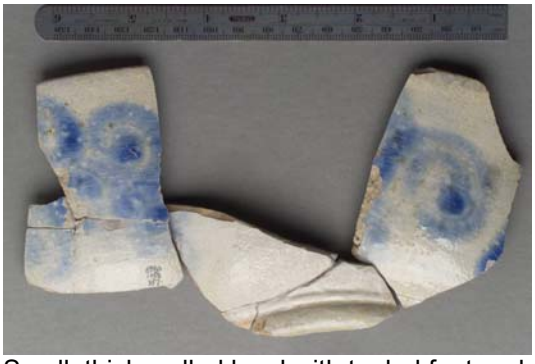
Plate F.19

Chamber pot rim sherds. Grave shaft of Burial 333.

Plate F.20

Chamber pot and unidentified hollowware body sherds with rouletted motifs. Grave shaft of Burial 333.

Plate F.21



Small, thick-walled bowl with tooled foot and multiple spiral motifs. Grave shaft of Burial 357.

Plate F.22

Porringer rims with rouletted motifs. Note that two motifs are from left to right and two others are right to left. Grave shafts of Burials 333 and 353.

Plate F.23

Porringer rim sherds with relatively thick bodies. Grave shaft of Burial 333.

Plate F.24

Mended rim sherds and body sherd with handle attachment from either a porringer with a rounded lip or a small bowl. Grave shaft of Burial 355.

Plate F.25

Rim and body sherds from a dish or a large deep plate. Grave shaft of Burial 353.

Plate F.26

Three plate sherds. Right: rim sherd covered in brown slip with kiln adhesions. Top: rim sherd with brushed blue design. Left: base sherd, probably the same vessel as rim at top, with unusual impressions on the exterior (interior has a brushed blue motif). Grave shafts of Burials 186 and 366.

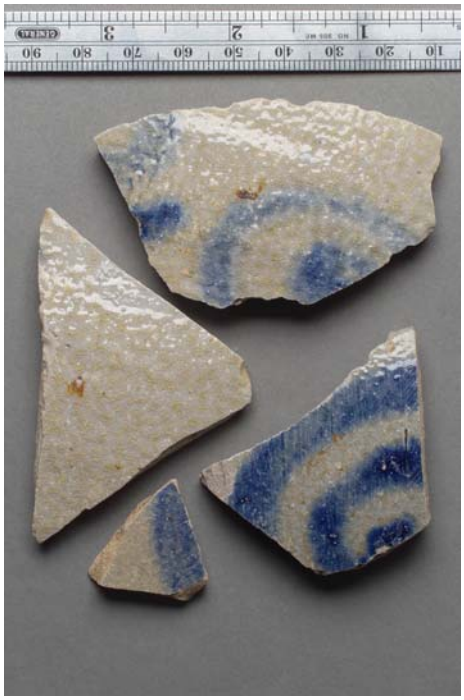
Plate F.27

Rim and body sherds from a large tankard with cordoned and filled-in and incised and filled-in decorations. Light salt glaze. Grave shaft of Burial 383.

Plate F. 28

Rim from a small hollowware vessel, probably a tankard, with brown slip around the rim, possibly in imitation of english salt-glazed stoneware. Grave shaft of Burial 353.

Plate F.29

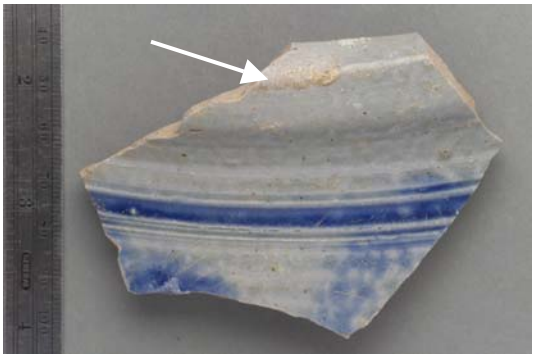


Jug or jar sherds with spiral motifs. Grave shaft of Burial 353.

Plate F.30

Sherds from a jug or jar with “notched spiral” motif. Grave shaft of Burial 353.

Plate F.31



Jar rim with tooled band and unidentified brushed blue motif. Note kiln pad adhesion on rim. Grave shafts of Burial 366.

Plate F.32

Chamber pot with blue at base of handle and start of other motif. Grave shaft of Burial 353.

Plate F.33

Sherds with blue and purple decorations. Grave shaft of Burial 333.

Plate F.34

Small sherd with incised motif filled-in with blue and purple. The purple fired to a brownish color. Grave shaft of Burial 404.

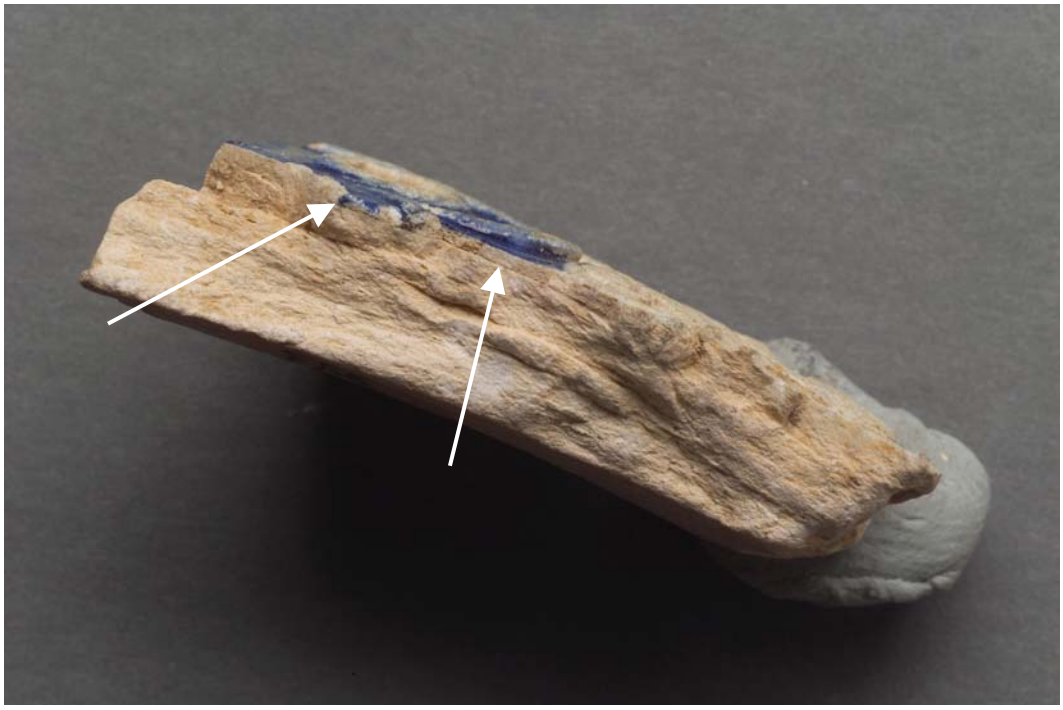
Plate F.35

Tankard sherd with incised and filled-in geometric or floral motif, reeding, and cordons and both blue and purple pigments. Grave shaft of Burial 353.

Plate F.36

Sherds, probably from a tankard, with overlapping circles and pomegranate(?) motifs. Grave shaft of Burial 333.

Plate F.37a-b



Two views of an underfired and unglazed sherd with sprigged decoration (part of a GR medallion). Arrows point to line between attached pad and the body. Grave shaft of Burial 333.

Plate F.38

Sherds from a jug(s) with rouletted design and brown speckled exteriors. Grave shaft of Burial 333.

Plate F.39

Sherds from small hollowwares (probably porringers or round mugs) with a variety of rouletted motifs. Grave shaft of Burial 333.

Plate F.40

Sherds from porringers and a small jug or round mug with rouletted motifs. the incised lines on the jug/mug might have served as guide lines. Grave shaft of Burial 353.

Plate F.41

Small jug sherd with rouletted motif and transition into a plain part of the vessel. Grave shaft of Burial 353.

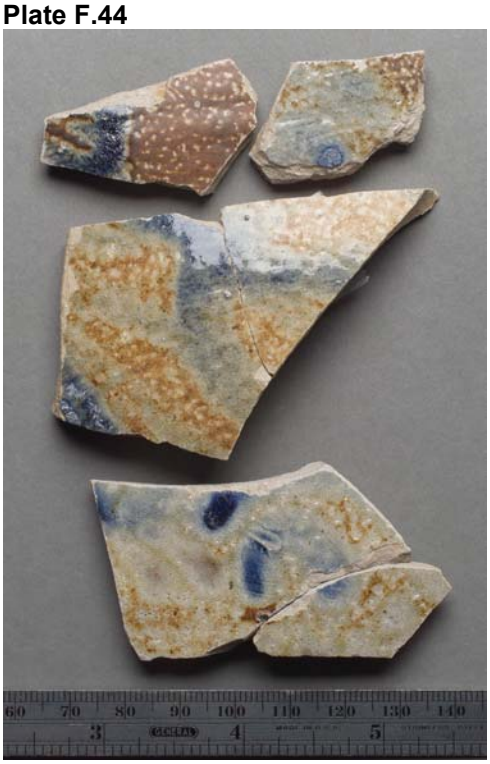
Plate F.42

Sherd with a stamped floral motif. Note double striking of the motif. Grave shaft of Burial 353.

Plate F.43

Sherd with interior slip that has bled onto the broken edge. Grave shaft of Burial 333.

Plate F.44



Sherds from two small jugs or jars with brown slip and brushed blue motifs. Grave shaft of Burial 353.

Plate F.45

Small sherds with brushed blue decorations; one has heavy mottled brown slip. Grave shaft of Burial 353.

KILN FURNITURE

Plate F.46

Pieces of kiln debris, probably including clay used to seal the kiln. Grave shaft of Burial 333.

Plate F.47

Jug stackers with uneven cut-outs.
Grave shafts of Burials 333 and 397.

Plate F.48

Left, possibly a very small jug stacker; right possibly a hollow handle. Grave shaft of Burial 333.

Plate F.49a-b

Bent rectangular pads with a variety of kiln scars and adhesions. Grave shaft of Burial 333.

Plate F.50

Waisted rectangular pads with kiln scars and adhesions. Grave shaft of Burial 333.

Plate F.51

Half of a rectangular kiln pad with incised numbers “13[0]…”. Grave shaft of Burial 396.

Plate F.52a-b

Spools used to separate vessels and steady stacks.

Plate F.53

Expedient rolls.

Plate F.54

Wedges. Grave shaft of Burial 333.

Plate F.55

Large wedges. The one in the center of the upper row has cobalt blue that migrated from a vessel. Grave shaft of Burial 333.

Plate F.56

Wedges with impressions of rouletted designs and reeding from vessels. Grave shaft of Burial 333.

Plate F.57

Roughly square wedges, some with adhesions of vessels. Grave shaft of Burial 333.

Plate F.58a-b

Stacks of kiln pads that have been overfired and fused. Grave shaft of Burial 333.