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 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania 05000387  
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylvania 05000388  
 AUTH. NAME AUTHOR AFFILIATION  
 FIELDS, J.S. Pennsylvania Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 TISE, L.E. Pennsylvania, Commonwealth of

SUBJECT: Revises original determination of effect of designation of four archeological sites on plant floodplain from "no adverse effect" to "no effect." Archeological recommendations & sitemaps encl.

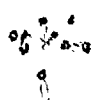
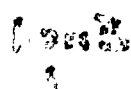
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 TITLE: Licensing Submittal: Environmental Rept Amdt & Related Correspondence

NOTES: 1cy NMSS/FCAF/PM. LPDR 2cys Transcripts. 05000387  
 OL: 07/17/82  
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 OL: 03/23/84

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add: Walt Butler Ltr Encl  
 1 1

TOTAL NUMBER OF COPIES REQUIRED: LTTR 28 ENCL 26



August 29, 1985

Dr. Larry E. Tise  
State Historical Preservation Office  
William Penn Memorial Museum and  
Archives Building  
Box 1026  
Harrisburg, PA 17108-1026

SUSQUEHANNA STEAM ELECTRIC STATION  
DETERMINATION OF EFFECT OF OPERATION AND  
MAINTENANCE ACTIVITIES ON ARCHEOLOGICAL  
SITES DESIGNATED SES-3, SES-6, SES-8, AND SES-11  
CCN 741326 FILE 991-2  
PLE-7531

Dear Dr. Tise:

The Pennsylvania Power and Light Company (PP&L) is resubmitting archeological information for the State Historic Preservation Office for review and concurrence on the determination of effect designation as listed in 36CFR800.3, 800.4, 800.5, and 800.13 concerning four archeological sites located on the Susquehanna SES floodplain, Salem Township, Luzerne County. These four sites SES-3, SES-6, SES-8, and SES-11 were determined by the U.S. Department of the Interior, Heritage Conservation and Recreation Service, to be eligible for inclusion in the National Register of Historic Places according to a U.S. Nuclear Regulatory Commission (NRC) letter received by PP&L March 18, 1983. Now, after approximately two years of operation and maintenance activities at the Susquehanna SES, PP&L would like to revise its original determination of "no adverse effect," to "no effect" with State Historic Preservation Office concurrence. Letter PLE-3098, April 19, 1983 discusses PP&L mitigation actions for these four sites with the preliminary evaluation of "no adverse effect." Your April 20, 1983 letter to the NRC concurred with this initial PP&L evaluation based on 1983 preliminary information available in 1983.

The reasons for the revised determination of "no effect" are based on 36CFR800.3(a), Criteria of Effect and they are as follows:

- o "No station operation or maintenance activity has changed the integrity of location, design, setting, materials, etc., that contributes to its significance in accordance with National Register criteria."
- o "No station operation or maintenance activity has impacted on the archeological sites causing either direct or indirect effects."

Attached for your review are archeological recommendations and site maps prepared by Commonwealth Associates for PP&L. Reports with the Commonwealth

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August 29, 1985

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FILE 991-2

archeological investigations were previously provided to your office. The reports are listed as follows:

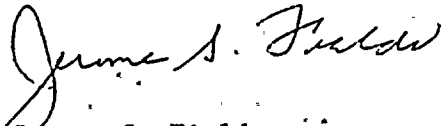
- o Archeological Investigations at the Susquehanna SES: The Susquehanna SES Floodplain, Commonwealth Associates, Inc., March 27, 1981.
- o Management Summary: Archeological Investigations at the Susquehanna Steam Electric Station: The Susquehanna SES, Commonwealth Associates, Inc., March 26, 1981.

In addition, PP&L has commented on each of the archeological recommendations.

Based on this updated information, PP&L requests that you review this documentation on the four archeological sites located on the Susquehanna SES Floodplain to determine if they meet the criteria of "no effect" as listed in 36CFR800.3(a). We request a response by September 30, 1985.

If you have any questions or concerns, please call me at (215) 770-7889.

Respectfully yours,



Jerome S. Fields  
Senior Environmental Scientist-Nuclear

JSF/dml

jsflth0034081

Attachments

cc: Walter R. Butler

NRC

COMMONWEALTH ASSOCIATES  
ARCHEOLOGICAL RECOMMENDATIONS

SES-3

Previous work at this location identified two Late Archaic sites that were quite extensive and documented what may very probably have been a major prehistoric occupation. The area was subsequently developed, and it now lies within the main access to Ichthyological Associates headquarters. Only isolated portions of the original tract remain undisturbed. The site was considered to be only potentially significant since primary archeological evidence has been largely destroyed or displaced. Commonwealth's testing program revealed that artifact concentrations do not extend below the plow zone so that preservation of major features is improbable. The former size and probable extent of the site is such that selective undisturbed areas may yet disclose archeological materials, albeit not of a primary nature. Major mitigation is clearly not called for, but preservation procedures for intact portions of the sites could be implemented with minimal effort and in conjunction with Pennsylvania Power and Light's relandscaping operations. Protective planting of the area, including the riverbank, is suggested. Should this plan prove unfeasible, or if further development is scheduled, monitoring of such activities is suggested.

Comments:

PP&L has begun adding fill and seeding this site to prevent further erosion.

Excavation of this site revealed diagnostic artifacts as well as several in situ archeological features occurring to depth and below plow zone. This is a probably Middle Woodland site that provided initial evidence for the existence of an occupation horizon with possible suggestions of activity areas. The site was discovered as a result of the profiles exposed by the drainage ditch that was cut through it. The erosion that is occurring along the cut is already destroying the archeological evidence and will continue to do so if not checked. A first step in the preservation of this significant resource would include solid infilling and grading of exposed profiles. The significance of the site calls for additional deep testing and trenching across the north levee where the most diagnostic archeological materials were found. A designated area at this location should be excavated and until that time the vicinity should be graded and either seeded with protective plantings or riprap with protective plantings. The area should be permanently protected and fenced in.

Comments:

PP&L has covered this area with fill and seeded with protective plantings. Since the area where this site is located is not used by the public, protective fencing has not been required.





Deep testing at this site disclosed the presence of cultural materials of the Transitional period at a depth of approximately 1.5 M. This is a potentially critical site, as it may document a pivotal prehistoric period which is not very well understood by archeologists. Additionally, the deeply buried setting of the site suggests that materials may be well preserved and that the site may be defined in terms of the alluvial history of the floodplain. There are, however, no significant surface-distributions of an archeological nature, so that since no major disturbances of the landscape are scheduled for this area, mitigation and intensive investigation of this site are not warranted. It would be beneficial if the area were to be removed from the perimeters of cultivation. In the event that future developments necessitate subsurface disturbances or earth removal, close monitoring of operations is imperative and further testing may be called for.

Comments:

No direct or indirect affects are expected on this forested site. No mitigative measures required.

SES-11.

Excavations suggested that a Woodland-period occupation occurred at this site. Materials were found below the surface and plow zone and offered the potential for site preservation. At this stage the total recovery of materials is not sufficient to justify a major mitigation effort, but the site should be considered a significant resource. In the absence of definite plans for construction, the area's potential cultural resource base may remain undisturbed by removing the tract from cultivation and planting a protective vegetation cover. Fencing is also a viable option.

Comments:

The tract has been removed from cultivation and there are no plans to construct on this site.

JSF/dml

jsf1th003408i

COMMONWEALTH ASSOCIATES  
ARCHEOLOGICAL RECOMMENDATIONS

SES-3

Previous work at this location identified two Late Archaic sites that were quite extensive and documented what may very probably have been a major prehistoric occupation. The area was subsequently developed, and it now lies within the main access to Ichthyological Associates headquarters. Only isolated portions of the original tract remain undisturbed. The site was considered to be only potentially significant since primary archeological evidence has been largely destroyed or displaced. Commonwealth's testing program revealed that artifact concentrations do not extend below the plow zone so that preservation of major features is improbable. The former size and probable extent of the site is such that selective undisturbed areas may yet disclose archeological materials, albeit not of a primary nature. Major mitigation is clearly not called for, but preservation procedures for intact portions of the sites could be implemented with minimal effort and in conjunction with Pennsylvania Power and Light's relandscaping operations. Protective planting of the area, including the riverbank, is suggested. Should this plan prove unfeasible, or if further development is scheduled, monitoring of such activities is suggested.

Comments:

PP&L has begun adding fill and seeding this site to prevent further erosion.

SES-6

Excavation of this site revealed diagnostic artifacts as well as several in situ archeological features occurring to depth and below plow zone. This is a probably Middle Woodland site that provided initial evidence for the existence of an occupation horizon with possible suggestions of activity areas. The site was discovered as a result of the profiles exposed by the drainage ditch that was cut through it. The erosion that is occurring along the cut is already destroying the archeological evidence and will continue to do so if not checked. A first step in the preservation of this significant resource would include solid infilling and grading of exposed profiles. The significance of the site calls for additional deep testing and trenching across the north levee where the most diagnostic archeological materials were found. A designated area at this location should be excavated and until that time the vicinity should be graded and either seeded with protective plantings or riprap with protective plantings. The area should be permanently protected and fenced in.

Comments:

PP&L has covered this area with fill and seeded with protective plantings. Since the area where this site is located is not used by the public, protective fencing has not been required.



Deep testing at this site disclosed the presence of cultural materials of the Transitional period at a depth of approximately 1.5 M. This is a potentially critical site, as it may document a pivotal prehistoric period which is not very well understood by archeologists. Additionally, the deeply buried setting of the site suggests that materials may be well preserved and that the site may be defined in terms of the alluvial history of the floodplain. There are, however, no significant surface distributions of an archeological nature, so that since no major disturbances of the landscape are scheduled for this area, mitigation and intensive investigation of this site are not warranted. It would be beneficial if the area were to be removed from the perimeters of cultivation. In the event that future developments necessitate subsurface disturbances or earth removal, close monitoring of operations is imperative and further testing may be called for.

Comments:

No direct or indirect affects are expected on this forested site. No mitigative measures required.



Excavations suggested that a Woodland-period occupation occurred at this site. Materials were found below the surface and plow zone and offered the potential for site preservation. At this stage the total recovery of materials is not sufficient to justify a major mitigation effort, but the site should be considered a significant resource. In the absence of definite plans for construction, the area's potential cultural resource base may remain undisturbed by removing the tract from cultivation and planting a protective vegetation cover. Fencing is also a viable option.

Comments:

The tract has been removed from cultivation and there are no plans to construct on this site.

JSF/dml



jsflth003408i



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

RECEIVED  
MAR 18 1983  
NUCLEAR DEPT.

Docket Nos. 50-387/388

Mr. Norman W. Curtis  
Vice President  
Engineering and Construction - Nuclear  
Pennsylvania Power & Light Company  
2 North Ninth Street  
Allentown, Pennsylvania 18101

Dear Mr. Curtis:

Subject: Susquehanna Steam Electric Station Cultural Resources

Pursuant to our responsibility under 36 CFR 800 as licensing agency for the operation of Susquehanna Steam Electric Station, Units 1 and 2, the NRC requests information with regard to completing a determination of effect which the operation and maintenance activities of the plant may have on four archeological sites on the Susquehanna property.

Site SES-3, Site SES-6, Site SES-8 and Site SES-11 were determined by the keeper to be eligible for inclusion in the National Register of Historic Places on February 10, 1983, and now require a determination of effect to be made. As discussed in a telephone conversation with Mr. C. Coddington and Jerome S. Fields on March 3, 1983, the NRC requests that you follow the steps presented in 36 CFR 800.3 and 36 CFR 800.4 in developing the information. Upon receipt of the information, the NRC, in consultation with the State Historical Preservation Office, will complete the determination of effect process.

Sincerely,

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

cc: See next page

APR 19 1983

Dr. Lawrence Tice  
State Historical Preservation Office  
William Penn Memorial Museum and Archives Building  
Box 1026  
Harrisburg, PA

SUSQUEHANNA STEAM ELECTRIC STATION  
PROTECTION OF ARCHEOLOGICAL SITES  
ER 100450 FILE 991-2  
FLE-3098

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Dear Dr. Tice:

Four archeological sites located on the Susquehanna SES floodplain have been determined eligible for inclusion in the National Register of Historic Places by the Nuclear Regulatory Commission. The attached map shows their locations.

In accordance with 36 CFR 800.3 and 800.4 this letter describes the effects plant operation, maintenance and construction activities may have had or will have on the eligible sites and the mitigating actions taken by PP&L to protect them. These mitigation measures were recommended in the report prepared by Commonwealth Associates entitled Archeological Investigations at the Susquehanna SES: The Susquehanna SES Floodplain (March, 1981).

We believe by following these recommendations there will be no adverse effect upon the sites from the station.

#### Mitigative Actions

##### SES-3

The study recommended no major mitigation at SES-3. Only isolated portions of the original tract remain undisturbed. PP&L will cover them with fill and plant protective landscaping.

##### SES-6

The preservation measures taken to prevent erosion from a drainage ditch crossing it consisted of regrading exposed profiles, infilling with soil and seeding with protective planting. The northern edge of the site is cultivated which provides additional protection against erosion.



SES-8

No major disturbances are expected on this forested site. It did not warrant mitigative measures.

SES-11

This tract has been removed from cultivation. There are no plans to construct on the site.

There are no plans to disturb any of these four sites. Various PP&L Departments have been informed of their locations and requested to notify Nuclear Support about impending work in these areas. If you concur with PP&L's evaluation, we would request a letter be sent to Mr. A. Schwencer of the Nuclear Regulatory Commission (see attached letter) confirming these sites are protected.

Very truly yours,

Jerome S. Fields

By:

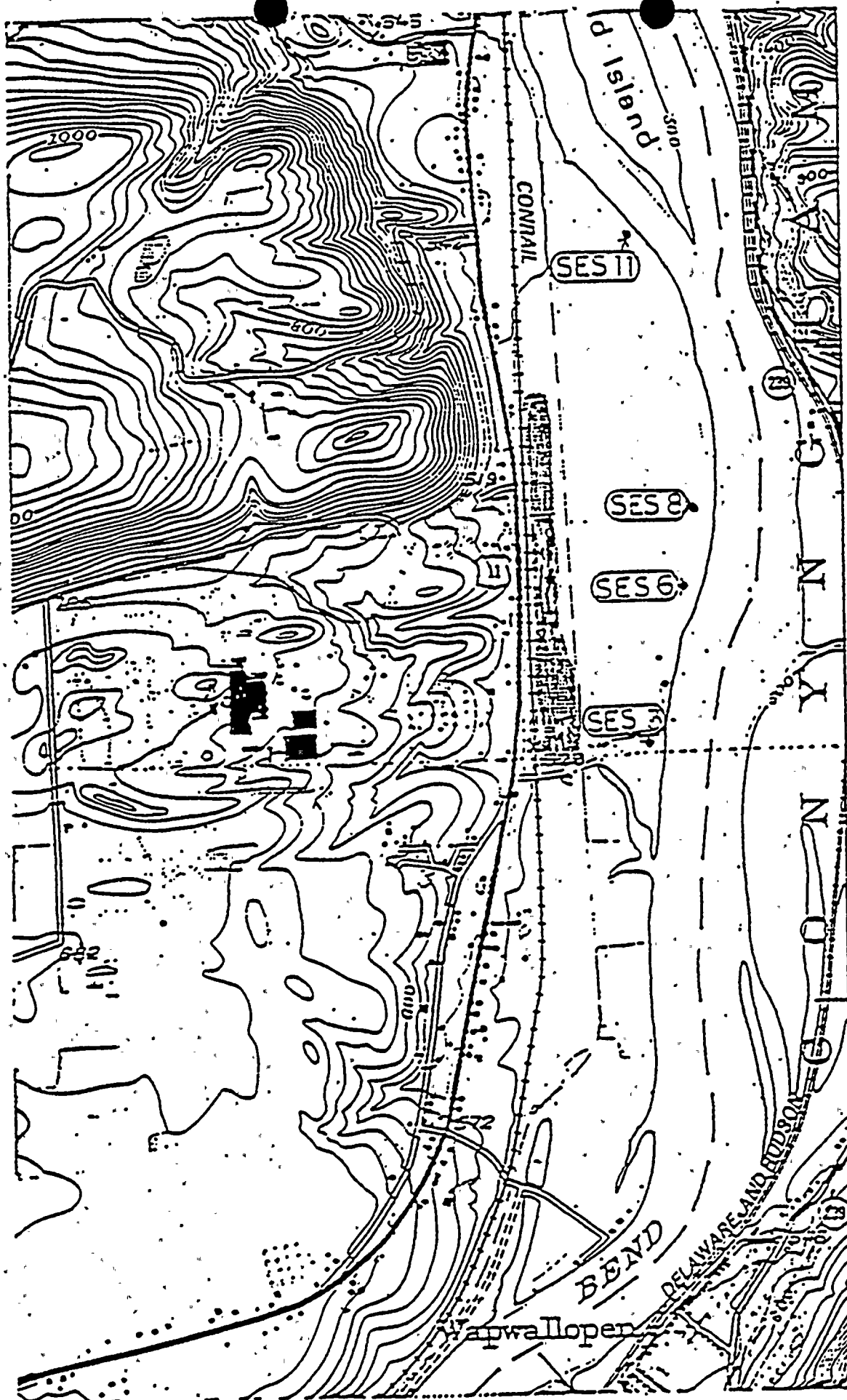
*Joseph B. Evans*  
Joseph B. Evans

JBE:mg

E-01

Attachments: Site Map  
NRC Letter

bcc: M.F. Basta	A3-3
W.E. Barberich	A6-1
S.H. Cantone	N-4
J.B. Evans	N-4
J.S. Fields	N-4
D.W. Miller	N-4
K.E. Shank	N-4
Correspondence File	A6-2
Letter File	A6-2



SCALE  
1"=1536'

Fig. 4.2-

cc: Mr. Joe Evans

COMMONWEALTH OF PENNSYLVANIA  
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION  
P. O. BOX 1028, HARRISBURG, PENNSYLVANIA 17133

April 20, 1983

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

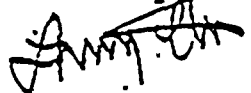
Re: Susquehanna Steam Electric Station  
Protection of Archeological Sites  
File 991-2, ER81 079 0658

Dear Mr. Schwencer:

The Bureau for Historic Preservation concurs with your opinion that mitigative actions proposed in your letter of April 19 will result in no adverse effect on archeological sites SES-3, SES-6, SES-8 and SES-11 which have been determined eligible for listing on the National Register.

Please be advised that regulations of the Advisory Council on Historic Preservation (36 CFR 800.13 a.) prescribe that Documentation for Determination of No Adverse Effect, including the comment of the Bureau for Historic Preservation, must be submitted to the Advisory Council on Historic Preservation, 1522 K Street, N.W. Washington, D.C. 20005.

Sincerely,



LARRY E. TISE

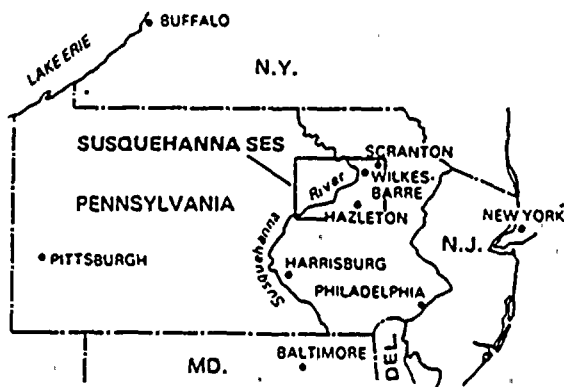
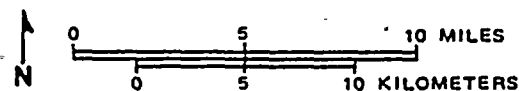
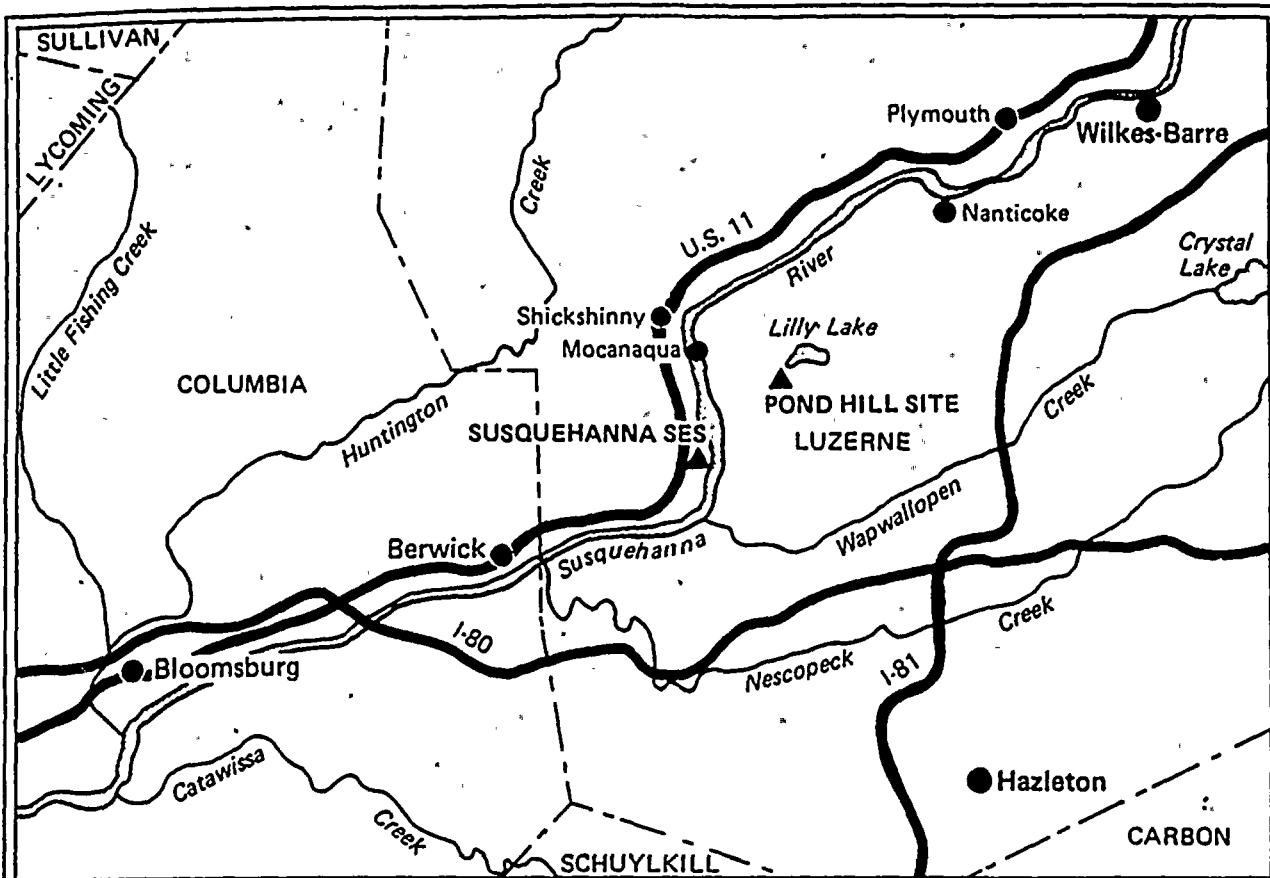


FIGURE 1

LOCATION OF SUSQUEHANNA SES AND POND HILL SITES IN PENNSYLVANIA

SUSQUEHANNA S.E.S.

Archeological Investigations At The Susquehanna S.E.S. Floodplain

E



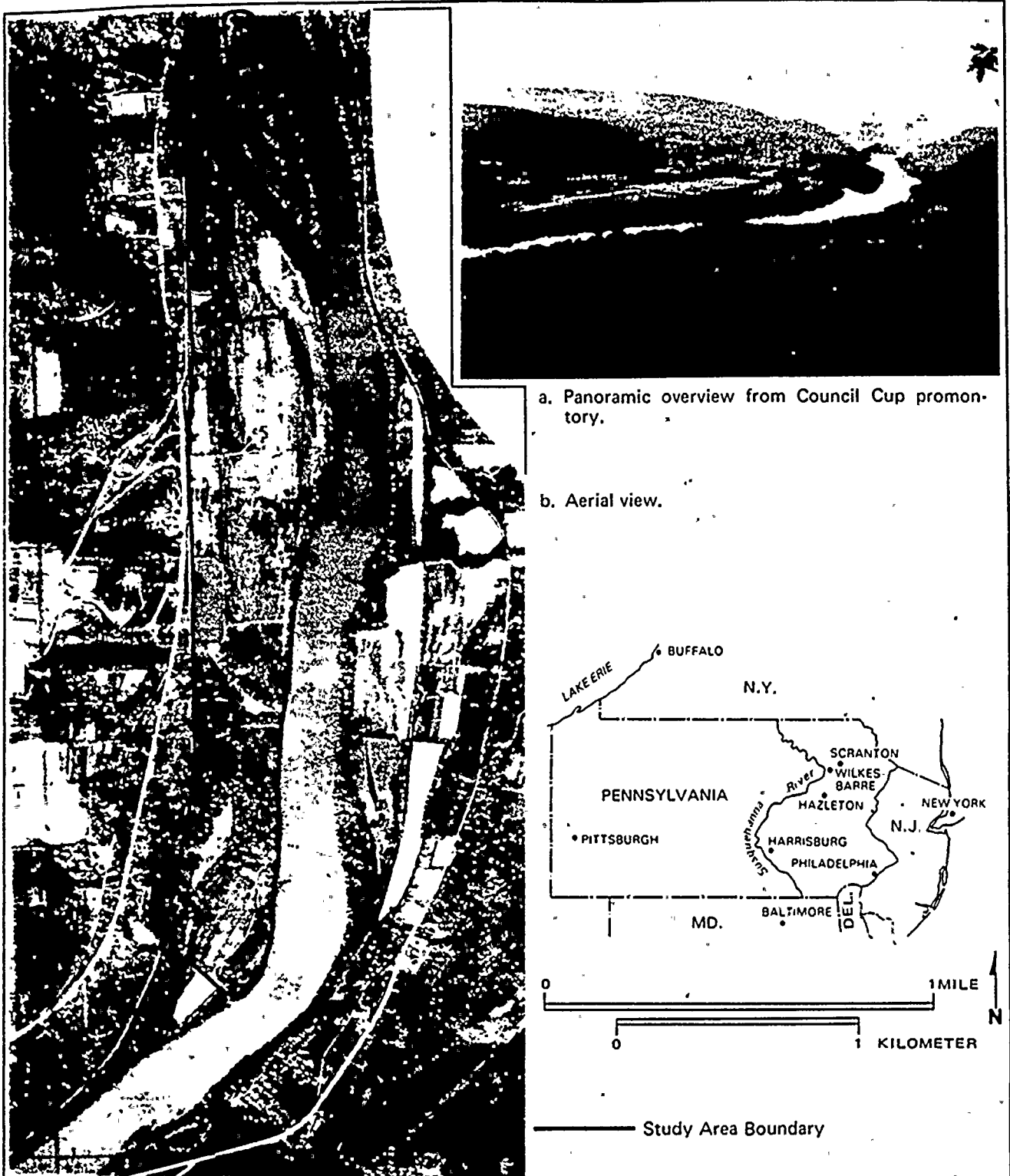


FIGURE 2

THE S.E.S. FLOODPLAIN GEO-ARCHEOLOGICAL TESTING AREA

SUSQUEHANNA S.E.S.

Archeological Investigations At The Susquehanna S.E.S. Floodplain





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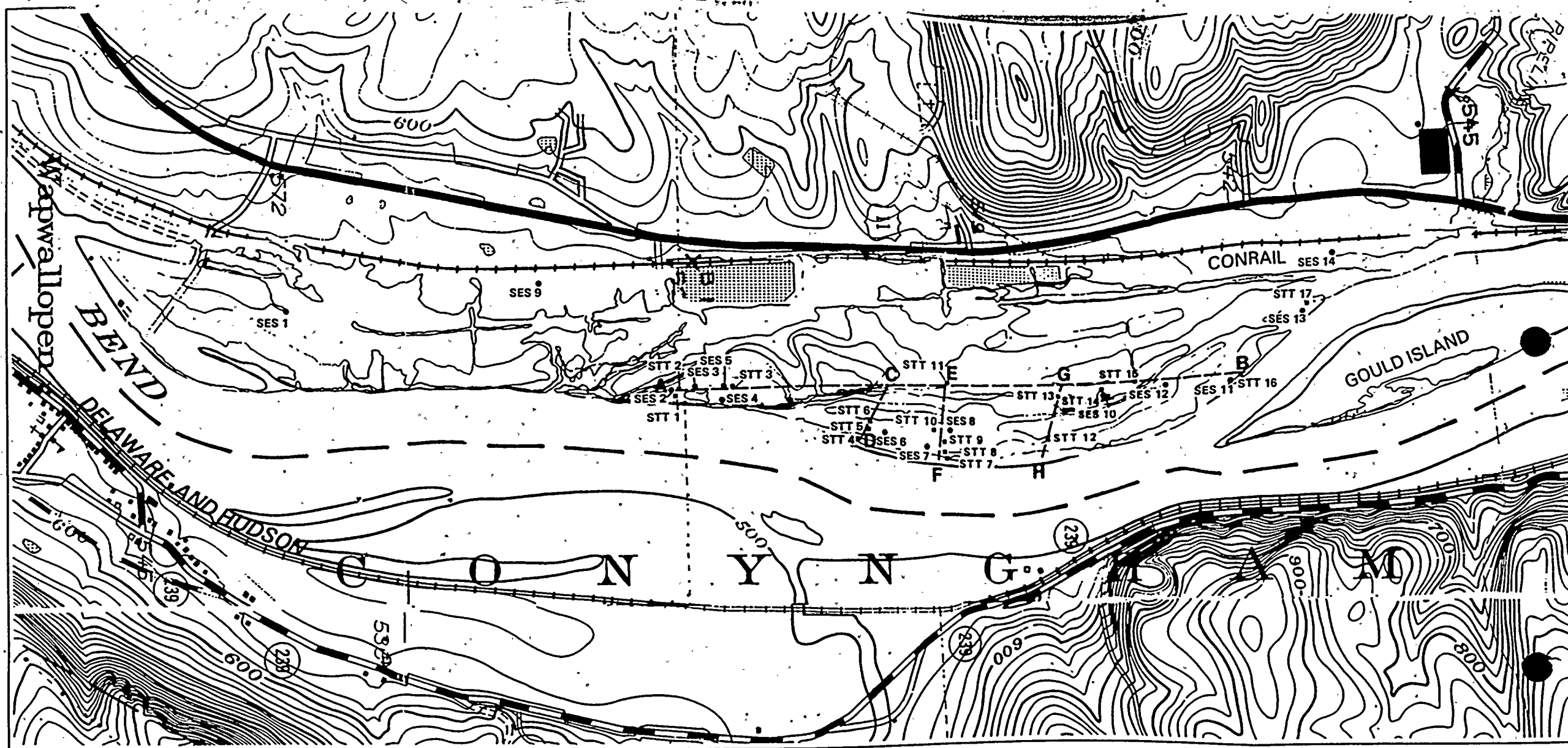


FIGURE 3

LOCATION OF TRANSECTS,  
DEEP TEST TRENCHES, AND  
ARCHEOLOGICAL LOCALITIES  
ALONG THE SUSQUEHANNA  
S.E.S. FLOODPLAIN

SUSQUEHANNA S.E.S.  
Archeological Investigations  
At The Susquehanna  
S.E.S. Floodplain

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GEOARCHEOLOGICAL TEST TRENCHES  
EXCAVATION UNITS  
TRANSECT LINES (see text)

