APPENZELL #1 & #2 138 kV LINE PHASE I ARCHAEOLOGY MANAGEMENT SUMMARY AND RECOMMENDATIONS

This proposed 2-mile route would connect to the existing 138-kilovolt Siegfried-Jackson transmission line, about 1.5 miles northeast of the village of McMichael, on the east side of Jackson Road. The new 138-kilovolt transmission line would proceed southeast, paralleling Jackson Road for about 2,000 feet. At this point, the new transmission line would turn south, crossing Price Drive and Mountain Road, and proceed for about 5,500 feet before crossing Mountain Road again, north of Frailey Road. After turning southwest, the new transmission line would proceed for about 3,000 feet and cross Route 715 west of Mountain Road. The new transmission line would then turn east and proceed for about 1,500 feet, generally paralleling Route 715 to the south.

The transmission line would end at a new substation that would be built southwest of the Route 715 and Miller Road intersection, about a half-mile from Appenzell. The new substation will step down power from 138 kilovolts to 12 kilovolts so it can be sent to homes and businesses in the area. The substation will be within a fenced area of 104 feet by 136 feet located on 2-3 acres of land. The substation will contain one transformer and two lines; a control shed; and structures to support incoming transmission lines and new distribution lines. PPL Electric Utilities plans to build 2 miles of new 138-kilovolt transmission line to connect the new substation to PPL's existing Siegfried to Jackson 138-kilovolt transmission line. The new steel poles will be between 95-105 feet high.

The objective of the Phase I study was to determine if there will be any impact to potentially significant prehistoric cultural resources within the proposed construction corridor for the Appenzell transmission line. Given the fact that the line will not cross any streams which have the potential to contain deeply buried prehistoric cultural resources, deep testing was not warranted or recommended by the PABHP.

Geologically, the area is situated in the Glaciated Poconos Plateau section of the Appalachian Plateaus physiographic province. The principal soils along the proposed transmission line corridor are primarily formed in late Wisconsin glacial till of Olean Subage (22,000 to 18,000 yrs. B.P.). The soils formed in this till and along the corridor

range from well drained to very poorly drain. Texturally, the soils are extremely rocky with large cobbles and boulders scattered on the ground surface and within the soil profile. This is attested by the fact that along all of the farm fields, the adjacent wooded tracts contain large boulders and cobbles removed from the fields over the years to allow for plowing and disking.

A typical profile encountered in a wooded tract consisted of a 2 cm to 3 cm thick organic O-horizon which was then underlain by a 5 cm to 10 cm thick dark brown cobbly pebbly sandy loam A-horizon. The A horizon was in turn underlain by a yellowish brown to brown (often mottled) cobbly pebbly loam sand to sandy loam C-horizon. In several areas, the till soils which mantle the ground surface were then underlain by a well sorted sands deposited as ice-contact stratified drift. The bedrock units which are capped by the Olean till include Devonian age sandstones, siltstones, and shales ascribable to Walcksville Member, Beaver Dam Run, and the Long Run Member. All three members are primarily comprised of thick sandstone beds with shale interbeds; not surprisingly the large rock clasts in the Olean Till and the associated soils developed on the till are chiefly comprised of these sandstones and shales. The soils encountered at the small stream crossings within the study area contain a thin package (less than 1 m thick) of coarse grained alluvium of recent age. The coarse nature of these immature Entisol order soils documents the effects of historic deforestation and flood scouring along these small first order streams. In fact during, the field studies, the low bottom zone along these small tributaries were inundated by flood waters for several days.

Testing along the proposed power line corridor was broken down into seven distinct zones or areas designated A, B, C, F, G, H, and J. In each area testing was accomplished by standard shovel test probes. As noted earlier, none of the landforms (flood plain, valley slopes, and uplands) along the proposed power line corridor contain a thick (> 1m) package of Holocene age soils. In fact, all of the investigated soils to date either have formed in late Wisconsin age glacial till or occur along the narrow, recently constructed valley bottom zone of small first order tributaries. All shovel test probes were excavated at least 20 cm into the subsoil (C-horizon) or to a nominal depth of 40 cm below ground surface. The soil fill material from each probe was screened thru ¼ inch mesh hardware

cloth. All probes were mapped in the field using standard soil nomenclature as defined in Soil Taxonomy (1970).

Prior to and concurrent with Phase I archaeological field investigations, extensive Phase I background research was undertaken and completed for the study area. The types of Phase I research that were conducted included informant interviews; archival searches, literature reviews, and a P.A.S.S. site file examination. A search was also made for information available on previously known and/or recorded archaeological sites located within or adjacent to the project area. Examined sources included unpublished research papers and regional survey reports, published articles and tomes, previous cultural resource management reports completed on other project situated in or bordering the general project area. Finally, topographic maps, soil reports, geologic reports, and attendant site forms maintained at the William Penn Museum in Harrisburg were reviewed.

To date, a continuous line of shovel test probes excavated at 15 meter intervals were emplaced along the proposed power line corridor in all areas which exhibited slopes of less than 15% (8 degrees); for the most part, this included nearly the entire power line corridor. The results of this exhaustive shovel testing program were negative for the identification of any potentially significant prehistoric or historic cultural resources. The only artifacts found to date were several pieces of rusted iron, several nails, a single 22 caliber long shell casing, and several broken pieces of white ware. The absence of any prehistoric cultural resources was not unexpected given the very rocky and often poor soil drainage conditions present within much of the study area and the absence of any moderate to large drainage lines bordering or nearby the proposed transmission route.

Given all levels of inquiry, there are no potentially significant prehistoric or historic cultural resources present that will be impacted by the proposed Appenzell power line corridor.

This summary was provided to PPL Electric by Dr. Frank J. Vento PG-001831-G, Professor of Geology, Clarion University of Pennsylvania.