

Figure 7. Upland Project Areas and Vicinity in 1969 (Areas 12, 13 East, and 14)

*REDACTED Figure 7
Upland Project Areas and
Vicinity in 1969 (Areas 12, 13
East, and 14)*

III. Objectives and Methods

Objectives

The goals of GAI's Third Supplemental Phase I survey were to identify, delineate and evaluate the potential National Register eligibility of previously unrecorded historic and prehistoric sites in new portions of the project APE.

Field Methods

Supplemental Phase I archaeological fieldwork was conducted between July 11 and 15, 2011 and on August 25, 2011. As noted above, GAI's Third Supplemental Phase I Scope of Work (May 31, 2011) assumed a 22.0-acre (8.9-hectare) project area with approximately 4.0 acres (1.6 hectares) of moderate to high archaeological potential.

Phase I field investigations began with an archaeological reconnaissance of the project APE to verify assessments of archaeological potential. Areas of moderate to high archaeological potential were identified and plotted on project mapping and were subject to systematic Phase Ib subsurface testing. Areas characterized by previous disturbance, steep slopes, or wetlands were noted and were excluded from Phase Ib testing.

Based on slight refinements in assessments of archaeological sensitivity and determinations of project size, GAI's Supplemental Phase I study area included 4.6 acres (1.8 hectares) of moderate to high archaeological potential within a 25.7-acre (10.4-hectare) overall project area. Figure 2 presents the final assessments of archaeological sensitivity within the project APE.

The Third Supplemental Phase I APE consisted of five parcels: Area 1, Area 7 North, Area 12, Area 13 East (Excess Cut Disposal Area), and Area 14 (see Figure 2). These lots varied from large wooded lots (e.g., Area 13 East) to residential parcels (e.g., Area 14), narrow areas of development/disturbance (e.g. Areas 12 and 1), and slivers of cultivated fields (e.g., Area 7 North).

GAI conducted systematic Phase Ib subsurface shovel testing within moderate to high potential portions of two parcels—Area 13 East and Area 14. Discrete Test Sections (e.g. Sections 1, 2, and 3) were numbered sequentially within Area 13 East (see Figure 2). Based on a review of current and previous project mapping in the vicinity of Area 7 North, it was determined that this extremely small, narrow parcel, representing a minor shift in the project boundary, extended only approximately 12 meters (39 feet) north of the edge of previously-investigated Area 7. It was concluded that the moderate to high potential portion of Area 7 North was encompassed by GAI's 2008 Phase Ib shovel testing of adjacent Area 7 (Munford et al. 2008). Accordingly, no additional subsurface testing of Area 7 North was conducted during the current study.

Due to poor ground surface visibility (e.g., woodlands or grass) Phase Ib survey within the project's moderate to high archaeological potential localities consisted of systematic shovel testing. Systematic shovel test pits (STPs) were excavated at 15-meter (49-foot) intervals within transects spaced 15 meters (49 feet) apart. GAI archaeologists used a compass and tapes to establish transects and shovel test locations within each test section. Judgmental STPs were excavated in select areas to confirm the presence of cultural artifacts or disturbed soils. When a shovel test yielded artifacts, radial STPs were excavated at 5-meter (16-foot) intervals around the initial positive findspot to further investigate the locality. GAI excavated 71 STPs during supplemental Phase I fieldwork.

STPs measured 50 cm (20 in) in diameter and were hand-excavated in natural strata. In upland settings (e.g., Area 13 East and Area 14) cultural resources were anticipated to be near-surface in nature and STPs extended to at least 10 cm (4 in) into the subsoil and 10 cm (4 in) below the deepest artifact recovery, with a maximum depth of approximately 50 cm (20 in) below surface. As described above, no subsurface testing was conducted within the single moderate to high potential locality (Area 7 North) situated on the low terrace/floodplain, due to previous testing in this area.

Excavated soils were screened through 0.6 cm (0.25-in) wire mesh for systematic artifact recovery. Recovered artifacts were bagged and labeled with appropriate provenience information. GAI archaeologists recorded results of individual STPs on standardized field forms, noting depths of soil horizons, soil texture and Munsell color, and the presence/absence of artifacts. STP locations were recorded on project maps and were backfilled upon completion.

Laboratory Methods

Laboratory Processing

Cultural materials collected during the Third Supplemental Phase Ib survey were transported to GAI's Archaeological Laboratory in Homestead, Pennsylvania, for processing and analysis. These materials were processed in accordance with the *Curation Guidelines* of the Pennsylvania Historical and Museum Commission (2005).

The initial processing stage consisted of checking artifact bags against the field-generated Field Specimen Log to confirm that all collected materials were present. Artifacts were temporarily placed in numerical order according to Field Specimen Number (FS#), providing a basis for processing, analysis, and curation. Artifacts were then cleaned, generally with water and a soft brush. Metal artifacts and perishable items were cleaned by dry-brushing. Non-cultural materials (i.e., pebbles) included in the artifact samples were recorded and discarded during this stage of processing or in later stages, as they were recognized. Cultural materials were placed on artifact-drying racks to air dry.

When dry, the artifacts within each provenience were sorted into basic artifact classes (i.e., glass, ceramics, metal) and were re-bagged accordingly in clean, perforated, 4-mil polyethylene bags. Bags were labeled with provenience information using a permanent ink marker. An acid-free paper tag with complete provenience information was also placed inside each artifact bag.

Specimens large enough in size were then labeled with the site number and the appropriate field specimen number (FS#). Labels were written in permanent ink and coated with PVA. After washing and labeling, artifacts were subject to the appropriate laboratory analysis.

Methods of Historic/Modern Artifact Analysis

Historic/modern artifacts recovered during the Second Supplemental Phase Ib survey were subjected to identification and analysis using GAI's Historic Coding scheme. This multivariate classification system codes for significant attributes of various artifact classes. Artifact analysis was focused on the creation of an inventory of artifact classes and types to examine issues of chronology and function for each site containing historic/modern components. A variety of analytical techniques was employed to synthesize artifact data including standard classification typologies developed by South (1977).

Once washed, artifacts were sorted into major material classes including ceramics, glass, and metal. The materials were then subjected to a preliminary analysis, which included a basic

description of artifacts by material class, functional group, and relevant attributes. Included among the recorded attributes, as applicable, are type, beginning and end dates of production, form, motif/decoration, color, manufacturing technique, functional group, base, finish, embossment, maker's mark/manufacturer, material, bore diameter, and pattern class and subclass (South 1977:95-96). Artifact dating was based on the identification of maker's marks, diagnostic-manufacturing methods, such as bottle mold seams, bottle pontil marks, ceramic bodies and glazes, and known dates of production.

Coded data, using unique codes for each artifact description, were entered into the Access database. This database was subsequently converted into the Excel computer program for purposes of data manipulation and table generation.

Glass artifacts were tabulated according to major groups (e.g., bottle glass, window glass, lamp glass, tableware, tumblers) and then separated into functional categories whenever possible. Dating information was based on the identification of diagnostic technological attributes (e.g., mold seams and evidence of snap-case manufacture) in addition to identifiable bottle embossments. Attributes recorded for glass artifacts include manufacturing technique, decoration, finish type, base type, color, and functional group. The beginning and end dates for datable attributes were determined. Maker's marks and embossments were described and dated, when possible.

Other historic/modern artifact classes include architectural debris (e.g., bricks, nails, window glass, etc.), clothing (type and materials identified when possible) and miscellaneous small finds. Where appropriate, attributes such as character, wear, decoration, and material were recorded for these artifacts.

IV. Supplemental Phase Ib Results

GAI's Phase I survey of the Third Supplemental BBNPP project area involved an archaeological reconnaissance of the project APE and the excavation of 71 STPs. These investigations resulted in the identification of one historic period archaeological site (Site 36LU307) and produced 22 modern/historic artifacts. Table 3 presents a summary of Supplemental Phase Ib survey results by testing location. A brief description of testing results within each locality is provided below.

Table 3. Summary of Third Supplemental Phase Ib Survey Results by Testing Location

Testing Location	# STPs	# Positive STPs	Sites	Isolated Finds
Area 1	0	0	--	--
Area 7 North	0	0	--	--
Area 12	0	0	--	--
Area 13 East (Excess Cut Disposal Area)				
Section 1	9	0	--	--
Section 2	11	0	--	--
Section 3	2	0	--	--
Subtotal	22	0	--	--
Area 14	49	5	1	--
TOTAL	71	0	1	0

Area 1

Area 1 is a small, (0.75-acre/0.30-hectare) narrow, disturbed parcel bordering the southwest edge of previously-surveyed Area 7 (see Figure 1). It is situated on the low terrace/floodplain of the Susquehanna River east of US Route 11, in the northeast corner of the overall BBNPP project area. This test area represents a minor property boundary change identified during the BBNPP 2011 property survey. Phase I surface reconnaissance confirmed that this entire parcel has been disturbed by previous road construction associated with development of the PPL Riverlands Park and the Susquehanna Energy Visitor's Center (see Figure 2). It comprises a portion of a paved roadway extending eastward from US Route 11 into the park (Photographs 4, 5, 6 and 7). Paved parking areas lie south of the roadway. Proposed project impacts will result from use as an access road for a proposed temporary construction laydown area located further east in Area 7.

Due to previous disturbances Area 1 was concluded to have no archaeological potential and was excluded from subsurface testing (see Figure 2).



Photograph 4. Area 1: Paved Access Road with Visitor's Center to Right and Parking Areas to Left, US Route 11 in Distance, Facing West



Photograph 5. Area 1: Paved Access Road Crossing SSES Rail Spur and former Bloomsburg Division of the Delaware, Lackawanna & Western Railroad (155053/GAI-11), Facing East



Photograph 6. Area 1: Paved Access Road with Border of Rocks Marking Crossing over North Branch Pennsylvania Canal (141673/GAI-10), Facing East



Photograph 7. Area 1: Paved Road at Crossing of North Branch Pennsylvania Canal (141673/GAI-10), Facing South

Area 1 intersects two previously-recorded linear architectural and historical resources—the NRHP-eligible North Branch Pennsylvania Canal (141673/GAI-10) and the former Bloomsburg Division of the Delaware, Lackawanna & Western Railroad (155053/GAI-11), determined Not Eligible to the NRHP (see Photographs 5, 6 and 7). An SSES rail spur also cuts through Area 1

just west of the main rail line. The canal and railway were documented by GAI's previous architectural survey and results and recommendations were presented in the BBNPP Phase I/Phase II Technical (Munford et al. 2010). No architectural investigations of these resources were conducted as part of the current study.

Area 7 North

Like Area 1, Area 7 North is located on the low terrace/floodplain of the Susquehanna River in the northeast portion of the BBNPP project area (see Figures 1 and 2). It consists of a small (0.63-acre/0.25-hectare), narrow parcel that edges the northwest margin of previously-surveyed Area 7. The central portion of this test area is located within a cultivated field bordered to the west by a tree line. The NRHP eligible North Branch Pennsylvania Canal (141673/GAI-10) extends through the eastern edge of this parcel and the former Bloomsburg Division of the Delaware, Lackawanna & Western Railroad (155053/GAI-11) cuts through its west end.

Area 7 North represents a minor property boundary shift defined during review of revised project limits of disturbance mapping. This small parcel extends only approximately 12 meters (39 feet) north of the Area 7 boundary. Based on a review of current and previous project mapping it was concluded that the moderate to high potential portions of Area 7 North lie within the area investigated by GAI's 2008 systematic Phase Ib shovel testing of Area 7 (Munford et al. 2008). Accordingly, no additional testing within Area 7 North was performed during the Third Supplemental Phase I survey.

As noted above, the NRHP-eligible North Branch Pennsylvania Canal (141673/GAI-10) and the former Bloomsburg Division of the Delaware, Lackawanna & Western Railroad (155053/GAI-11), described for Area 1, also extend through Area 7 North (see Figures 1 and 2). No architectural investigations of these resources were conducted during the current study.

Area 12

Area 12 is a small (0.76-acre/0.31-hectare) linear parcel representing a section of US Route 11. It is located in an upland setting in the southern portion of the BBNPP project area, west of the transmission corridor (see Figures 1 and 2). Phase I surface reconnaissance confirmed that this test area has been disturbed by previous road construction (Photograph 8). Accordingly, Area 12 was concluded to have no archaeological potential and was excluded from subsurface testing (see Figure 2).



Photograph 8. Area 12: Test Area within US Route 11 Right-of-Way, Facing Northwest

US Route 11 was documented during GAI's previous architectural survey as 155056 (GAI-12) (Munford et al. 2010). PHMC-BHP has concluded that this resource is Not Eligible for listing in the NRHP and requires no further architectural investigation. No investigations of this resource were conducted during the current study.

Area 13 East (Excess Cut Disposal Area)

Area 13 East, the largest of the Third Supplemental Phase I test areas (19.26 acres/7.79 hectares), occupies an upland setting in the southern portion of the BBNPP project area, between US Route 11 and the North Branch Susquehanna River (see Figure 1). This parcel represents the eastern half of the on-site Excess Cut Disposal Area, associated with the proposed BBNPP power block relocation. The western half of the proposed Excess Cut Disposal Area was investigated during previous Phase Ib survey as part of Lots 93 F and 95. Area 13 East consists largely of a steeply-sloping, wooded parcel bounded to the south by a railway (documented during GAI's previous architectural survey as 1550553/GAI-11), and to the north and west, respectively, by previously-surveyed Lots 93 D and 93 F (see Figures 1 and 2). A large transmission corridor cuts northwest-southeast through the western portion of this wooded test area (Photographs 9 and 10). A retention pond and surrounding wetland lie in the central portion (Photograph 11).



Photograph 9. Area 13 East: Steep Wooded Slope at South Edge of Test Area, showing Railroad at Base of Slope to Left, Facing Southwest



Photograph 10. Area 13 East: Disturbed Transmission Corridor on Steep Slope, Facing Northeast



Photograph 11. Area 13 East: Retention Pond in Eastern Portion of Test Area, Facing East

GAI's Phase I archaeological reconnaissance of Area 13 East identified three small, relatively level benches, totaling 1.74 acres (0.70 hectares) that were concluded to have a moderate to high archaeological potential (see Figure 2; Photograph 12). Phase I shovel testing was conducted within each of these areas (Sections 1, 2, and 3). Section 1 is located in the eastern portion of the parcel, while Sections 2 and 3 are situated in its northwest and southwest corners.

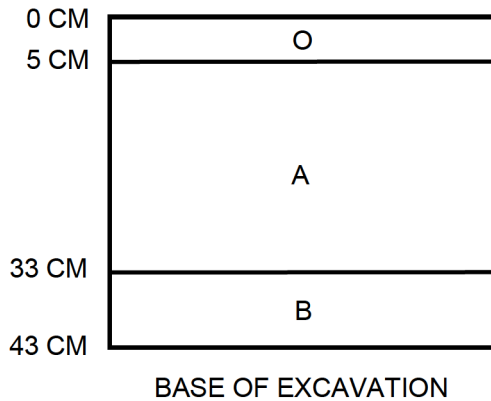


Photograph 12. Area 13: Wooded Bench (Section 1) in Eastern Portion of Parcel, Facing East

The remaining 17.52 acres (7.09 hectares) of Area 13 East were determined to have slopes in excess of 15 percent and a low archaeological potential (see Figure 2; see Photographs 9 and 10). The steep slopes also exhibited areas of disturbance associated with construction of the transmission corridor, the use of numerous ATV trails and previous core boring. These portions were excluded from shovel testing.

The moderate to high potential portions of Area 13 East were subject to 15-meter interval shovel testing as part of the current supplemental Phase I survey. GAI excavated 22 STPs in Area 13 East (nine STPs in Section 1, 11 STPs in Section 2, and two STPs in Section 3). Shovel test profiles typically consisted of an A-B or an O-A-B soil horizon sequence including an approximately 26 to 37 cm-thick brown to light olive brown sandy loam A horizon and a yellowish-brown sandy loam B horizon (Figure 8). STPs in Section 1 exposed an approximately 5-cm-thick very dark brown surface O horizon above the A-B horizons (see Figure 8, Section 1-STP A3). Shovel testing produced no cultural materials.

SECTION 1
STP A3

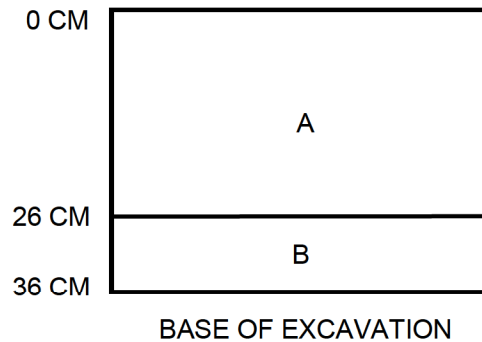


O – VERY DARK BROWN (10YR 2/2) SILT LOAM

A – LIGHT OLIVE BROWN (2.5Y 5/4) SANDY LOAM WITH 20% SANDSTONE

B – BROWNISH YELLOW (10YR 6/6) SANDY LOAM

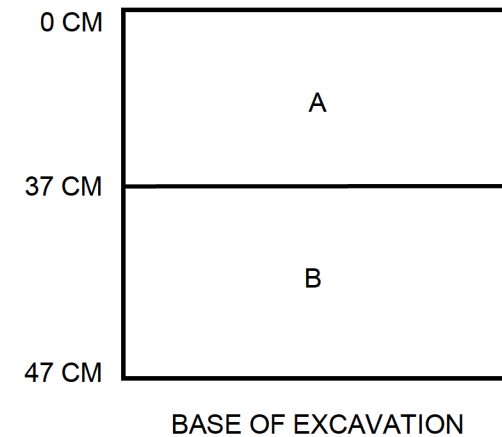
SECTION 2
STP A6



A – BROWN (10YR 5/3) SANDY LOAM

B – BROWNISH YELLOW (10YR 6/8) SANDY LOAM

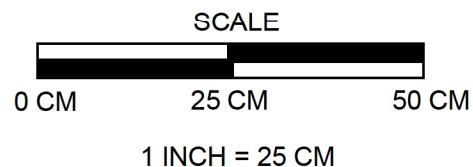
SECTION 3
STP A1




A – BROWN (10YR 4/3) SANDY LOAM

B – BROWNISH YELLOW (10YR 6/8) SANDY LOAM

FIGURE 8. AREA 13 EAST,
REPRESENTATIVE SHOVEL TEST PROFILES (STPs A3, A6 AND A1)



 BELL BEND NUCLEAR POWER PLANT
UNISTAR NUCLEAR DEVELOPMENT, LLC.

DRWN: BAM DATE: 08/18/2011
CHECKED: BAM APPROVED: BAM

Area 14

Area 14, located east of Area 12, is a relatively level upland parcel lying east of the transmission corridor in the southern portion of the BBNPP project area (see Figure 1). It comprises a residential lot (Hower Property) fronting the north edge of US Route 11, as well as a section of this roadway (Photograph 13). The residential property includes two structures—a residence and a garage—separated by a gravel driveway (Photographs 14 and 15). A small front lawn borders

the roadway to the south, while larger, relatively level grassy lawns lie to the east and the north of the house (Photographs 16 and 17). A partially exposed line of cut stones (possible retaining wall) extends across the east lawn from the garage to the eastern edge of the property. The parcel is flanked by woodlands to the north and west, another residential property to the east, and US Route 11 to the south.



Photograph 13. Area 14: Overview of Residential Parcel (Hower Property) from South Edge of US Route 11, showing Garage and East and North Lawns, Facing Northwest



Photograph 14. Area 14: Rear Façade of House, Facing Southwest



Photograph 15. Area 14: Garage and House, Facing Southwest



Photograph 16. Area 14: Overview of East Lawn with Garage to Right, US Route 11 in Background, Facing Southeast



Photograph 17. Area 14: Overview from Edge of US Route 11 showing Garage with North Lawn in Background, Facing North

The residential property was documented as GAI-23 during GAI's previous architectural survey (Munford and Tuk 2008; Munford et al. 2010) and has been determined by PHMC-BHP as Not Eligible for listing in the NRHP (June 5, 2008 review letter, see Appendix B). Accordingly, no further architectural investigations of this resource are required.

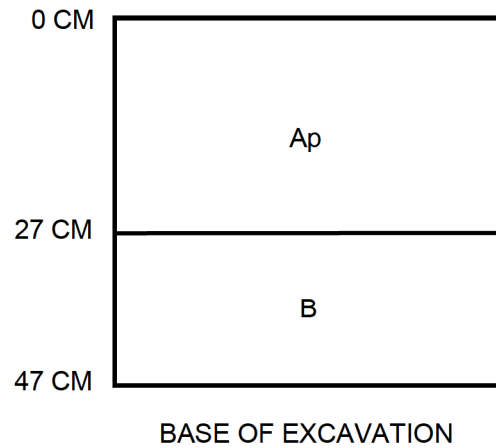
Phase I archaeological reconnaissance confirmed that the residential lot (2.48 acres/1.0 hectares) had a moderate to high archaeological potential, requiring systematic Phase Ib shovel testing (see Figure 2). The remaining portion of Area 14 located within the US Route 11 right-of-way (1.86 acres/0.75 hectares) was disturbed by road construction and was excluded from subsurface testing.

GAI excavated a total of 49 STPs within Area 14, including 37 shovel tests placed at systematic 15-meter intervals throughout the lot, followed by 12 radial STPs in the north yard. Shovel testing resulted in the identification of one historic period site (Site 36LU307) in the north yard of the residence. Shovel tests exposed an Ap-B soil horizon sequence throughout the majority of this parcel. As described for STP A2, the typical profile consisted of a 27-cm-thick brown silt loam Ap horizon and a brownish-yellow sandy loam B horizon (Figure 9). STPs excavated along the northern edge of the residential lot exposed a gravelly B horizon.

Shovel testing identified localized disturbances associated with residential construction and use in proximity to the house and garage, as well as road construction disturbances along the edge of US Route 11. A surface fill deposit associated with a modern septic system was noted in STP E2 in the rear yard, approximately 5 meters (16 feet) north of the house. A disturbed area associated with a former septic field was also observed in the rear yard, approximately 7 to 20 meters (23 to 66 feet) north of the garage. A depression with loose chunks of concrete and large voids, representing a collapsed septic tank, was noted in this locality. The typical disturbed profile, as described for STP C3, located approximately 5 meters (16 feet) east of the garage, consisted of a CA-B soil horizon sequence. STP C3 exposed a 23-cm-thick very dark grayish-brown silt loam CA horizon (fill) with a high percentage of coal and cinders, above a brownish-yellow sandy loam B horizon (see Figure 9)

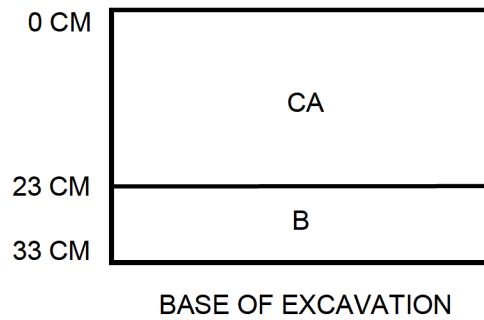
Site 36LU307 was identified during shovel testing of Area 14. This small historic period site was defined by a cluster of five positive STPs located in the north yard, approximately 25 to 30 meters (82 to 98 feet) north of the house and garage, and approximately 4 meters (13 feet) north of the disturbed former septic system. These STPs yielded 22 modern/historic artifacts from the A horizon. Site 36LU307 is described below.

STP A2



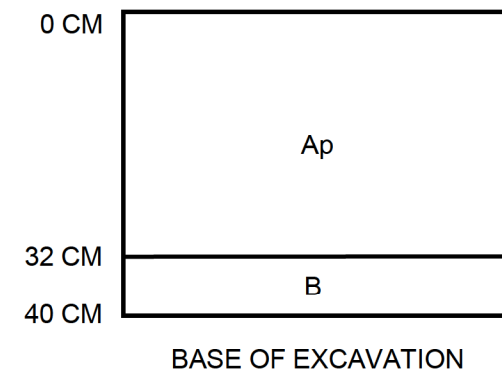
Ap –BROWN (10YR 4/3) SILT LOAM
 B –BROWNISH YELLOW (10YR 6/6) SANDY LOAM

STP C3



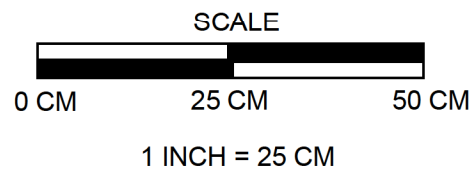
CA –VERY DARK GRAYISH BROWN (10YR 3/2) SILT LOAM WITH HEAVY COAL AND CINDERS
 B –BROWNISH YELLOW (10YR 6/6) SANDY LOAM


Site 36LU307
 STP C5



Ap –BROWN (10YR 4/3) SILT LOAM
 B –BROWNISH YELLOW (10YR 6/6) SANDY LOAM

FIGURE 9. AREA 14,
 REPRESENTATIVE SHOVEL TEST PROFILES (STPs A2, C3, and C5)



 BELL BEND NUCLEAR POWER PLANT
 UNISTAR NUCLEAR DEVELOPMENT, LLC.
 DRWN: BAM
 CHECKED: BAM
 DATE: 09/1/2011
 APPROVED: BAM

Site 36LU307 (BBNPP Site 14)

Location: Area 14

Site Type: Twentieth Century Artifact Scatter

Site Size: 15 x 30 meters (49 x 98 feet)

Recommendations: Not NRHP Eligible/ No Further Work

Site 36LU307 (BBNPP Site 14) was identified during Phase I shovel testing in Area 14. The site represents a twentieth century artifact scatter located in a residential rear yard on an upland flat north of US Route 11 and east of a transmission corridor (see Figure 2). The residential property (the Hower Property) was documented as GAI-23 during a previous architectural survey and contains a circa 1910 house and a garage; PHMC-BHP has concluded that this property is Not Eligible for listing in the NRHP (June 5, 2008 review letter; see Appendix B). A review of twentieth century aerial photographs (1939, 1959 and 1969) indicates that the site area has been previously cultivated (see Figures 4, 6, and 7). A tree line was located in the site vicinity in 1939 and the trees were removed by 1969. Based on Phase I investigations the site measures 15x30 meters (49x98 feet) and lies within a large grassy rear lawn approximately 25 to 30 meters (82 to 98 feet) north of the house and garage (Figure 10). The large rear yard is bordered farther to the north and west by woodlands, to the east by a narrow line of trees, and the to south by the house and garage (Photographs 18 and 19). Disturbances within the site vicinity include former cultivation, nearby residential

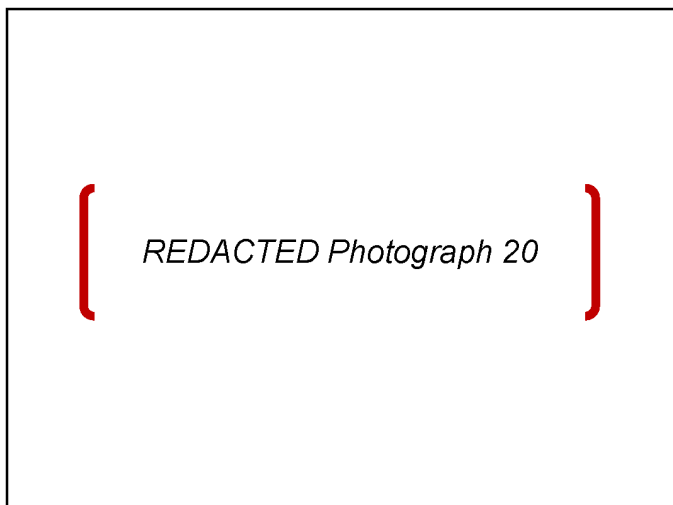
construction, and the installation and use of a former septic system. The presence of the septic system was indicated by a surface depression, approximately 4 meters (13 feet) south of the site that exposed the collapsed concrete tank (Photograph 20).

REDACTED Photograph 18

Photograph 18. Site 36LU307: Overview from North Edge of Site showing House and Garage, US Route 11 in Background, Facing South

REDACTED Photograph 19

Photograph 19. Site 36LU307: Overview from South Edge of Site showing Grassy Rear Yard North of House and Garage, Facing North



**Photograph 20. View of Disturbance
(Collapsed Former Septic Tank) in Yard
South of Site, Facing North**

Phase Ib shovel tests were excavated at 15-meter intervals throughout Area 14, followed by 5-meter interval radial shovel testing around initial positive STPs. Of the 49 shovel test pits (STPs) excavated in the total parcel, a cluster of five STPs in the rear yard were positive, yielding a total of 22 historic artifacts (see Figure 10).

Shovel testing exposed an Ap-B soil horizon sequence within the site area. As described for STP C5, the soil profile included a 32-cm-thick brown silt loam Ap horizon and a yellowish-brown sandy loam B horizon (see Figure 9). Subsequent plowing in this location may be masking earlier ground disturbing activities associated with creation of the septic field and removal of trees. Artifacts were recovered exclusively from the Ap horizon.

The artifact assemblage is composed of a wide variety of specimens representing low frequencies of kitchen and activities-related specimens as well as architectural, personal, and indeterminate items (Table 4). The kitchen-related artifacts consist entirely of clear container glass (n=6). Activities-related items (n=6) include tin can fragments, a metal handle, an iron plate, and a rubber cap with carbon rod associated with an electric pet fence. Architectural specimens (n=4) consist of wire nails as well as window glass and a hinge fragment. The two personal items include a stainless steel wrist watch backing and a key fragment.

Table 4. Site 36LU307: Historic Artifact Pattern Analysis

Class	Sub-Class	Ware Type/Object	Count	%
Activities	Cans/Tins	tin can fragments	3	13.64%
	Livestock/ Pets	rubber cap and carbon rod for pet fence	1	4.55%
	Machine Parts/ Hardware	iron plate with strap	1	4.55%
	Other	handle	1	4.55%
		Activities Total	6	27.27%
Architecture	Door Parts	part of a hinge	1	4.55%
	Nails	nail, wire	2	9.09%
	Window Glass	window glass	1	4.55%
		Architecture Total	4	18.18%

Class	Sub-Class	Ware Type/Object	Count	%
Kitchen	Bottles/Jars	container glass	6	27.27%
Personal	Jewelry	watch backing	1	4.55%
	Keys	key	1	4.55%
		Personal Total	2	9.09%
Unidentifiable	Indeterminate	metal fragments	4	18.18%
Total			22	100.00%

The artifact assemblage includes only two likely pre-1950 specimens—one flat metal key (possibly for a trunk) and one iron plate with strap—both hand stamped out of sheets of metal. Nine clearly modern artifacts (40 percent of the total assemblage) were also recovered including four pieces of clear container glass, three tin can fragments, one stainless steel wrist watch backing, and one rubber cap/carbon rod associated with an electric pet fence.

Based on the results of Phase I investigations the site represents a low density twentieth century artifact scatter likely associated with the nearby residence.

Site 36LU307 (BBNPP Site 14) Recommendations

Based on the results of Phase I investigations, Site 36LU307 (BBNPP Site 14) represents a low-density twentieth century artifact scatter, located in a residential rear yard on an upland flat north of US Route 11. It lies approximately 25 to 30 meters (82 to 98 feet) north of a circa 1910 house and a garage. The site area has been used as a septic field and later cultivated; an area of surface disturbance associated with a former septic tank was documented just 4 meters (13 feet) to its south. No features or structural remains were identified during Phase I shovel testing and a review of historic maps and twentieth century aerial photographs indicated no former structures in this locality. The small artifact assemblage (n=22) was recovered exclusively from the Ap horizon and includes a wide variety of artifact types. Only two pre-1950 artifacts were identified and approximately 40 percent of the assemblage is modern in age. Based on documentation of disturbances the integrity of this site is concluded to be poor.

Based on the site's reduced integrity, lack of structural remains, and mostly modern twentieth century artifact assemblage, GAI concludes that the potential for Site 36LU307 to contribute important information on the historic utilization of this area is low. GAI recommends that Site 36LU307 is Not Eligible to the National Register under Criterion D. No further archaeological investigations are recommended for this site.

Figure 10. Site 36LU307 showing Phase I Testing Locations

*REDACTED Figure 10
Site 36LU307 showing Phase I
Testing Locations*

V. Summary and Recommendations

GAI conducted Third Supplemental Phase I archaeological investigations within the Bell Bend Nuclear Power Plant (BBNPP), Luzerne County, Pennsylvania, for AREVA on behalf of UniStar. Supplemental Phase I fieldwork, performed between July 11 and 15, 2011 and on August 25, 2011, investigated approximately 4.2 acres (1.7 hectares) of moderate to high archaeological potential within the approximately 25.7-acre (10.4 hectare) project APE; an additional 0.43 acres (0.17 hectares) of moderate to high potential in Area 7 North was concluded to have been encompassed by GAI's previous 2008 Phase Ib survey of the adjacent Area 7 and was excluded from further investigation. Phase I fieldwork consisted of the excavation of 71 shovel test pits within two test areas (Area 13 East and Area 14).

Supplemental Phase Ib survey identified one historic period archaeological site (Site 36LU307) within the project area. Shovel testing produced 22 modern/historic artifacts from this site.

Based on Phase I results, GAI recommends that historic period Site 36LU307 is Not Eligible for listing on the NRHP and no further archaeological investigations are recommended at this site.

The Third Supplemental Phase I project area included one previously-recorded NRHP-eligible architectural resource—the North Branch Pennsylvania Canal (141673/GAI-10). No investigations of this resource were conducted during the current study. As has been recommended in a previous report (Munford et al. 2010), GAI recommends that an assessment of project impacts to this resource be included in a separate Criteria of Effects Evaluation Report to be prepared for the overall BBNPP project area.

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Broyles, Bettye J.

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Munford, Barbara A.

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Munford, Barbara A. and Jared N. Tuk

2008 Technical Report, Phase IA Cultural Resources Reconnaissance, Berwick, PA NPP-1, Areas 6, 7, 8 and Confers Lane Parcel, Luzerne County, Pennsylvania. Prepared for AREVA NP Inc. and UniStar Nuclear Development, LLC by GAI Consultants, Inc., Homestead, Pennsylvania.

Munford, Barbara A., Lori A. Frye, Jared N. Tuk, and Matthew G. Hyland

2008 *Management Summary, Phase Ib Cultural Resources Reconnaissance, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania*. Prepared for AREVA NP Inc. and UniStar Nuclear Development, LLC by GAI Consultants, Inc., Homestead, Pennsylvania.

- Munford, Barbara A., Lori A. Frye, and Michael P. Kenneally
2010 Technical Report, Phase I Cultural Resources Investigations and Phase II National Register Site Evaluations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0685-079. Prepared for UniStar Nuclear Energy, LLC by GAI Consultants, Inc., Homestead, Pennsylvania.
- Munford, Barbara A.
2010 Addendum Report, Second Supplemental Phase Ib Cultural Resources Investigation, Power Block Relocation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0685-079. Prepared for AREVA NP Inc. and UniStar Nuclear Energy, LLC by GAI Consultants, Inc., Homestead, Pennsylvania.
- Pennoni Associates, Inc.
2009 Overall Re-Zoning Plan A-1, Prepared for PPL, Salem Township, Luzerne County (6/2/09), Wilkes-Barre, Pennsylvania.
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2011a Area to Characterize, PPL Bell Bend, LLC, Bell Bend Nuclear Power Plant, Salem Township, PA, Pennoni Associates, Inc. 5/11/11
- Pennoni Associates, Inc.
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United States Geological Survey (USGS)

1955 Berwick, Pennsylvania, 7.5-Minute Topographic Quadrangle (Photorevised 1969 & 1976).

1955 Sybertsville, Pennsylvania, 7.5-Minute Topographic Quadrangle (Photorevised 1969 & 1977).

1955 Shickshinny, Pennsylvania, 15-Minute Topographic Quadrangle.

Wetherbee, Jean

1980 *A Look at White Ironstone*. Wallace-Homestead Book Co., Des Moines, Iowa

APPENDIX A
BHP REPORT SUMMARY FORM



Archaeological Report Summary Form

ER# _____
DATE 9/15/2011

PROJECT CHECKLIST: Please fill out a copy of this checklist and include it with your initial report submission, (including with management summaries or draft reports). This form may be downloaded and expanded as needed, but please do not eliminate any fields.

1. **Report Title** Addendum Report, Third Supplemental Phase I Cultural Resources Investigation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, Prepared for AREVA NP Inc. and UniStar Nuclear Development, LLC, by GAI Consultants, Inc. Homestead, Pennsylvania.
2. **PI** Barbara A. Munford (☒ MA, ☐ PhD) / **Firm** or Institution GAI Consultants, Inc.
3. **Report Date** (Month/Day/Year) September 15, 2011
4. **Number of Pages** ~45 + appendices
5. **Agency Name** NRC Federal ☒ State ☐
6. **Project Area County/Municipality** (list all)

County	Municipality
Luzerne	Salem Township

7. **Project Area Drainage(s)**, (list all)

Sub-basin	Watershed
Central Susquehanna (Number 5)	Toby-Wapwallopen Creek (B) Nescopeck Creek (D)

8. **Project Area Physiographic Zone(s)** (list All) (Use DCNR Map 13 compiled by W.D. Sevon, Fourth Edition, 2000.)

Physiographic Zone
Ridge and Valley Province, Susquehanna Lowlands Section



Archaeological Report Summary Form

ER# _____
DATE 9/15/2011

9. **Report Type** (some reports are combinations, check as many as apply to this report)

- ☐ Phase IA/Sensitivity Study
☒ Phase I
☐ Phase II
☐ Phase III

- ☐ Historic Structures
☐ Geomorphology
☐ Determination of Effects
☐ Other _____

10. **Total Project Area** 10.4 hectares

11. **Low Probability/Disturbed Areas** 8.5 hectares = 82 % of project area

12. **Phase I Methods used for total project** (check as many as apply)

- ☒ shovel tests, ☐ controlled test units/deep tests,
☐ surface survey, ☐ informant interview, ☐ other:

13. **Total Number of Sites** Encountered/Phase I one (1)

Total Sites Tested/Phase II

Total Sites Excavated/Phase III _____

14. Updated PASS Information: Please complete an updated PASS form **for each site** reported by this report. Updated forms need only include the new information and the site number and name.

15. PASS Site Specific Information: In addition, the following pages must also be completed **for each site**. Complete only the portions that pertain to the current report. If the report is a stand-alone Phase II, you do not need to fill in the Phase I methods, since they should have been included in the summary form for the previous report.

15. PASS Site Specific Information

Please complete the following **for each site** reported by this report.

PASS NUMBER 36LU307

A. Phase I Methods (how the site was located - check as many as apply)

- ☒ shovel tests, ☐ controlled test units/deep tests,
☐ surface survey, ☐ informant interview, ☐ other:

B. Phase II Methods

- ☐ controlled surface collection
☐ controlled excavation w. screening of plowzone, > 5 units
☐ mechanical stripping of plowzone (_____%)
☐ deep excavation units
☐ remote sensing
☐ other _____

square meters of site tested: _____ sq. m

% of site area tested: _____ %

C. Phase III Methods

- ☐ controlled surface collection
☐ controlled excavation w. screening of plowzone, > 5 units
☐ mechanical stripping of plowzone _____%
☐ deep excavation
☐ block excavations
☐ remote sensing
☐ environmental reconstruction (soils, floral, pollen)
☐ dietary reconstruction (floral, faunal)
☐ intensive lithic analysis (functional)
☐ intensive lithic analysis (technological)
☐ raw material sourcing
☐ ceramic analysis (seriation)
☐ ceramic analysis (functional)
☐ blood residue
☐ other _____

square meters of site tested: _____ sq. m

% of site area tested: _____ %

Recommendations (normally completed only after Phase II):

-- NR Eligibility recommendation

☐ eligible, ☐ ineligible, ☐ undetermined

-- reasons for determination (check as many as apply; expand as needed)

☐ eligible: Criterion A. Explain _____☐ eligible: Criterion B. Explain _____☐ eligible: Criterion C. Explain _____☐ eligible: Criterion D:☐ settlement patterning (intersite patterning)☐ intrasite artifact patterning☐ features☐ radiocarbon dating☐ organic preservation☐ evidence of culture change through time☐ stratified ☐ temporally discrete clusters☐ burials/human remains☐ technological☐ economics☐ ethnicity☐ dietary☐ other(specify): _____☐ ineligible☐ disturbed☐ ephemeral occupation☐ redundant information☐ undatable☐ other (specify): _____**E. Artifacts/Collections**☒ will be donated to the State Museum of Pennsylvania☐ gift agreement from private owner enclosed**- or -**☐ transfer of responsibility from State Agency enclosed☐ election of repository from Federal Agency enclosed☒ artifacts washed/marked/cataloged following State
Museum guidelines

-- collection will be submitted by _____(date)

☐ will be donated to other approved repository (**this option must be negotiated with the BHP and State Museum or stated as stipulation in MOA**)

☐ curation agreement enclosed

☐ artifacts washed/marked/cataloged following host guidelines

-- collection will be submitted by _____(date)

☐ will be retained by land owner (☐ whole or ☐ partial collection)

☐ expanded documentation enclosed for items retained

☐ proof enclosed that owner was notified of the option to

donate the collection to the State Museum and chose to retain the collection:

☐ letter from owner indicating desire to retain collection

- or -

☐ agency or representative discussed donation option with owner on _____(date)

- and -

☐ copy of letter and certified letter receipt indicating that the owner was offered this option in writing.

APPENDIX B
PROJECT CORRESPONDENCE



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phunc.state.pa.us

June 5, 2008

John E. Price
UniStar Nuclear Energy
750 E. Pratt Street, 14th floor
Baltimore, MD 21202

**TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER**

Re: ER 81-0658-079-H
NRC: Proposed Bell Bend Nuclear Power Plant
Salem Township, Luzerne County
Phase IA Cultural Resources Survey

Dear Mr. Price:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

We agree with the recommendations of the Phase IA archaeological study and look forward to working with you further as the successive phase of work proceeds.

We have reviewed the preliminary information concerning historic structures in the Area of Potential Effect of this project. Based on this information, no further survey work will be needed on the following properties.

1. Beach Grove Cemetery, Salem Twp., Luzerne County
2. Stone Walls, Bell Bend Rd., Salem Twp., Luzerne County
3. House 65 Bell Bend Rd., Salem Twp., Luzerne County
4. House, 115 Bell Bend Rd., Salem Twp., Luzerne County
5. House, 189 Bell Bend Rd., Salem Twp., Luzerne County
6. House, 193 Bell Bend Rd., Salem Twp., Luzerne County
7. House, 1021 Salem Blvd., Salem Twp., Luzerne County
8. Bell Bend Efficiency Apartments, 1043 Salem Blvd., Salem Twp., Luzerne County
9. House, 1047 Salem Blvd., Salem Twp., Luzerne County
10. House, 1091 Salem Blvd., Salem Twp., Luzerne County
11. House, 1069 Salem Blvd., Salem Twp., Luzerne County
12. Barn & Trailer, 998 Berwick-Hazleton Hwy, Nescopeck Twp., Luzerne County
13. House, 906 Berwick-Hazleton Hwy, Nescopeck Twp., Luzerne County

14. House, 809 Berwick-Hazleton Hwy, Nescopeck Twp., Luzerne County
15. House, 175 E. Cherry Rd., Nescopeck Twp., Luzerne County
16. House, 598 River Rd., Nescopeck Twp., Luzerne County
17. House, 546 River Rd., Nescopeck Twp., Luzerne County
18. House, 520 River Rd., Nescopeck Twp., Luzerne County
19. House, 510 River Rd., Nescopeck Twp., Luzerne County
20. Quarry, River Rd., Nescopeck Twp., Luzerne County
21. Bridge, N. Market St., Salem Twp., Luzerne County

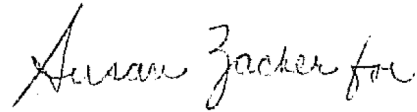
Additional survey information must be supplied for the following properties. Please submit a Historic Resource survey form for the following resources. This form and instructions can be obtained from our website at www.phmc.state.pa.us/bhp.

1. United Reformed and Lutheran Church, Conyngham Twp., Luzerne County
2. Woodcrest, Conyngham Twp., Luzerne County
3. Hummel Farmstead, Salem Twp., Luzerne County
4. Stone Arch Bridge, Salem Twp., Luzerne County
5. Kiliti Farm, Salem Twp., Luzerne County
6. Heller Farm, Salem Twp., Luzerne County
7. North Market Street Bridge, Salem Twp., Luzerne County
8. North Branch of the Pennsylvania Canal in the APE, Salem Twp., Luzerne County
9. Canadian Pacific/Bloomsburg Division of the Delaware, Lackawanna & Western Railway in the APE, Salem Twp., Luzerne County
10. Susquehanna and Tioga Turnpike, Salem Twp., Luzerne County
11. House, 29 Bell Bend Rd., Salem Twp., Luzerne County
12. House, 49 Bell Bend Rd., Salem Twp., Luzerne County
13. Valley View Farm, 1022 Salem Blvd., Salem Twp., Luzerne County
14. Michaels Farm, 4252 N. Market St., Salem Twp., Luzerne County
15. House, 1405 Berwick-Hazleton Highway, Nescopeck Twp., Luzerne County
16. PA Railroad-Sunbury Line/Delaware & Hudson Railroad, Nescopeck Twp., Luzerne County
17. Farm, 950 Berwick-Hazleton Hwy, Nescopeck Twp., Luzerne County
18. House, 944 Berwick-Hazleton Hwy, Nescopeck Twp., Luzerne County
19. Farm, 783 Berwick-Hazleton Hwy, Nescopeck Twp., Luzerne County
20. Farm, 212 E. Cherry Rd., Nescopeck Twp., Luzerne County
21. Wapwallopen Historic District, Wapwallopen, Luzerne County
22. Farm, 811 River Rd., Nescopeck Twp., Luzerne County

Page 3
J. Price
June 5, 2008

If you need further information in this matter please consult Susan Zacher at (717) 783-9920.

Sincerely,

A handwritten signature in cursive script that reads "Susan Zacher for".

Douglas C. McLearn, Chief
Division of Archaeology &
Protection

DCM/smz



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

RECEIVED

MAR 22 2010

GAI CONSULTANTS INC.
PROJ. NO. C080204.10

March 17, 2010

CC: JNT
BAM
BR
CF
MPK

Hannah L. Cole
GAI Consultants, Inc.
385 E. Waterfront Drive
Homestead, PA 15120-5005

TO EXPEDITE REVIEW USE
GHP REFERENCE NUMBER

Re: ER 81-0658-079-U
NRC: Bell Bend Power Plant Phase IB Investigations Management
Summary: Historic Resources
Conyngham, Nescopeck, Salem Townships, Luzerne County

Dear Ms. Cole:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

We concur with the findings of the agency that the following resources are eligible for the National Register of Historic Places.

1. United Reformed & Lutheran Church (Old River Church), Conyngham Township, Luzerne County: This church is an excellent example of the Federal style of architecture and meets National Register criterion C.
2. Woodcrest, 3209 SR 239, Conyngham Township, Luzerne County: This farms is eligible for its local agricultural significance and meets National Register criterion A. It may also be eligible under criterion C, for it architectural significance, however, information and photographs of its interior would need to be submitted to evaluate for this criterion.

We disagree with the findings of the agency concerning the eligibility of the following resource. In our opinion, this resource is eligible for the National Register of Historic Places.

3. North Branch of the Pennsylvania Railroad, Salem Township, Luzerne County: This intact section of the canal reflects the significance of the canal in the mid to late 19th century and therefore is eligible under National Register criterion A.

We concur with the findings of the agency that the following properties are not eligible for the National Register of Historic Places. Based on the information supplied they are not historically or architecturally significant.

4. Thrash Farm, 783 Berwick-Hazleton Highway, Nescopeck Township, Luzerne County
5. Fortner Farm, 212 E. Cherry Road, Nescopeck Township, Luzerne County
6. Croll Farm, 811 River Road, Nescopeck Township, Luzerne County
7. Raber Farm, 950 Berwick-Hazleton Highway, Nescopeck Township, Luzerne County
8. Michaels Farm, 4252 N. Market Street, Salem Township, Luzerne County
9. Heller Farm, 4210 N. Market Street, Salem Township, Luzerne County
10. Valley View Farm, Salem Township, Luzerne County
11. Susquehanna & Tioga Turnpike, Salem Township, Luzerne County
12. Jameson Farm, 62 Kiliti Road, Salem Township, Luzerne County

We disagree with the findings of the agency concerning the National Register eligibility of the following resources. In our opinion, these railroads are not eligible.

13. Pennsylvania & Sunbury Line of the Delaware and Hudson Railroad, Nescopeck Township, Luzerne County: This line was a connection between major Railroad lines of the Pennsylvania Railroad. While Sunbury, Wilkes-Barre and Hazleton Were all major economic centers at the time, it does not make this spur Significant nor played a significant role in the transportation of anthracite coal.
14. The Bloomsburg Division of the Delaware, Lackawanna and Western Railroad, Salem Township, Luzerne County: Based on the information provided the Significance of this section of the DL& W is unproven. It does not appear to have provided significant competition to other railroad lines or to have been an important carrier in relation to other railroads.

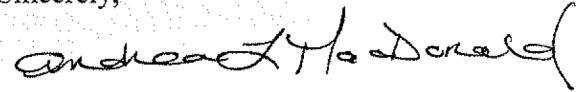
We are unable to complete our review of the following resources until additional information is submitted.

15. Stone Arch Bridge/North Market Street Bridge, Salem Township, Luzerne County: Please supply the correct length measurement of this bridge (see attached guidance for measuring bridges). The submission states that there are only 3 intact stone arch bridges in the county. Our on-line Geographical Information Submission shows that there are over 50 stone arch bridges. Please evaluate this bridge in the context of the bridge survey.
16. Wapwallopen Historic District (potential), Conyngham Township, Luzerne County: Please contact our agency to schedule a site visit to verify the presence and boundaries of a historic district.

Page 3
H. Cole
March 17, 2010

If you need further information in this matter please consult Susan Zacher at (717)
783-9920.

Sincerely,

A handwritten signature in dark ink, appearing to read "Andrea L. MacDonald". The signature is fluid and cursive, with the first name "Andrea" and last name "MacDonald" clearly distinguishable.

Andrea L. MacDonald, Chief
Division of Preservation Services

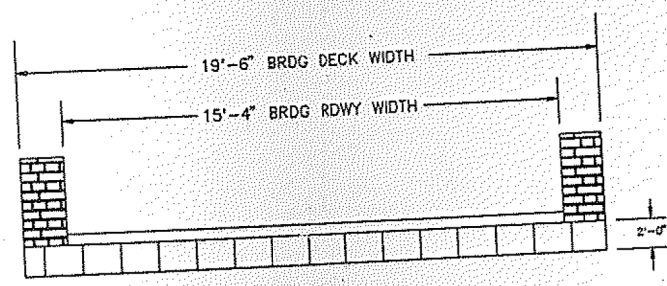
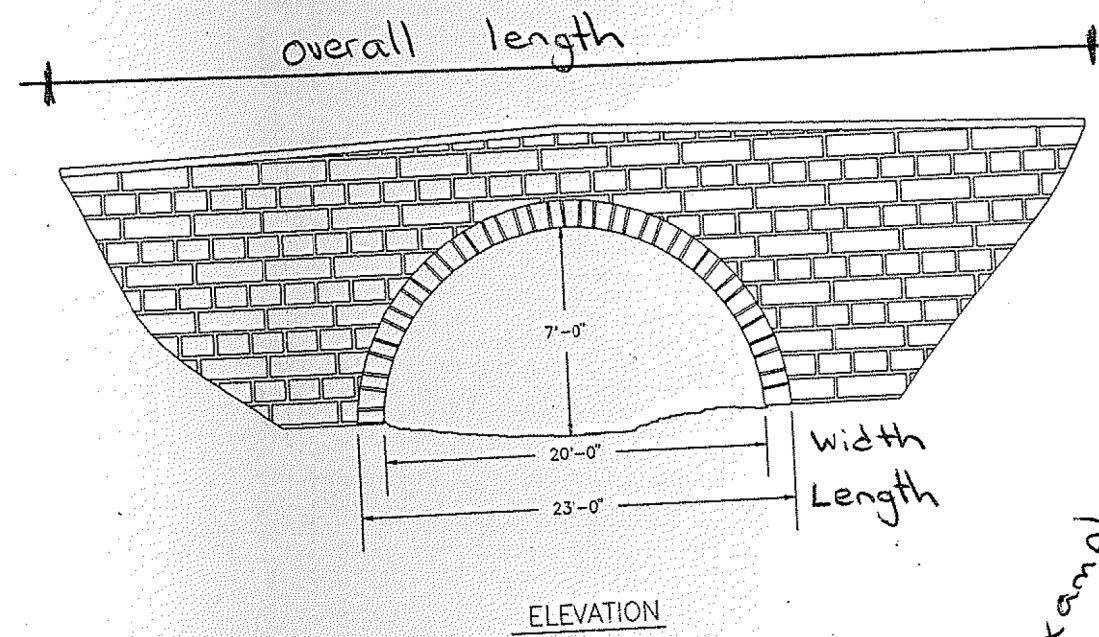
Enclosure
AM/smz

Enclosure for Bridge Measurements

46 7470 0486 2502

Stone Arch Bridge (GAI-06) & North
Market St Bridge (GAI-07), Salem Twp, Luzerne Co

Example for
Bridge Measuring



LUZERNE COUNTY ROAD AND BRIDGE DEPARTMENT		
BRIDGE # 42502 NEW COLUMBUS BOROUGH		
DRAWN GAS	CHECKED JJB	DWG 2/2
SCALE NOTED	DATE AUGUST-94	



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

20 May 2011

Rocco R. Sgarro
PPL Bell Bend, LLC
38 Bomboy Lane, Suite 2
Berwick, PA 18603

Re: ER# 81-0658-079-CC
Addendum Report, Second Supplemental Phase Ib
Cultural Resource Investigation, Power Block
Relocation, Bell Bend Nuclear Power Plant, Salem
Township, Luzerne County, Pennsylvania

Dear Mr. Sgarro:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

This report meets our standards and specifications as outlined in *Guidelines for Archaeological Investigations in Pennsylvania* (BHP 2008) and the Secretary of the Interior's Guidelines for Archaeological Documentation. This report documents two previously unrecorded archaeological sites with the project area. These sites include **GAI Site 12 (36Lu301)** and **GAI Site 13 (36Lu302)**.

We agree that **36Lu301** is potentially eligible for inclusion on the National Register of Historic Places. If this site cannot be avoided by project activities, then a Phase II investigation is necessary to formally determine site eligibility.

We agree that **36Lu302** is not eligible for inclusion on the National Register. In our opinion, no further archaeological work is necessary at this site.

Please send four additional copies of the final report (three bound and one unbound) for our files and distribution to the repositories.

Page 2
20 May 2011
ER# 81-0658-079-CC

If you need further information in this matter please consult Steven McDougal at (717) 772-0923.

Sincerely,

A handwritten signature in dark ink, appearing to read "Douglas C. McLearen". The signature is fluid and cursive, with the last name "McLearen" being more prominent.

Douglas C. McLearen, Chief
Division of Archaeology &
Protection

Handwritten initials "for" in dark ink, positioned to the right of the typed name.

cc: B. Munford, GAI Consultants, 385 E. Waterfront Dr., Homestead, PA
S. Imboden, NRC, Mailstop T-6D38M
J. Davis, NRC, Mailstop O-11F1

DCM/srm



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

23 August 2011

Rocco R. Sgarro
PPL Bell Bend, LLC
38 Bomboy Lane, Suite 2
Berwick, PA 18603

Re: ER# 81-0658-079-BB
NRC: Phase I Cultural Resources Investigation and
Phase II National Register Site Evaluations, Bell
Bend Nuclear Power Plant, Salem Township,
Luzerne County, Pennsylvania

Dear Mr. Sgarro:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

Archaeological Resources

This report meets our standards and specifications as outlined in *Guidelines for Archaeological Investigations in Pennsylvania* (BHP 2008) and the Secretary of the Interior's Guidelines for Archaeological Documentation. We agree that the following sites are not eligible for inclusion on the National Register of Historic Places: **36Lu279, 36Lu280, 36Lu281, 36Lu283, 36Lu285, and 36Lu286.**

It is our opinion that site **36Lu288** is eligible for inclusion in the National Register of Historic Places. The presence of intact, dateable cultural features in the northern half of the site, one of which was located within a buried A horizon, indicates a sufficient level of integrity to warrant this designation. Use of the **northern half of the site** as a lay-down area, where cultural features were found and artifact concentrations were highest, should be considered an adverse effect. We strongly recommend that this portion of the site be avoided by construction activities either by fencing off the area as a restricted location or by use of geotextile and fill as a protective measure. If these measures cannot be undertaken, then Phase III excavation should be undertaken to mitigate the adverse effect of the project to the eligible resource. No features were found in the **southern half of the site** and artifact concentrations were very low. As a result, use of this location as a lay-down area should be considered no adverse effect. If the project scope is

changed such that there will be impacts below 80 cm in any part of the site area, additional archaeological investigation will be necessary to determine whether there will be adverse effects to intact cultural material.

Historic Structures

It is the opinion of the State Historic Preservation Officer that the following properties are not eligible for listing in the National Register of Historic Places:

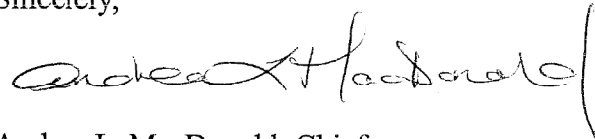
House (Red Brick Studios), Key# 155064
North Market Street Bridge, Key# 155055

Stone Arch Bridge, Key# 155054

The Wapwallopen Historic District merits a site visit to properly evaluate its National Register eligibility potential. You will need to schedule a site visit with the Bureau staff.

If you need further information in this matter concerning archaeological resources please consult Steven McDougal at (717) 772-0923. For information concerning historic structures please consult Ann Safley at (717) 787-9121.

Sincerely,



Andrea L. MacDonald, Chief
Division of Preservation Services

cc: Barbara Munford, GAI Consultants, 385 E. Waterfront Dr., Homestead, PA 15120-5005
Stacey Imboden, NRC, Office of New Reactors, 11545 Rockville Pike, Rockville, MD 20852
Jennifer Davis, NRC, Office of Nuclear Reactor Regulation, Mail Stop O-11F1, Washington, DC 20555-0001
Amy Elliott, COE, Baltimore District, State College Field Office, 1631 S. Atherton St., Suite 102, State College, PA 16801

ALMacD/srm

APPENDIX C
PENNSYLVANIA ARCHAEOLOGICAL SITE SURVEY FORM

*REDACTED Appendix C
Pennsylvania Archaeological Site
Survey Form*

APPENDIX D
ARTIFACT CATALOG

Site 36LU307
Historic Artifact Catalog

Fs	Spec#	Area	Stp	Strat	Lev	Elev	Count	Material	Class	Sub-Class	Ware/Object	Decor/Manuf	Color	Motiff/Emb	Part	Form	Beg	End	Reference	
1	.001	14	C5	A	1	0-32 cmbgs	1	metal	Architecture	Door Parts	door handle									
1	.002	14	C5	A	1	0-32 cmbgs	1	metal	Personal	Keys	key									
1	.003	14	C5	A	1	0-32 cmbgs	1	metal	Architecture	Door Parts	part of a hinge	placement for three screws or nails, handmade								
1	.004	14	C5	A	1	0-32 cmbgs	1	glass	Kitchen	Bottles/Jars	container glass		clear		body	container				
1	.005	14	C5	A	1	0-32 cmbgs	1	glass	Kitchen	Bottles/Jars	container glass		aqua, light		body	container				
1	.006	14	C5	A	1	0-32 cmbgs	1	glass	Architecture	Window Glass	window glass		clear							
2	.001	14	C6	A	1	0-30 cmbgs	1	rubber; carbon	Activities	Livestock/ Pets	rubber cap and carbon rod for pet fence	embossed	red	"general dog f..... Pat...."						
3	.001	14	D3	A	1	0-27 cmbgs	1	glass	Kitchen	Bottles/Jars	container glass		clear		body	container				
3	.002	14	D3	A	1	0-27 cmbgs	1	metal	Architecture	Nails, Spikes, Etc.	nail, wire						1880	2011	Nelson 1968; IMAC 1984	
4	.001	14	E4	A	1	0-30 cmbgs	1	cast iron	Activities	Machine Parts/ Hardware	metal plate with strap									
4	.002	14	E4	A	1	0-30 cmbgs	3	metal	Activities	Cans/Tins	tin can fragments									
5	.001	14	R5	A	1	0-30 cmbgs	1	metal	Architecture	Nails, Spikes, Etc.	nail, wire						1880	2011	Nelson 1968; IMAC 1984	
5	.002	14	R5	A	1	0-30 cmbgs	4	metal	Unidentifiable	Indeterminate	metal fragments									
5	.003	14	R5	A	1	0-30 cmbgs	1	stainless steel	Personal	Jewelry	watch backing									
5	.004	14	R5	A	1	0-30 cmbgs	2	glass	Kitchen	Bottles/Jars	container glass		clear		body	container				
5	.005	14	R5	A	1	0-30 cmbgs	1	glass	Kitchen	Bottles/Jars	container glass	embossed	clear iridescent	Dendritic pattern	base	stemware				
TOTAL							22													