



September 15, 2015

Mr. Doug McLearen  
Pennsylvania Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2nd Floor  
400 North Street  
Harrisburg, PA 17120-0093

**Re: Literature Review and Section 106 Consultation Letter  
Shell Pipeline Company, LP  
Northeast Pipeline Project  
Beaver, Washington and Allegheny Counties, Pennsylvania**

Dr. McLearen:

On behalf of Shell Pipeline Company, LP (Shell), AECOM conducted a literature review and background records check for the Northeast Pipeline (NEP) Project (Project), elements of which occur within Beaver, Washington and Allegheny counties, Pennsylvania. Shell is seeking to build approximately 95 miles of ethane pipeline linking various supply points in Ohio, West Virginia and Pennsylvania to various delivery points in these same states. This letter represents the initial Section 106 consultation with the Pennsylvania Historical and Museum Commission (PHMC) for the Project, in accordance with PHMC standards and the protocols of the United States Army Corps of Engineers (the lead federal agency for the Project). A review of the data collected during the background research is presented in the following letter report, attached mapping, and tabular data set.

### **Project Description and Cultural Resources Area of Potential Effect**

Shell is proposing to construct approximately 42.8 miles of new ethane pipeline alignment through three Pennsylvania counties (see **Attachment A, Figure 1**), within a study corridor measuring 100 feet in width. The Project area in Pennsylvania is primarily composed of mixed deciduous and regenerating forest, agricultural land, existing right-of-ways, reclaimed strip mines and residential development areas. Wherever possible, Shell routed the proposed route along existing right-of-way. Access roads have not been identified at this point, however, when possible, existing roads will be utilized to minimize Project impacts.

With regard to cultural resources, the Area of Potential Effect (APE) for this Project consists of land requirements which could be physically impacted by ground disturbance during construction, referred to hereafter as the direct APE. The direct APE will be situated within an archaeological study corridor measuring 100 feet (30 meters) in width. Ancillary Project elements, such as staging areas, temporary-use contractor yards, and access roads have not yet been defined for the Project. The surrounding

viewshed, or indirect APE, includes cultural resources that may be visually impacted by the construction of the Project. The lead federal agency for the Project, the USACE, considers the cultural resources APE to include only those elements of the Project correspondent with USACE jurisdictional areas.

### Archival Research and PHMC Records Check

The following document details the results of the cultural resources literature review conducted by AECOM for the Project. The enclosed AECOM Literature Review:

- Defines the documented historic-era and prehistoric cultural contexts archived with the PHMC;
- Identifies all inventoried cultural resources located within the vicinity of the Project; and,
- Develops a context for assessing the Section 106 requirements (if any) for the Project.

AECOM consulted the PHMC online mapping system in August 2015, in effort to locate inventoried cultural resources identified within 1.6 kilometers (one mile) of the Project (referenced hereafter as the Archival Study Area for the Project). The archival study included a review of the Pennsylvania Archaeological Site Survey (PASS) forms, isolated find forms, the state archives of extant above-ground historic resources (the Historic Resource Files) and the National Register of Historic Places (NRHP). In conjunction with the resource-inventory research, an examination was undertaken of previous Cultural Resource Management (CRM)-related reports on file at the PHMC, which were completed within the townships containing portions of the Project. The synthesis of these data is intended to provide a clearer picture of cultural resource sensitivity within the limits of the Project, as well as an overview of the previous investigations conducted across the region. The following table quantifies the data collected from the archival research, separated into resources/reports located within the 1.6-kilometer (one-mile) study buffer, and also within 300 feet of the proposed Project centerline. **Attachment A, Figures 2A/B-14A/B**, illustrate the location of the cultural resources identified through the PHMC online mapping system review.

**Table 1. Inventoried Cultural Resources and Reports Within One Mile of the Project Centerline**

| PHMC Data                                | Count Within One Mile of Project | Count Within 300 Feet of Project |
|--|----------------------------------|----------------------------------|
| <b>NRHP-Listed Properties/ Districts</b> | 0                                | 0                                |
| <b>PHMC-Listed Archaeological Sites</b>  | 135                              | 13                               |
| <b>PHMC-Listed Aboveground Resources</b> | 150                              | 14                               |
| <b>Previous CRM-Related Reports</b>      | 26                               | 11                               |

In summary:

- There are no NRHP-listed properties located within one mile of the Project in Pennsylvania;
- A total of 135 archaeological resources have been inventoried within one mile of the Project centerline, 13 of which occur within 300 feet of the Project;

- A total of 150 inventoried aboveground structures are located within one mile of the Project, dating primarily to the late nineteenth through early twentieth centuries. Of this total inventory, 14 occur within 300 feet of the Project centerline; and,
- There have been 26 CRM-related reports filed with the PHMC for archaeological/architectural history work conducted within one mile of the Project, 11 of which are partially co-located with/intersect the proposed Project centerline.

The following sections detail each of the different types of archival data examined as part of this literature review. **Attachment A, Figures 2A/B-14A/B** depict the location of the previously-inventoried cultural resources and CRM-related field projects within the one-mile (1.6-kilometer) study buffer defined for this letter report.

### National Register Properties

The archival research did not identify any NRHP-listed properties located within one mile of the Project in Pennsylvania.

### PHMC Archaeological Inventory Resources

A total of 135 archaeological resources have been previously inventoried in the Archival Study Area examined for the Project, 13 of which occur up to 300 feet from the Project. Of these 13 sites, 11 are depicted across the proposed Project centerline. The overwhelming majority of these resources have not been assessed for NRHP eligible, with just a handful previously determined not eligible for the NRHP. The following table lists all 140 archaeological resources inventoried in the PHMC system within one mile of the Project, ordered by distance from the Project.

**Table 2. PHMC-Listed Archaeological Resources Within One Mile of the Project**

| Resource ID | Component/ Type                                       | Landform       | Distance To Centerline |
|-------------|---|----------------|------------------------|
| 36WH0157    | Open Habitation, Prehistoric                          | Stream Bench   | 0                      |
| 36WH1441    | Historic Industrial Site                              | Upland Flat    | 0                      |
| 36WH1549    | Unknown Function Surface Scatter Less than 20M Radius | Floodplain     | 0                      |
| 36BV0374    | Open Habitation, Prehistoric                          | Hill Ridge/Toe | 0                      |
| 36BV0375    | Open Habitation, Prehistoric                          | Stream Bench   | 0                      |
| 36BV0096    | Open Habitation, Prehistoric                          | Terrace        | 0                      |
| 36BV0011    | Unknown Function Surface Scatter Less than 20M Radius | Hilltop        | 0                      |
| 36BV0095    | Open Habitation, Prehistoric                          | Floodplain     | 0                      |
| 36BV0097    | Open Habitation, Prehistoric                          | Hilltop        | 0                      |

| Resource ID | Component/ Type                                       | Landform           | Distance To Centerline |
|-------------|---|--------------------|------------------------|
| 36BV0010    | Unknown Function Surface Scatter Less than 20M Radius | Terrace            | 0                      |
| 36BV0110    | Open Habitation, Prehistoric                          | Lower Slopes       | 66 feet                |
| 36BV0247    | Open Habitation, Prehistoric                          | Hill Ridge/Toe     | 104 feet               |
| 36WH0800    | Open Prehistoric Site, Unknown Function               | Stream Bench       | 298 feet               |
| 36BV0119    | Open Habitation, Prehistoric                          | Terrace            | 368 feet               |
| 36BV0377    | Historic Domestic Site                                | Lower Slopes       | 406 feet               |
| 36BV0204    | Open Habitation, Prehistoric                          | Floodplain         | 451 feet               |
| 36BV0221    | Open Habitation, Prehistoric                          | Upland Flat        | 453 feet               |
| 36BV0019    | Unknown Function Surface Scatter Less than 20M Radius | Terrace            | 458 feet               |
| 36BV0379    | Open Habitation, Prehistoric                          | Floodplain         | 489 feet               |
| 36BV0230    | Open Habitation, Prehistoric                          | Floodplain         | 497 feet               |
| 36WH0156    | Open Prehistoric Site, Unknown Function               | Saddle             | 500 feet               |
| 36BV0161    | Open Habitation, Prehistoric                          | Floodplain         | 592 feet               |
| 36BV0206    | Unknown Function Surface Scatter Less than 20M Radius | Floodplain         | 595 feet               |
| 36WH0241    | Historic and Prehistoric                              | Middle Slopes      | 611 feet               |
| 36BV0100    | Open Habitation, Prehistoric                          | Ridgetop           | 625 feet               |
| 36BV0250    | Unknown Function Open Site Greater than 20M Radius    | Floodplain         | 659 feet               |
| 36BV0179    | Open Habitation, Prehistoric                          | Stream Bench       | 664 feet               |
| 36BV0048    | Open Habitation, Prehistoric                          | Hill Ridge/Toe     | 674 feet               |
| 36BV0124    | Open Habitation, Prehistoric                          | Floodplain         | 676 feet               |
| 36WH0159    | Open Prehistoric Site, Unknown Function               | Terrace            | 678 feet               |
| 36WH0608    | Village   | Terrace            | 812 feet               |
| 36BV0012    | Unknown Function Surface Scatter Less than 20M Radius | Terrace            | 879 feet               |
| 36BV0084    | Unknown Function Surface Scatter Less than 20M Radius | Floodplain         | 975 feet               |
| 36BV0050    | Open Habitation, Prehistoric                          | Floodplain         | 1057 feet              |
| 36BV0109    | Open Habitation, Prehistoric                          | Floodplain         | 1132 feet              |
| 36BV0017    | Open Habitation, Prehistoric                          | Upland Flat        | 1185 feet              |
| 36WH0190    | Open Prehistoric Site, Unknown Function               | Upper Slopes       | 1210 feet              |
| 36BV0125    | Open Habitation, Prehistoric                          | Terrace            | 1274 feet              |
| 36BV0249    | Open Habitation, Prehistoric                          | Terrace            | 1325 feet              |
| 36BV0036    | Open Habitation, Prehistoric                          | Terrace            | 1329 feet              |
| 36WH0158    | Open Habitation, Prehistoric                          | Middle Slopes      | 1408 feet              |
| 36BV0378    | Open Habitation, Prehistoric                          | Floodplain         | 1409 feet              |
| 36BV0191    | Lithic Reduction                                      | Floodplain         | 1411 feet              |
| 36BV0231    | Open Habitation, Prehistoric                          | Terrace            | 1441 feet              |
| 36BV0232    | Open Habitation, Prehistoric                          | Terrace            | 1449 feet              |
| 36BV0021    | Open Habitation, Prehistoric                          | Rise in Floodplain | 1460 feet              |
| 36BV0280    | Unknown Function Open Site Greater than 20M Radius    | Floodplain         | 1498 feet              |
| 36BV0111    | Open Habitation, Prehistoric                          | Floodplain         | 1506 feet              |

| Resource ID | Component/ Type                                       | Landform       | Distance To Centerline |
|-------------|---|----------------|------------------------|
| 36AL0582    | Farmstead   | Upland Flat    | 1516 feet              |
| 36BV0180    | Open Habitation, Prehistoric                          | Floodplain     | 1656 feet              |
| 36BV0193    | Open Habitation, Prehistoric                          | Floodplain     | 1688 feet              |
| 36BV0372    | Unknown Function Open Site Greater than 20M Radius    | Floodplain     | 1705 feet              |
| 36BV0058    | Open Habitation, Prehistoric                          | Floodplain     | 1713 feet              |
| 36BV0203    | Open Habitation, Prehistoric                          | Terrace        | 1734 feet              |
| 36BV0055    | Open Habitation, Prehistoric                          | Floodplain     | 1734 feet              |
| 36WH/037    | Isolated Find   | Floodplain     | 1748 feet              |
| 36BV0101    | Open Habitation, Prehistoric                          | Floodplain     | 1800 feet              |
| 36BV0372    | Unknown Function Open Site Greater than 20M Radius    | Floodplain     | 1809 feet              |
| 36BV0046    | Unknown Function Open Site Greater than 20M Radius    | Floodplain     | 1880 feet              |
| 36BV0376    | Open Habitation, Prehistoric                          | Ridgetop       | 1885 feet              |
| 36BV0177    | Open Habitation, Prehistoric                          | Floodplain     | 1967 feet              |
| 36BV0205    | Unknown Function Open Site Greater than 20M Radius    | Floodplain     | 2052 feet              |
| 36BV0022    | Open Habitation, Prehistoric                          | Terrace        | 2066 feet              |
| 36BV0037    | Open Habitation, Prehistoric                          | Hill Ridge/Toe | 2071 feet              |
| 36BV0117    | Unknown Function Surface Scatter Less than 20M Radius | Saddle         | 2121 feet              |
| 36BV0044    | Unknown Function Open Site Greater than 20M Radius    | Floodplain     | 2160 feet              |
| 36BV0114    | Open Habitation, Prehistoric                          | Floodplain     | 2196 feet              |
| 36BV0112    | Open Habitation, Prehistoric                          | Upland Flat    | 2199 feet              |
| 36BV0057    | Open Habitation, Prehistoric                          | Saddle         | 2213 feet              |
| 36BV0018    | Open Habitation, Prehistoric                          | Hilltop        | 2239 feet              |
| 36WH0155    | Open Prehistoric Site, Unknown Function               | Stream Bench   | 2350 feet              |
| 36WH0209    | Open Habitation, Prehistoric                          | Hill Ridge/Toe | 2383 feet              |
| 36BV0102    | Open Habitation, Prehistoric                          | Floodplain     | 2445 feet              |
| 36WH1310    | Open Prehistoric Site, Unknown Function               | Terrace        | 2471 feet              |
| 36BV0078    | Village   | Floodplain     | 2489 feet              |
| 36BV0047    | Open Habitation, Prehistoric                          | Hill Ridge/Toe | 2504 feet              |
| 36WH0191    | Open Prehistoric Site, Unknown Function               | Middle Slopes  | 2525 feet              |
| 36BV0045    | Open Habitation, Prehistoric                          | Floodplain     | 2596 feet              |
| 36BV0159    | Other Specialized Aboriginal Site                     | Terrace        | 2618 feet              |
| 36BV0056    | Unknown Function Surface Scatter Less than 20M Radius | Hilltop        | 2661 feet              |
| 36BV0274    | Open Habitation, Prehistoric                          | Hilltop        | 2714 feet              |
| 36BV0059    | Open Habitation, Prehistoric                          | Floodplain     | 2724 feet              |
| 36BV0035    | Open Habitation, Prehistoric                          | Floodplain     | 2748 feet              |
| 36WH0208    | Open Habitation, Prehistoric                          | Middle Slopes  | 2911 feet              |
| 36BV0099    | Open Habitation, Prehistoric                          | Floodplain     | 2922 feet              |
| 36WH0142    | Open Prehistoric Site, Unknown Function               | Terrace        | 2931 feet              |
| 36BV0113    | Open Habitation, Prehistoric                          | Floodplain     | 2938                   |

| Resource ID | Component/ Type                                       | Landform       | Distance To Centerline |
|-------------|---|----------------|------------------------|
| 36WH1178    | Historic Domestic Site                                | Upper Slopes   | 2947 feet              |
| 36BV0207    | Unknown Function Surface Scatter Less than 20M Radius | Hill Ridge/Toe | 2988 feet              |
| 36BV0116    | Open Habitation, Prehistoric                          | Terrace        | 3025 feet              |
| 36BV0061    | Open Habitation, Prehistoric                          | Hilltop        | 3058 feet              |
| 36BV0049    | Open Habitation, Prehistoric                          | Terrace        | 3297 feet              |
| 36BV0354    | Open Prehistoric Site, Unknown Function               | Terrace        | 3300 feet              |
| 36BV0115    | Open Habitation, Prehistoric                          | Hill Ridge/Toe | 3364 feet              |
| 36BV0052    | Isolated Find   | Hill Ridge/Toe | 3422 feet              |
| 36BV0098    | Open Habitation, Prehistoric                          | Terrace        | 3457 feet              |
| 36WH0231    | Open Prehistoric Site, Unknown Function               | Ridgetop       | 3528 feet              |
| 36BV0192    | Open Habitation, Prehistoric                          | Terrace        | 3619 feet              |
| 36BV0009    | Open Habitation, Prehistoric                          | Floodplain     | 3669 feet              |
| 36WH1625    | Farmstead; Historic Domestic Site                     | Middle Slopes  | 3779 feet              |
| 36BV0003    | Open Habitation, Prehistoric                          | Floodplain     | 3839 feet              |
| 36BV0171    | Open Prehistoric Site, Unknown Function               | Stream Bench   | 4008 feet              |
| 36BV0120    | Open Habitation, Prehistoric                          | Terrace        | 4017 feet              |
| 36BV0173    | Open Habitation, Prehistoric                          | Floodplain     | 4134 feet              |
| 36WH1481    | Open Habitation, Prehistoric                          | Terrace        | 4232 feet              |
| 36WH/035    | Isolated Find   | Floodplain     | 4293 feet              |
| 36BV0217    | Rock Shelter/Cave                                     | Middle Slopes  | 4301 feet              |
| 36BV0108    | Open Habitation, Prehistoric                          | Terrace        | 4308 feet              |
| 36BV0216    | Rock Shelter/Cave                                     | Middle Slopes  | 4377 feet              |
| 36BV0030    | Unknown Function Surface Scatter Less than 20M Radius | Floodplain     | 4414 feet              |
| 36BV0020    | Open Habitation, Prehistoric                          | Floodplain     | 4423 feet              |
| 36BV0015    | Open Habitation, Prehistoric                          | Ridgetop       | 4455 feet              |
| 36BV0160    | Other Specialized Aboriginal Site                     | Floodplain     | 4560 feet              |
| 36WH1440    | Open Habitation, Prehistoric                          | Upland Flat    | 4569 feet              |
| 36BV0118    | Open Habitation, Prehistoric                          | Floodplain     | 4591 feet              |
| 36BV0025    | Open Habitation, Prehistoric                          | Terrace        | 4593 feet              |
| 36WH0024    | Open Habitation, Prehistoric                          | Lower Slopes   | 4622 feet              |
| 36BV0178    | Open Habitation, Prehistoric                          | Stream Bench   | 4628 feet              |
| 36BV0051    | Open Habitation, Prehistoric                          | Floodplain     | 4665 feet              |
| 36WH0229    | Open Prehistoric Site, Unknown Function               | Upper Slopes   | 4677 feet              |
| 36BV0175    | Open Habitation, Prehistoric                          | Floodplain     | 4731 feet              |
| 36BV0334    | Open Habitation, Prehistoric                          | Beach          | 4754 feet              |
| 36BV0004    | Village   | Terrace        | 4784 feet              |
| 36BV0176    | Open Habitation, Prehistoric                          | Floodplain     | 4784 feet              |
| 36BV0174    | Unknown Function Surface Scatter Less than 20M Radius | Floodplain     | 4801 feet              |
| 36BV0360    | Farmstead   | Hill Ridge/Toe | 4841 feet              |
| 36BV0262    | Open Habitation, Prehistoric                          | Hilltop        | 4938 feet              |
| 36BV0042    | Open Habitation, Prehistoric                          | Terrace        | 4939 feet              |
| 36BV0060    | Open Habitation, Prehistoric                          | Island         | 4978 feet              |
| 36BV0089    | Petroglyph/Pictograph                                 | Beach          | 5029 feet              |

| Resource ID | Component/ Type              | Landform     | Distance To Centerline |
|-------------|------------------------------|--------------|------------------------|
| 36BV0005    | Open Habitation, Prehistoric | Floodplain   | 5092 feet              |
| 36BV0373    | Open Habitation, Prehistoric | Upper Slopes | 5155 feet              |
| 36BV0169    | Open Habitation, Prehistoric | Floodplain   | 5163 feet              |
| 36BV0202    | Open Habitation, Prehistoric | Floodplain   | 5202 feet              |
| 36BV0172    | Open Habitation, Prehistoric | Floodplain   | 5212 feet              |

The analysis of data presented in the table above provides the basis for discussing the archaeological landscape of the Project in western Pennsylvania. The prehistoric landscape manifest within the PHMC inventory of archaeological resources is suggestive of continual occupation and utility of the region, particularly within and around the Raccoon Creek watershed (see particularly **Attachment A, Figures 4B-7B**). The landform type listed for the majority of the sites is either floodplain or terrace, with a smaller amount of upland-type landforms (ridges, hilltops, upland flats and upper slopes) included in the inventory. The potential for encountering prehistoric locales is therefore considered to be much higher atop floodplain and terrace settings crossed by the Project.

#### Aboveground Resources Inventory

A total of 150 aboveground structural resources have been inventoried within the Archival Study Area for the Project. Of this inventory, 14 aboveground resources are depicted within 300 feet of the Project centerline, eight of which extend across the centerline itself (six railroad lines, one existing subterranean gas pipeline, and a country store previously determined not eligible for the NRHP). The following table lists each of these resources situated within one mile of the Project, ordered by distance from the Project centerline.

**Table 4. Aboveground Resources Located Within One Mile of the Project Centerline**

| PHMC ID | County                                       | Resource Name                                       | Resource Type | Year Built | Distance to Centerline |
|---------|--|---|---------------|------------|------------------------|
| 104699  | Allegheny                                    | Jardine's Store                                     | Building      | Unk.       | 0                      |
| 200970  | Allegheny, Beaver, Washington                | National Fuel Gas Company: Line N Extension         | Structure     | 1947       | 0                      |
| 097622  | Washington, Allegheny                        | Montour Railroad (Coraopolis to Snowden)            | District      | 1878;1927  | 0                      |
| 155446  | Washington, Allegheny                        | Montour Railroad (aggregate file)                   | District      | Unk.       | 0                      |
| 156881  | Allegheny, Fayette, Washington, Westmoreland | Pittsburgh & West Virginia Railway (aggregate file) | District      | Unk.       | 0                      |
| 115042  | Washington                                   | Montour Railroad (Champion to Primose)              | District      | 1878       | 0                      |

| PHMC ID | County                | Resource Name   | Resource Type | Year Built        | Distance to Centerline |
|---------|-----------------------|---|---------------|-------------------|------------------------|
| 100105  | Washington, Allegheny | Pittsburgh & Steubenville Railroad (Pittsburgh to WV line)                | District      | Unk.              | 0                      |
| 115209  | Washington, Allegheny | Pittsburgh, Cincinnati, Chicago & St. Louis Railroad: Pittsburgh Division | District      | 1865              | 0                      |
| 104724  | Allegheny             | McBride, David, Farmstead   | District      | Unk.              | 163 feet               |
| 104693  | Allegheny             | Jardine House   | Building      | Unk.              | 166 feet               |
| 100010  | Washington            | Shaw Mine   |               | Unk.              | 221 feet               |
| 104698  | Allegheny             | Jablonski, Henry, House   | Building      | Unk.              | 242 feet               |
| 104697  | Allegheny             | Heidler Bungalow  | Building      | Unk.              | 243 feet               |
| 104701  | Allegheny             | Morgan, Charles, House  | Building      | Unk.              | 296 feet               |
| 104681  | Allegheny             | Washington Road Bridge  | Structure     | Unk.              | 302 feet               |
| 104696  | Allegheny             | Heidler, Wilson Farmette  | Building      | Unk.              | 352 feet               |
| 802087  | Washington            | Unk.  | Site          | C1910, 1910, 1910 | 380 feet               |
| 130261  | Beaver                | Unk.  | Structure     | 1954              | 405 feet               |
| 100557  | Beaver                | Unk.  | Structure     | 1937              | 410 feet               |
| 115051  | Washington            | Donaldson, Thomas, Jr., Farm  | Building      | C1840             | 425 feet               |
| 130259  | Beaver                | Unk.  | Structure     | 1932              | 511 feet               |
| 115038  | Washington            | Geary Farm Property   | Building      | 1895, 1890, 1890  | 584 feet               |
| 115220  | Washington            | Primrose Machine Shop Property  | Building      | C1900             | 605 feet               |
| 201214  | Beaver                | Midway Bar & Grill  | Building      | C1950             | 617 feet               |
| 104700  | Allegheny             | Potato Garden Rd Bridge   | Structure     | Unk.              | 646 feet               |
| 802046  | Washington            | Unk.  | Site          | C1975, 1875, 1975 | 650 feet               |
| 802086  | Washington            | Unk.  | Site          | C1860, 1880, 1860 | 689 feet               |
| 155445  | Washington, Allegheny | Chartiers Railway (aggregate file)  | District      | Unk.              | 759                    |
| 201213  | Beaver                | Magnotta Buffington House   | Building      | C1850             | 798 feet               |
| 115223  | Washington            | George Property   | Building      | 1939              | 835 feet               |
| 115221  | Washington            | Machak, David, Property   | Building      | C1900             | 856 feet               |
| 802047  | Washington            | Unk.  | Site          | C1860, 1860, 1860 | 957 feet               |
| 802237  | Washington            | Unk.  | Site          | C1900, 1930, 1900 | 958 feet               |
| 129532  | Allegheny             | Unk.  | Structure     | 1941              | 1077 feet              |
| 802082  | Washington            | Unk.  | Site          | C1990, 1900, 1990 | 1120 feet              |
| 115211  | Washington            | Oil Resource N  | Object        |                   | 1167 feet              |



| PHMC ID | County     | Resource Name                                  | Resource Type | Year Built        | Distance to Centerline |
|---------|------------|--|---------------|-------------------|------------------------|
| 130260  | Beaver     | Unk.   | Structure     | 1946              | 1191 feet              |
| 076802  | Allegheny  | McNall House                                   | Building      | C1841;C1860       | 1207 feet              |
| 130268  | Beaver     |  | Structure     | 1938              | 1274 feet              |
| 115222  | Washington | Raineri Property                               | Building      | C1930             | 1292 feet              |
| 104703  | Allegheny  | McBride, J., Farmstead                         | District      | Unk.              | 1345 feet              |
| 115218  | Washington | Oil Resource P                                 | Building      | Unk.              | 1346 feet              |
| 802081  | Washington | Unk.   | Site          | C1905, 1870, 1900 | 1399 feet              |
| 115224  | Washington | Olshinsky Property                             | Building      | 1950              | 1407 feet              |
| 115219  | Washington | Robinson Township Consolidated School Property | Building      | 1921              | 1510 feet              |
| 115227  | Washington | Gilbert Property                               | Building      | 1940              | 1619 feet              |
| 129694  | Allegheny  | Unk.   | Structure     | C1946             | 1628 feet              |
| 115226  | Washington | Machak, Fred, Property                         | Building      | C1950             | 1677 feet              |
| 100056  | Washington | Westland Mine                                  | Unk.          | Unk.              | 1682 feet              |
| 115225  | Washington | Primrose Mine Company Housing                  | District      | C1910             | 1689 feet              |
| 115210  | Washington | Oil Resource W                                 | Object        | Unk.              | 1699 feet              |
| 100040  | Washington | Brevard Bridge                                 | Structure     | 1913              | 1725 feet              |
| 802083  | Washington | Unk.   | Site          | C1840, 1870, 1840 | 1837 feet              |
| 130224  | Beaver     | Bocktown Bridge                                | Structure     | 1979              | 1937 feet              |
| 156515  | Beaver     | Glenn  | Building      | 1918;2010         | 1942 feet              |
| 139367  | Washington | Unk.   | Structure     | 1925              | 1959 feet              |
| 139209  | Washington | Brevard Bridge                                 | Structure     | 1913              | 1998 feet              |
| 115040  | Washington | McDonald Property                              | Building      | 1825              | 2029 feet              |
| 115217  | Washington | Hopper Property                                | Building      | 1950              | 2043 feet              |
| 139198  | Washington | Unk.   | Structure     | 1934              | 2138 feet              |
| 802236  | Washington | Unk.   | Site          | C1890, 1900, 1890 | 2261 feet              |
| 099977  | Washington | Midway Mine                                    | Unk.          | Unk.              | 2314 feet              |
| 200834  | Beaver     | Beaver County Home                             | Building      | 1915              | 2325 feet              |
| 100007  | Washington | Midland 3                                      | Unk.          |                   | 2452 feet              |
| 000355  | Washington | Unk.   | Unk.          | 1913              | 2470 feet              |
| 104695  | Allegheny  | Imperial Land Corp Quonset Hut                 | Structure     | Unk.              | 2489 feet              |
| 100053  | Washington | Montour Mine 1                                 | Site          | 1913              | 2494 feet              |
| 130267  | Beaver     | Unk.   | Structure     | 1938              | 2499 feet              |
| 156919  | Allegheny  | Tri-State Holiness Association, Clinton Camp   | District      | C1925;C1938       | 2533 feet              |
| 139323  | Washington | Unk.   | Structure     | 1932              | 2635 feet              |

| PHMC ID | County     | Resource Name                               | Resource Type | Year Built        | Distance to Centerline |
|---------|------------|---|---------------|-------------------|------------------------|
| 139321  | Washington | Unk.  | Structure     | 1925              | 2649 feet              |
| 802084  | Washington | Unk.  | Site          | C1885, 1890, 1880 | 2656 feet              |
| 115228  | Washington | Libert Property                             | Building      | 1905              | 2778 feet              |
| 156513  | Beaver     | Glenn                                       | Building      | 1876;1969         | 2813 feet              |
| 130217  | Beaver     | Unk.  | Structure     | 1938              | 2819 feet              |
| 802235  | Washington | Unk.  | Site          | C1970, 1920, 1970 | 2825 feet              |
| 200835  | Beaver     | St. Joseph Lead Company Zinc Smelting Plant | District      | 1930              | 2862 feet              |
| 802088  | Washington | Unk.  | Site          | C1870, 1890, 1870 | 2863 feet              |
| 156518  | Beaver     | Stewart, Robert W., House                   | Building      | 1889              | 2915 feet              |
| 100559  | Beaver     | 04 1 0 0445 0 026604                        | Structure     | 1939              | 2922 feet              |
| 115043  | Washington | Oil Resource A                              | Structure     | C1900             | 2972 feet              |
| 099975  | Washington | Primrose Mine                               | Unk.          | Unk.              | 3035 feet              |
| 130221  | Beaver     | Unk.  | Structure     | 1948              | 3092 feet              |
| 130223  | Beaver     | Unk.  | Structure     | 1950              | 3092 feet              |
| 130219  | Beaver     | Unk.  | Structure     | 1920              | 3104 feet              |
| 802238  | Washington | Unk.  | Site          | C1870, 1950, 1870 | 3111 feet              |
| 156920  | Allegheny  | Benton, Agnes, House                        | Building      | C1956             | 3111 feet              |
| 156921  | Allegheny  | Smith, Robert, House                        | Building      | C1953             | 3130 feet              |
| 104719  | Allegheny  | Burns, John, Farmstead                      | District      | Unk.              | 3239 feet              |
| 156933  | Allegheny  | Spik, Susan, House                          | Building      | C1961             | 3247 feet              |
| 076807  | Allegheny  | Unk.  | Site          | C1821;C1840       | 3329 feet              |
| 156514  | Beaver     | Crooks, Earl Glenn                          | Building      | 1959              | 3377 feet              |
| 156934  | Allegheny  | Daniels, Leslie, House                      | Building      | C1948             | 3444 feet              |
| 115052  | Washington | Moreland Farm Property                      | Building      | C1850, 1950, 1950 | 3553 feet              |
| 156926  | Allegheny  | Ehle, Wayne, House                          | Building      | C1960             | 3589 feet              |
| 126701  | Allegheny  | McElroy, Charles F. & Iva M., Home          | Building      | C1794;C1894       | 3649 feet              |
| 156924  | Allegheny  | Baxter, Kathleen, House #1                  | Building      | C1940             | 3759 feet              |
| 156935  | Allegheny  | McCoy, John, House                          | Building      | C1961             | 3765 feet              |
| 156923  | Allegheny  | Marshall, Jeffrey, House                    | Building      | 1944              | 3793 feet              |
| 001270  | Beaver     | Merrill Lock No. 6                          | Site          | 1892;1904         | 3826 feet              |
| 115212  | Washington | McDonald Mine Property                      | Unk.          | C1920;C1939       | 3841 feet              |
| 104688  | Allegheny  | Morgan, J., Bank Barn                       | Building      | Unk.              | 3853 feet              |
| 802203  | Washington | Unk.  | Site          | C1900             | 3878 feet              |
| 156930  | Allegheny  | Hoberek, William, House                     | Building      | C1955             | 3893 feet              |

| PHMC ID | County     | Resource Name   | Resource Type | Year Built              | Distance to Centerline |
|---------|------------|---|---------------|-------------------------|------------------------|
| 156925  | Allegheny  | Baxter, Kathleen, House #2                            | Building      | C1940                   | 3900 feet              |
| 156927  | Allegheny  | Kapaldo, Alan, House                                  | Building      | C1949                   | 3909 feet              |
| 156928  | Allegheny  | Kusen, Edward, House                                  | Building      | C1961                   | 3928 feet              |
| 802080  | Washington | Unk.  | Site          | C1920, 1905, 1920       | 3931 feet              |
| 802089  | Washington | Unk.  | Building      | C1890, 1890, 1880, 1900 | 3947 feet              |
| 802225  | Washington | Unk.  | Site          | C1870, 1870, 1870       | 3962 feet              |
| 156929  | Allegheny  | DiMichele, Benjamin, House                            | Building      | C1948                   | 3995 feet              |
| 110355  | Beaver     | Lockkeepers' House                                    | Building      | 1903                    | 4056 feet              |
| 156931  | Allegheny  | Fodor, Zolton, House                                  | Building      | C1948                   | 4088 feet              |
| 156932  | Allegheny  | Kish, Josh, House                                     | Building      | C1961                   | 4098 feet              |
| 156937  | Allegheny  | Kinney, Gary, House                                   | Building      | C1950                   | 4123 feet              |
| 144198  | Beaver     | Christler-Marker Cemetery                             | Site          | C1812                   | 4167 feet              |
| 106105  | Allegheny  | Johnson, Rodney & Rogene, Farmstead                   | Building      | 1940                    | 4168 feet              |
| 802200  | Washington | Unk.  | Site          | C1850, 1880, 1850       | 4188 feet              |
| 087080  | Washington | Midway Milling Company                                | Building      | C1875                   | 4191 feet              |
| 112372  | Multiple   | Pennsylvania Railroad (Pittsburgh to Ohio State Line) | District      | Unk.                    | 4196 feet              |
| 156936  | Allegheny  | Scott, Gregory, House                                 | Building      | C1950                   | 4238 feet              |
| 000265  | Beaver     | Service Creek Rd. Bridge                              | Structure     | 1900                    | 4240 feet              |
| 130220  | Beaver     | Unk.  | Structure     | 1938                    | 4265 feet              |
| 099979  | Washington | Jumbo Mine  | Unk.          | 1884                    | 4290 feet              |
| 156918  | Allegheny  | Guszczynski, Richard, House                           | Building      | C1900                   | 4290 feet              |
| 115216  | Washington | Donaldson, T., Farm Property                          | Building      | C1890, 1910, 1830       | 4342 feet              |
| 802224  | Washington | Unk.  | Site          | C1970, 1930, 1970       | 4416 feet              |
| 115215  | Washington | Smith Farm Property                                   | Building      | C1920                   | 4435 feet              |
| 802007  | Washington | Unk.  | Building      | C1880, 1880, 1900, 1880 | 4479 feet              |
| 156516  | Beaver     | Montgomery School                                     | Building      | C1880;1959              | 4546 feet              |
| 115214  | Washington | Clark Farm Property                                   | Building      | 1825, 1890, 1920, 1910  | 4629 feet              |
| 157427  | Beaver     | Clinton LTA Sawmill Site                              | Site          | 1820                    | 4635 feet              |
| 802239  | Washington | Unk.  | Site          | C1880, 1910, 1880       | 4705 feet              |
| 802091  | Washington | Unk.  | Building      | C1997, 1890 1890        | 4707 feet              |
| 156512  | Beaver     | Calhoon, Milton, Farm                                 | Building      | C1850;C1920             | 4784 feet              |

| PHMC ID | County     | Resource Name               | Resource Type  | Year Built              | Distance to Centerline |
|---------|------------|-----------------------------|----------------|-------------------------|------------------------|
| 139203  | Washington | Scott Bridge                | Structure      | 1895                    | 4797                   |
| 100058  | Washington | Morris Mine                 | Unk.           | 1922                    | 4828 feet              |
| 104694  | Washington | Gordon, D., Barn            | Building       | Unk.                    | 4902 feet              |
| 802199  | Washington | Unk.                        | Site, Building | C1875, 1870, 1875, 1890 | 4910 feet              |
| 104718  | Washington | McCandless, Hugh, Farmstead | District       | Unk.                    | 4929 feet              |
| 100553  | Beaver     | 04 1 0 0243 0 058761        | Structure      | 1927                    | 4943 feet              |
| 802051  | Washington | Unk.                        | Site           | C1900, 1905, 1900       | 4971 feet              |
| 802090  | Washington | Unk.                        | Building       | C1860, 1890, 1860       | 4982 feet              |
| 802226  | Washington | Unk.                        | Site           | C1870, 1870, 1890       | 5018 feet              |
| 139368  | Washington | Unk.                        | Structure      | 1929                    | 5109 feet              |
| 115053  | Washington | Lauff Property              | Building       | 1850                    | 5117 feet              |
| 802085  | Washington | Unk.                        | Site           | C1870, 1900, 1865       | 5144 feet              |
| 115055  | Washington | Oil Resource O              | Object         | C1900;C1950             | 5157 feet              |
| 099960  | Washington | Montour Mine 9              | Site           | Unk.                    | 5173 feet              |
| 139320  | Washington | Jardine's Store             | Structure      | 1930                    | 5200 feet              |

As indicated in the table above, the 150-count inventory of historic-era aboveground resources located within one mile of the Project is composed of a large number of residential/single dwelling houses, in addition to a light mix of rural retail/commercial buildings, churches, and barns/outbuildings. The location of the proposed Project across a largely rural, remote section of southwestern Pennsylvania generally avoids any large communities, and therefore very few public buildings/works are present within this data set.

#### Prior CRM/Section 106 Reports

The archival research identified 26 previous cultural resources survey reports on file with the PHMC located within one-mile of the APE for the Project. Seven of these reports detail cultural resource investigations which extend across the Project route, associated with water lines, pipelines, sewer lines and road extensions. The following table lists all 26 of the prior CRM-related field surveys conducted within one mile of the Project, as reflected in the reports inventory maintained by the PHMC.

**Table 4. Summary of Previous Cultural Resources Surveys Within One Mile of the Project**

| PHMC ID | Title | Reference | Distance to Project |
|---------|-------|-----------|---------------------|
|---------|-------|-----------|---------------------|

| PHMC ID           | Title  | Reference                 | Distance to Project |
|-------------------|--|---------------------------|---------------------|
| 1989-1378-042-C   | <i>Ph I Arch Survey Prop S.Beltway PA 60 to SR 22 Robinson Twp, Washington Co, Findlay Twp, Allegheny Co, PA</i>   | Tidlow 1996               | 0                   |
| 1989-1378-042-N   | <i>Addendum, Phase I Arch. Survey, Additional Right-of-Way on Tan and Green Alignments, Southern Beltway, PA 60 to US 22, Washington and Allegheny Co, PA</i>  | Rue 2000                  | 0                   |
| 1989-1378-042-UUU | <i>Southern Beltway Transportation Project, S.R. 0022 to Interstate 79, Allegheny and Washington Counties, Pennsylvania, Phase Ib Archaeological Survey</i>  | Basalik 2014              | 0                   |
| 1995-0511-125-E   | <i>Lit Rev &amp; Arch Srvy, Proposed Sewer Pipeline, Robinson, Cecil &amp; Mt Pleasant Twps, Midway &amp; McDonald Boros, WA Co, Pa</i>  | Whitman et al. 1999       | 0                   |
| 1998-1880-003-C   | <i>Phase I Archaeological Survey Report, Potato Garden Water and Sewer Expansion Project, Findlay Township, Allegheny County, Pennsylvania</i>   | MacDonald 2006            | 0                   |
| 2009-2142-003-B   | <i>Negative Survey Form, Route 30 Sanitary Sewer Project, Findlay Township, Allegheny County</i>   | Davis 2009                | 0                   |
| 2013-2179-003-D   | <i>Phase I Archaeological Report, Proposed Construction of Well Pads, Impoundment Areas, Gas Pipeline, and Associated Access Roads, Greater Pittsburgh, International Airport, Findlay and Robinson Townships, Allegheny County.</i> | Jackson 2013              | 0                   |
| 2012-2431-042-E   | <i>Negative Survey Form, Mariner West Ethane Line Reroute, 36BV0097 Site Area, Potter Township, Beaver County</i>  | Marine 2013               | 4 feet              |
| 1991-1517-007-A   | <i>Ph I Cult. Res. Inventory, Prop. Wetland Replace. Site, GPIA Midfield Terminal Proj., Independence Twp., BV CO., PA</i>   | Waite 1991                | 80 feet             |
| 1986-0679-007-B   | <i>Ph I Arch. Surv., St. Joe Fly Ash Disposal Site, BV CO., PA</i>   | Cosgrove and Michael 1986 | 135 feet            |
| 1995-3109-007     | <i>Ph. I Cult. Res. Survey, Line N Ntl. Gas Pipeline Replac. Proj., Centre, Hopewell, Independence Twps, BV Co, Pennsylvania</i>   | Baker 1995                | 200 feet            |
| 2012-1291-007-A   | <i>Phase I/II Archaeological Investigation, Site 36BV0094, Mariner West Ethane Transmission Line, Ohio River Crossing, Potter Township, Beaver County</i>  | Marine 2012               | 485 feet            |
| 2004-2421-007-F   | <i>Phase I Archaeological Survey, Proposed First Energy 540 Acre Little Blue Run East Landfill Expansion, Greene Township, Beaver County</i>   | Weller 2011               | 1070 feet           |
| 2015-0534-125-A   | <i>Phase I Archaeological Survey Yonkers to Cowden Pipeline</i>  | Lackett 2015              | 1245 feet           |

| PHMC ID         | Title  | Reference                        | Distance to Project |
|-----------------|--|----------------------------------|---------------------|
| 2012-1650-042-G | <i>Addendum 1, Phase I Cultural Resource Investigations for the Proposed Oak Grove to Ft. Beeler and Ft. Beeler to Houston Ethane Pipeline Project, Marshall County, West Virginia and Washington County, Pennsylvania</i> | Green 2013                       | 1535 feet           |
| 1991-4547-007-D | <i>Ph I Arch. Surv. Rpt., Prop. Interconnection Of Pipeline Facilities, Independence Twp., BV CO., PA</i>  | Miller 1991                      | 1756 feet           |
| 1999-0080-125-F | <i>Negative Survey Form for Phase I Archeological Survey in Support of the Columbia Line 1758 Project, Washington County</i>   | Goodwin 2014                     | 1896 feet           |
| 2008-0424-125-B | <i>Phase I Archaeological Investigation of Proposed Cellular Phone Tower Pads and Access Roadways in Westmoreland and Washington Counties</i>  | Nass 2007                        | 2531 feet           |
| 1994-2434-125-B | <i>Ph I Arch. Surv. At The Proposed Waste Coal Fueled Power Generation Facility, WH CO., PA</i>  | Catts 1994                       | 2664 feet           |
| 2004-0278-003-C | <i>Phase I Archaeological Survey, PIT Proposed Site 12 Phase II Development, Findlay Township, Allegheny County</i>  | Stanilla 2012                    | 2833 feet           |
| 2006-0300-007-A | <i>Archaeological and Geomorphological Invest. for the Proposed Raredon Stream Restoration Project, Independence Twp., Beaver Co., PA</i>  | Anderson 2005                    | 4303 feet           |
| 2005-1240-007-C | <i>Phase I Archaeological Survey, Clinton U.S. Army Resserve local Training Area (LTA)(PA018), Independence Township, Beaver County</i>  | Kiebeknecht and Harshbarger 2013 | 4563 feet           |
| 2006-0942-042-A | <i>Arch. Reconnaissance of Ohio River Islands National Wildlife Refuge in PA, WV, and KY (and Phase I Arch. Survey of Manchester Isl. No. 2, KY)</i>   | Diamanti 2005                    | 4597 feet           |
| 2004-2421-007-B | <i>Ph. I Arch. Survey, Little Blue Run Disposal Area, Greene Twp, Beaver Co, Pa</i>  | Davis 2004                       | 4832 feet           |
| 2014-0969-007-K | <i>Addendum III: New Water Treatment Plant Project</i>   | Dugas 2015                       | 5069 feet           |
| 1995-1000-007-B | <i>Ph I Arch. Survey, Prop. Towboat Dock, Shippingport Twp., BV CO., PA</i>  | Fox and Dwyer 1995               | 5146 feet           |

As indicated in the data above, seven of these prior CRM surveys recorded with the PHMC extend across/ intersect with the proposed centerline of the Project. A full review of the results of these prior investigations, prior to any field reconnaissance of the Project, may provide enough data to remove the necessity of any further fieldwork within the limits of these prior surveys, should they coincide with USACE jurisdictional areas.

## Historic-era Mapping

Concurrent with the archival research conducted on the cultural resource inventory data maintained by the PHMC, AECOM also examined available historic-era mapping of the Project areas, in an effort to more appropriately define the historic-era character of this portion of the three counties which contain elements of the Project. The following table lists the mapping resources consulted for the Project.

**Table 5. Historic-Era Mapping of the Project**

| <b>Date</b> | <b>Reference</b> | <b>Title</b>   | <b>Comments</b>  |
|-------------|------------------|--|--|
| <b>1876</b> | J.A. Caldwell    | <i>Caldwell's Illustrated, Historical, Centennial Atlas of Washington County, Pennsylvania</i> | Depicts roads, landowners, structures, villages/ towns |
| <b>1876</b> | J.A. Caldwell    | <i>Caldwell's Illustrated, Historical, Centennial Atlas of Beaver County, Pennsylvania</i>     | Depicts roads, landowners, structures, villages/ towns |
| <b>1876</b> | G.M. Hopkins     | <i>Atlas of the County of Allegheny, Penna.</i>  | Depicts roads, landowners, structures, villages/ towns |

An examination of the approximate location of the Project on these maps provides information regarding the historic-era occupation and utility of the landforms within and around the area of the Project. Not surprisingly, the rural agrarian character currently present across the landscape surrounding the Project is mirrored in the late nineteenth century mapping for the townships crossed by the Project within all three counties. It appears likely that the primary locations of sustained late nineteenth through mid-twentieth century occupations in the vicinity of the Project were located adjacent to township and county road alignments, which have largely maintained their alignment from the historic period into the twentieth century. The general continuity of the road network, from the earliest mapping available through to the modern era, suggests that the majority of the Project alignment was likely maintained as cultivated fields and forested lots since the late nineteenth century, which corresponds with the current land-use patterns evident across these landforms in the modern era.

## Proposed Cultural Resources Investigations

### Phase I Archaeological Investigations

The following discussion examines the various project activities and provides recommendations for the identification and evaluation of cultural resources. Due to the fact that the Project involves a new pipeline corridor, the field investigations will address both surface and subsurface impacts on any potential cultural resources.

AECOM will identify all USACE jurisdictional waters along the Project alignment. An arbitrary buffer of 200 feet (60 meters) will be placed on either side of the water crossing, and AECOM will utilize the standard

Phase I archaeological field methods as outlined in *Cultural Resource Management in Pennsylvania: Guidelines for Archaeological Investigations* (PHMC July 1991, revised 2008), to survey the 100 foot (30 meter) wide study corridor at each of these USACE jurisdictional areas. Once these areas have been established, other variables such as disturbance (e.g. residential development), slope, and previously recorded site data will also be factored, and as a result, some jurisdictional areas may have the arbitrary 200 foot (30 meter) buffer reduced and/or expanded. All areas of proposed Project ground disturbance in Pennsylvania will be made subject of a thorough visual inspection, in an effort to define above-ground cultural resources, such as rockshelters or structures, regardless of terrain (incidence of slope greater than 15 percent, or standing water, for example). The prevailing ground conditions and topography within the survey corridor will be documented in the Phase I report, per PHMC guidelines. The specific interval of testing will be determined by USACE jurisdictional status, as outlined below.

#### ***Field Survey of USACE Jurisdictional Areas***

The standard archaeological field methods cited in the PHMC Guidelines includes two main survey techniques (pedestrian reconnaissance and subsurface shovel testing). Pedestrian survey will involve walking in five meter intervals in cultivated fields displaying moderate to high levels of ground surface visibility and/or areas of steep slope (>15 degrees), standing water of obvious modern disturbance (such as existing utility right-of-ways, utilized roads and graveled lots). Where visual pedestrian inspection is not feasible, systematic shovel testing will be conducted, and will consist of minimally 0.57-centimeter-diameter holes, excavated to 50 centimeters below the surface or until a rock impasse or sterile soil is encountered. Given the 100-foot (30-meter) survey corridor, two transects will be required, with sample loci placed every 15-meters (50 feet). If cultural materials are identified within a shovel test or through visual pedestrian inspection, intra-radial shovel tests will be excavated at 7.5-meter (25-foot) intervals to delineate the archaeological site.

Excavated soils will be screened through ¼ inch wire mesh and examined for evidence of cultural materials. Profiles will be described for each shovel test and notes will be recorded concerning the soil stratigraphy (including Munsell color designations and texture) and any cultural resources encountered. All shovel tests will be assigned a unique designation that will be mapped with sub-meter accurate GPS equipment. During fieldwork, sample loci (SL) forms will be completed by the field crew. Isolated finds, archaeological sites, and positive finds within shovel tests will be noted on the SL forms. Artifacts will be bagged and assigned numbers by their SL locations. Photographs will be taken as appropriate during the field survey.

#### ***Field Survey of Non-USACE Jurisdictional Areas***

All portions of the Project designated as non-USACE jurisdictional areas will be subjected to visual pedestrian inspection. The purpose of this walkover will be to examine the area and document



disturbance, identify areas of high probability, or above ground cultural resources (e.g. foundations). Areas delineated by the archaeological team as displaying a high potential for containing archaeological resources in non-USACE jurisdictional areas will be surveyed utilizing the field methods described above for USACE jurisdictional areas. All observations in these regards will be thoroughly documented in notes, photographs and mapping using hand-held GPS technology capable of sub-meter accuracy.

### **Geoarchaeological/Deep Testing**

As the Project in Pennsylvania crosses multiple drainages and watersheds which are likely to be considered under USACE jurisdiction, Shell recognizes that deep testing may be needed to evaluate the potential for deeply buried significant archaeological deposits. Prior to the initiation of any deep-testing fieldwork, a geoarchaeological desktop assessment will be undertaken, to determine the geologic potential for buried prehistoric cultural deposits. This desktop assessment will be prepared for submittal to the PHMC, and will detail a scope of fieldwork, if applicable, for addressing any geoarchaeological concerns associated with the Project.

### **Historic Architectural Survey**

As the pipeline is subterranean and that minimal above ground structures will be constructed during this project, the effects to the visual landscape, or indirect APE, are expected to be generally nominal and temporary. If in the event the scope of work would change to include larger above ground facilities or if historic architectural issues are identified during the Phase I archaeological survey, both an architectural historian and the PHMC will be consulted.

### **Summary**

As stated earlier, this letter represents initial Section 106 consultation for the Project and outlines the APE, the documented record of cultural resources in the vicinity of the Project, and details a field strategy for the identification and evaluation of previously recorded or newly identified cultural resources within the APE. Archaeological field methods will follow the current PHMC *Guidelines*, and will involve the Phase I survey of both USACE jurisdictional areas and non-USACE jurisdictional areas. USACE jurisdictional areas and high probability locales within non-USACE jurisdictional areas will be subjected to two main strategies (pedestrian survey and shovel testing), while the remaining non-USACE jurisdictional areas will be subjected to visual surface inspection. These methods are considered sufficient given the overall scope of the Project. The results of the Phase I archaeological survey and the geomorphic assessment will be incorporated into one report and submitted to the PHMC for review.

Shell and AECOM look forward to receiving your response. Please contact Christopher G. Leary at 513-419-3439, or [christopher.leary@aecom.com](mailto:christopher.leary@aecom.com) if additional information is desired.



Sincerely,

**AECOM**

A handwritten signature in black ink, appearing to read 'C. Leary', is positioned above the name.

Christopher G. Leary  
Cultural Resources Group Director-Cincinnati

Brandon M. Walker, PE, CPESC  
Project Manager

Enclosures (8)

Figure 1–Overview Map

Figure 2A/B-8A/B–Archival Research Results

cc: Christopher G. Heitman, Shell Chemical Appalachia, LLC  
Kyle L. Webster, Shell Pipeline Company, LP