METHODOLOGY

ARCHIVAL METHODS

The Phase I and II archival research by Grettler et al. (1991) provided a basic chronology of site ownership and site function from 1831 to the present and provided much archival material. Therefore, archival research for the Phase III data recovery investigations of the Buchanan-Savin Farmstead focused on further refining this data, and consulting additional sources not utilized in the Phase I and II investigations. The additional sources provided more detailed knowledge about the site's occupants and function through time. Additional information was gleaned from Appoquinimink Hundred tax assessments, New Castle County will and probate documents, U.S. Census returns from 1850 to 1870. Examinations of deeds, New Castle County Road Petitions and Returns, and Delaware State Directories published in the second half of the nineteenth century were also utilized. Newspaper accounts proved valuable especially concerning George W. Buchanan's trial, since the New Castle Court records for that case are no longer extant.

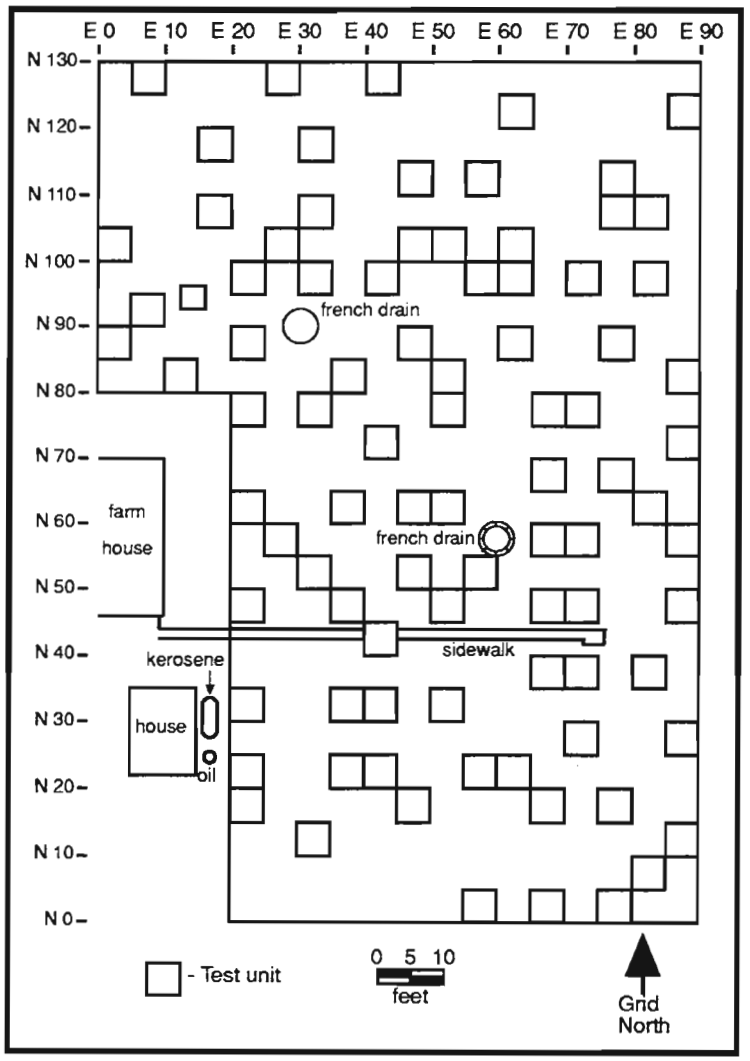
FIELD METHODS

Field investigations at the Buchanan-Savin Farmstead began with an attempt to reestablish the Phase II site grid. Due to road improvement on Duck Creek Road the original datum point was lost. A new grid of 10x10 ft units was established over the entire site including the specific farmyard area of excavation, the twentieth-century farm buildings and the nineteenth-century farmhouse. The 90x130 ft grid of 10x10 ft blocks covered the area of highest artifact distributions determined in the Phase I and II investigations.

In order to implement the research design and collect data on spatial organization and artifact distribution, a 25 percent stratified, systematic, unaligned sample (Plog 1976) of the plow zone from the main portion of the site was excavated in randomly selected 5x5 ft units from within the larger 10x10 ft sub-units (Figure 5). Plow zone sampling is a standard operating procedure on UDCAR data recovery projects; indeed, research utilizing plow zone soils and artifacts derived from plow zone contexts have suggested the importance of sampling this stratum of a site (Moir and Jurney 1987; Pogue 1988; Riordan 1988). Plow zone test units were excavated in one soil level, all soils were screened through 1/4-inch wire mesh, and all artifacts recovered were bagged according to test unit provenience and grid coordinates.

FIGURE 5

Locations of 25% Random Sample Plow Zone Testing



Following the sampling of the plow zone, the remaining plow zone was carefully removed mechanically with a backhoe. A grade-all is the preferred device for plow zone soil removal, however obstacles such as functioning sewer pipes, French drains, privy and sidewalk features in the plow zone, overhead electrical lines and the proximity to the farmhouse demanded the use of a smaller, more mobile backhoe. All subsurface and plow zone features were identified and mapped (Figure 2). The north-west corner of the excavation area was very wet and as the excavation proceeded the subsoil was covered with standing water. At the time of highest precipitation the north-east corner of the site was under three feet of water preventing any feature excavation in that area. All other features were fully recorded, sectioned, plan viewed, and profiled. Soils from the .lm features were screened and artifacts bagged according to the same standard techniques described for the plow zone units. Soil samples were collected at each of the 5x5 ft plow zone test units, and from the subsurface 10x10 ft sub-units. Soil samples were also taken from the plow zone and subsurface of the areas surrounding the twentieth-century farm structures and the nineteenth-century farmhouse for comparative study (Figure 6). Chemical analyses of the soil samples were conducted by the Soils Laboratory of the University of Delaware College of Agriculture. Black and white and/or 35-mm color slides, and video recordings were taken of selected features, soil excavation profiles, and test unit plan views. Large format and 35-mm aerial photographs of the site and its environmental setting were taken by DelDOT Location Studies personnel.

LABORATORY METHODS AND ARTIFACT ANALYSIS

Standard artifact processing procedures of the Delaware Bureau of Museums were applied to all artifacts recovered from the data recovery excavations. Artifacts were cleaned with plain water or, as in the case of deteriorated bone and shell, damp brushed. Artifacts were labeled with the site accession number and a three-digit provenience number. Ceramics and vessel glass recovered from features of the Buchanan-Savin Farmstead were sorted as to ware type, and vessel reconstruction and cross-mending were carried out to arrive at minimum vessel estimates. Vessels were then coded to a set of standard descriptive terms for analytical purposes.

South's ceramic numbering scheme (South 1977), and additional numbers obtained from Carlson (1983) and from current research particularly in the case of whitewares were used to classify individual

shards and minimum vessels (Appendix IV). Economic scaling of the ceramics recovered from the features at 7NC-J-175 utilized the new index values provided by Miller (1990). The artifacts of the Buchanan-Savin Farmstead were organized into the functional group and classification system developed by South (1977), but no comparative analysis of artifact patterns was attempted (Majewski and O'Brien 1987).

Attributes recorded for each ceramic shard and/or minimum vessel, if identified, were:

WARE: a combination of paste and glaze characteristics that serve to separate types of ceramics on a basic level.

PLASTIC DECORATION: records decorations involving paste of the ceramic item. Examples include bat-molded plate rim treatments such as shell- and feather-edging and overall ribbed decoration such as that found on some teapots.

COLOR OF DECORATION: refers to the color of painted, or otherwise applied, decoration, including slips and glazes.

APPLIED DECORATION: includes all non-plastic decorations, having to do with applied color.

VARIETY: records certain types of decoration, for instance a specific, named transfer-print such as the "Willow" pattern.

SOUTH TYPE NUMBER: Stanley South codified the ceramics described by Noël Hume in A Guide to the Artifacts of Colonial America (Noël Hume 1969). Additional ceramic codification and dating were obtained from Brown (1982) and Carlson (1983). These types are useful as chronological markers and are used in generating South's Mean Ceramic Date (MCD) Formula.

USE/SHAPE/FUNCTION: these codes classify shards according to the shape of the vessels they belong to and the use to which the vessels are put. Examples are chamber pot and milk pan.

COUNT: shard counts according to their position on the vessel; rim, base, body, or other, including handles and spouts, and totals.

VESSEL NUMBER: in addition to provenience labeling reconstructed vessels were assigned unique numbers to identify groups of mended shards.

DATE RANGE: span of time during which a particular type or variety was manufactured.

MEDIAN DATE: median date of manufacture, from South (1977), and Brown (1982), used to calculate Mean Ceramic Dates for early nineteenth-century contexts. Carlson (1983) has refined some of these dates, particularly for later nineteenth-century wares, and these refined dates are used in this report.

Attributes that were recorded for each reconstructed ceramic vessel were:

A) Minimum number of vessels estimated
B) Mean Ceramic date on (A) above
C) Vessel Form, i.e.,
   1) flatware or hollowware
   2) drinking form - cups, or mugs and jugs
D) Vessel Function
   1) dining (tableware)
   2) serving
   3) drinking (tea and coffeeware)
   4) food preparation (dairy/kitchen)

5) food storage (includes ceramic bottles)
6) medicinal (chamber pots, hygiene)
7) decorative
8) food storage or dining
9) condiment containers
10) food storage or preparation
11) toys
12) other

Glass, excluding window and lamp glass, from all features were sorted as to type, and vessel reconstruction and cross-mending were carried out to arrive at minimum vessel estimates. Vessels were coded to a set of standard descriptive terms for analytical purposes.

Date ranges were obtained from vessel type comparisons with known glass vessel manufacturing dates. Attributes for each glass shard and/or minimum vessel, if identified were:

TYPE: refers to the vessel shape and style.

COLOR: refers to the color of the glass, which is dependent on various chemical and metal contaminates or additives mixed with the silica.

MARKINGS/DECORATIONS: refers to embossed figures, lines, numbers, etc., or baked-on enamel labels evident on the vessel body or base.

MOLD SEAMS: refers to small ridges on vessel exterior formed during the manufacturing process. Indicates edges of mold parts. The location and number of mold seams are characteristic of special manufacturing techniques that are datable.

SIZE: refers to the dimension measurements of the vessel.

USE/SHAPE/FUNCTION: these codes classify fragments according to the shape of the vessels they belong to and the use to which the vessels are put.

COUNT: fragment counts according to their position on the vessel; rim, base, body, or other, including handles and spouts, and totals.

VESSEL NUMBER: in addition to provenience labeling reconstructed vessels were assigned unique numbers to identify groups of mended fragments.

DATE RANGE: range of time during which a particular vessel style, closure, or variety was manufactured.

Attributes that were recorded for each reconstructed glass vessel were:

A) Minimum number of vessels estimated
B) Vessel Function
   1) Alcoholic Beverage
   2) Non-alcoholic Beverage
   3) Medicinal
   4) Condiments
   5) Chemical
   6) Drinking
      a) Tumbler
      b) Stemmed
      C) Mug/Other

7) Other Table
   a) Dining
   b) Serving
8) Decorative
9) Lighting
10) Personal
11) Mirror
12) Preserves/Storage

The data generated from the glass vessel analysis of the Buchanan-Savin Farmstead was basic to intra-site and inter-site glass assemblage comparisons, which will be explained more fully later in the report.