



December 30, 1982

David J. Wambold  
Supervising Biologist  
Environmental Services  
Union Electric Company  
P.O. Box 149  
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Re: Draft Reports, Cultural Resources Survey and Management Plan,  
Union Electric Callaway Nuclear Power Plant, Callaway County, Missouri

Dear Mr. Wambold:

The Missouri Historic Preservation Program has reviewed the draft 1982 report entitled "A Cultural Resources Management Plan for Residential Lands at the Union Electric Company Callaway Nuclear Power Plant, Callaway County, Missouri" and "A Phase I Cultural Resources Survey and Assessment on Residential Lands at Union Electric Company's Nuclear Power Plant, Callaway County, Missouri". Based on this review, we have the following comments:

1. A completed Missouri Historic Preservation Program's Cultural Resource Survey Project Summary Sheet accompanied by appropriate U.S.G.S. topographic maps must be provided to this office.
2. The federal agency involved should be identified in the abstract, introduction, and on the title page. In this instance, the Nuclear Regulatory Commission (NRC) is the federal agency.
3. The term "cultural resource element", as utilized in the Abstract and elsewhere in the report is not a generally accepted term. It is recommended that "property" or "site" be substituted for "element".
4. Appropriate legends, including quadrangle names, scale, north arrow, etc., must be included on all U.S.G.S. topographic maps within the report. Also all maps are poorly reproduced. This should be corrected.
5. Site descriptions are difficult to follow as presently organized. Sequential numbering would be far superior for locating a specific site description. Discussions of impacts to sites and recommendations are necessary and should also be included for each individual site.
6. Site descriptions should mention, at least in the broad category (upland, prairie etc.) what other resources might be available, i.e. subsistence resources, lithic resources, etc. It is suggested that an estimate be made at the nature of the activity(ies) conducted. For example, scrapers, according to angle and wear, indicate hide working vs. woodworking.
7. Pages 186-199. As knapping and sharpening were continual and frequent pursuits of prehistoric populations, one could just as well describe any site as a knapping station.
8. Map 16 is too small of scale to be readable. Also, on all maps sites must include at least county designations as well as site number.

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9. Page 4. These figure headings are not sufficiently complete to stand by themselves and should be clarified.
10. Page 16, 3rd paragraph. It is questioned that this is a Winterset formation chert (see comment 40).
11. Page 28-30. Caution should be employed in utilizing environmental data from southwestern and southeastern Missouri in order to attempt to use environmental regimes in central Missouri at the edge of the Prairie Peninsula. While much of this may be applicable to northern Missouri, it should be pointed out that the project area is not even in the same environmental area.
12. Page 31. It should be noted that although there is evidence of man in the New World as early as 22,000 B.P., there is no conclusive evidence for Early Man in Missouri.
13. Page 31, 1st paragraph. The report fails to reference the recent work at Arnold Research Cave which was conducted by the University of Missouri - Columbia (O'Brien et al), as well as the recent Moreau River surveys (Sturdevant) and Columbia investigations (Schmits). As this project area is in close proximity, more detail should have been taken from these recent investigations.
14. Page 35. The discussion of the Early Archaic presented by Teter & Warren (1979) on page 246 should be qualified, as elsewhere in Teter & Warren it is called Dalton, and with a corrected date of 7390±280 B.C., it is in line with other dates from the other Dalton sites in Missouri.
15. Page 35. 23GA14 (Hermann Site) is not Early Archaic. The single radiocarbon date is Middle Archaic.
16. Page 36. It should be noted that there is a significant difference within the Middle Archaic assemblages from other sites in the area. Also, the Middle Archaic is well dated at the Hermann Site (Schmits 1982, listed as Wright in References Cited) as well as at 23B0964. (Schmits 1982)
17. Page 38. Teter & Warren (1979) have conflicting information. Table 8.1, page 234 of Teter & Warren, does not substantiate the dates presented on pages 247-248. The dates of 2100±100 B.P. from the Middle Woodland level were rejected (Teter & Warren 1979:235) and there are no dates anywhere in the text suggestive of an Early Woodland occupation. In addition, Klippel's (1972) Collins Site is a poor example of Early Woodland. O'Brien (1979:63) as well as others believe that the site is multi-component Archaic/Woodland. Most of the features were intersected at the base of the plowzone, and it cannot be determined what the levels of pit origins were. While the cited dates are generally accepted as Early Woodland, the dates for Early Woodland have not been firmly established in Missouri. Without pottery, calling it Early Woodland is questionable as the basis of defining any Woodland component is the presence of Woodland pottery. Also there is no basis for equating contracting stemmed projectile points with Early Woodland in Missouri.
18. Page 39. Non-Hopewell Middle Woodland assemblages are common in Missouri. While Hopewell occupations occur to the east and west along the Missouri

River, most of the state is dominated by non-Hopewellian Middle Woodland period sites. It would be appropriate to acknowledge this situation.

19. Page 49. The National Register nomination for 23CY20 was sent to the Department of the Interior but returned because of insufficient documentation. Thus, it is still considered to be a pending nomination; it has not been "refused".
20. Page 133, 3rd paragraph. When the authors refer to an area "...sufficient to determine the number of cultural resources present", what factors did they use to determine sufficiency of areas surveyed? Also does the management plan take into consideration cultural resources which are presently unidentified, buried or otherwise currently unknown sites within the project area?
21. Page 134, 3rd paragraph, lines 13-15. Stability does not in itself promote growth and complexity. Society does not change if it is stable. Only through forced change in adaptive subsistence potential does any society alter its technology (i.e. means of effecting adaptation to an environment) or, especially, its social organization.
22. Page 134, 3rd paragraph, line 11. "Adaptation" and "adjustment" are not the same thing.
23. Page 135, 1st paragraph. Technology and settlement patterns have a direct bearing on such "inappropriate" topics as social organization and subsistence.
24. Page 136-137, last paragraph. Please provide an indepth explanation of why the authors assume that primarily only a general hunting and gathering form of subsistence was prevalent for the prehistoric inhabitants within the project area.
25. Page 140, 1st paragraph. Were the isolated finds also mapped in detail and reported to the Archaeological Survey of Missouri?
26. Page 140. In respect to the definition of "site", how large or small of a circumscribed area is intended to be included? Also, the definition of site types is too vague; the authors should cite source(s) of definitions, if appropriate.
27. Page 140, 3rd paragraph. As organics can be quickly leached from the soil and usually are preserved readily only when quickly buried, the presence of organics to define habitation sites should be used cautiously.
28. Page 142, 3rd paragraph, line 9. What is the basis for this tentative scaling? Some basis for this is required other than species discussions. A limited number of species with high volume may yield higher biomass. Some form of index would be better than this (e.g. quantity by environmental areas).
29. Page 145. What was the rationale for limiting the hypothesis presented to hunter-gatherer subsistence/procurement strategies only?
30. Page 145-146. Hypothesis 1 cannot be tested until some index for scaling potential resources is accomplished. Simply to say that you assume re-

source areas have no order may have no basis in reality. Also, site location is a result of a matrix of choices by aboriginal populations. One factor by itself may not have a major effect on choice of site location. This hypothesis is simply not testable until more detailed work is done.

31. Page 146. Hypothesis 2 suffers the same drawbacks as the first hypothesis.
32. Page 146. Hypothesis 3 is far too broad to have much validity. The hypothesis is couched in terms of a general law rather than a suitable, testable hypothesis.
33. Page 146. Hypothesis 4 suffers from much the same problem as hypothesis three.
34. Page 145-147. The hypotheses presented are inappropriate, broadly generalized, and fail to address a single valid research question formulated by other intensive investigations in central Missouri, e.g. Schmits, O'Brien et.al. etc.
35. Page 161. A topographic map of the project area indicating percentage of vegetation/visibility and areas actually surveyed with approximate locations of shovel tests should be included.
36. Page 163, 1st paragraph. Detailed sketch maps of all sites located during this investigation should be included within the main text or in an appendix.
37. Page 175-183. The detail of discussions presented in the "Chert Resources Survey Section" is considered to be too extensive for this level of investigation. It would be more appropriate as an appendix.
38. Page 201. Discussion of sites in survey area are listed by environmental zones rather than sequentially. This is confusing when trying to locate a specific site. Furthermore, we have some serious reservations about the zone referred to as "Dissected Upland/Bottomland Forest Edge." This term appears to consist of a combination of two and possibly three vegetational communities, which probably consists of slope forest, floodplain forest and edge communities.
39. Plate 12, page 275 and others. Many of the tools are referred to as projectile points in the text but referenced as "projectile points/knives" in the illustrations.
40. Page 283 and 357. Winterset limestone is a member of the Kansas City group which is known to outcrop in western and northwestern Missouri. It is questioned that Winterset chert outcrops 18 km north of the Callaway project area. If it does, this would be an anomaly worth discussing in more detail. It is also interesting to note that on page 357, the source for Winterset chert has migrated 8 km to the south, i.e. only 10 km from the project area.
41. Page 297, Plate 13c. This is not Graham Cave Notched.
42. Page 352. Again, as there is no firm basis for ranking environmental areas, this test is nearly meaningless.



43. Page 352. Environmental zones were ranked in decreasing order of food importance. What is the basis for this ranking? We question that a prairie forest edge zone would have more resources than upland oak hickory forest. The possible incorrect ordering of these zones may account for the lack of significant correlation between food resource potential and site density.
44. Page 355, paragraph 3. We question the use of the term "social complexity". A large number of different site types does not necessarily equate with social complexity. Hunters and gatherers usually will have a greater number of site types than will more "complex" social organizations.
45. Page 355. Hypothesis 2 - This is not a test but is simply intensive observation.
46. Page 356. Use of the terms "field camp" and "limited activity sites" should be explicitly defined.
47. Page 357. Hypothesis 3 - Same as comment hypothesis 2. (No. 45).
48. Page 357. What is the basis for identification of Winterset chert in Audrain and Monroe Counties? *see Appendix 10*
49. Page 389, line 1. This is not a Graham Cave Notched point.
50. Page 391, paragraph 2. Grantham (1977:179) says nothing about blending of Late Archaic and Early Woodland.
51. Page 392. Grantham (1977:200-201) - This is an overview of the entire drainage. It does not refer to the reservoir area alone. Removal of the word "prominent" is recommended.
52. Page 401. Is this project designed to inventory and evaluate or to inventory and make recommendations for evaluation of potentially National Register eligible resources? There appears to be a lack of attention paid to proper CRM terminology or scope of work.
53. Page 417-418. These criteria are heavily weighted toward large, dense sites. It is seriously doubted that this has any basis in terms of potential research applicability. This is an arbitrary choice of criteria. Without reference to any specific research design which can successfully exclude certain site, after they have been adequately evaluated, these criteria are meaningless.
54. Page 418. Twenty-five sites are considered potentially significant and National Register eligible. What is the basis for determining the remaining properties non-eligible? This should be clearly documented on a site by site basis.
55. Page 436. If sufficient data is available to make National Register evaluations, i.e. determination of National Register eligible and non-eligible as called for in the scope of work, we question the recommendations for further Phase II testing. It would appear that the author is attempting to generate more work.
56. Page 426. The term "conservative protection boundary zone" should be defined.

Regarding Historic Section of the report, the first part of this section is basically filler and is irrelevant to the area in question. A rehash of the history of Missouri gleaned from outdated sources is not needed, and makes no contribution whatsoever. A full 20 pages pass before we are finally introduced to Callaway County. But even after this point the study shifts in and out of focus, occasionally discussing Callaway County, relying mainly on outdated sources and the rest of the time giving the unnecessary generic history of various themes in Missouri history such as hemp growing, slavery, the Civil War, railroads, agriculture, etc. The only specific study of slavery in Callaway County, Scarpino's, was cited but obviously not read; nor was Scarpino's Missouri Historical Review article on this subject.

It is obvious that the authors of this section preferred to produce a superficial piece of work that has little value from a cultural resource management point of view and which will offer no guidance whatsoever towards evaluating the material culture of the region. The only reliable research tools for doing the type of history needed for the specific project are census records. For the years 1850, 60, 70, and 80, exact figures for the individuals residing within the survey area could be computed including family sizes and ages, number of slaves, real estate holdings and values, quantities and values of livestock and crops. Two things that would probably be revealed are that residents within the survey area had fewer slaves than the norm for Callaway County, and that they, as did most southerners, practiced diversified agriculture and raised little hemp or tobacco. As it is, the authors have simply not provided a meaningful context with which to confront the cultural resources in the area. The Historic Section is far short of the state of the art.

In respect to the Architectural Overview, it is more focused on the project area than the previous section and based on better sources such as Marshall, Scarpino, and the agricultural census. Relative to the inventory forms, we were happy to see the excellent floor plans and photographs. A question could be raised concerning the plan of Inventory #4. Dotted lines should indicate the original fenestration which was likely window-door-door-window, and, if so, this structure is firmly within Little Dixie building tradition. Having noted the above, it is necessary to point out some serious weaknesses. As in the Historical Section, the context is poorly established. The development of the region's architecture is presented too simplistically, and suggests that the author does not have a firm grasp of the subject. The historical photo collection at the State Historical Society seemed not to have been consulted, nor was the Historical American Buildings Survey (HABS) records for Callaway County, which is on microfich in our office. Here are shown views of such early double pen houses as the Holman House near Mokane, which indicate the historical depth of the regional context of the later double pen houses of the survey area. In Portland are other early examples, and there is an excellent double pen "I" house south of Readsville, mention of which would have provided a sharper context. The examples in the study area are at the end of a long tradition of southern architecture in the region, but the sense of this tradition does not seem to be fully understood or appreciated by the author. The bibliography also indicates that the author is not acquainted with the basic literature on vernacular southern architecture. And there is no specific context of the project area to contrast against the vague regional one based on Scarpino and Mayer and Hammer. No history of the occupants of a single house within the survey area is given, nor is there any indication that the slave schedules or agricultural census records for individuals residing within the area were consulted to demonstrate that the authors' generalizations on these subjects are valid and relevant to the project area. No profile or analysis of

the actual farmsteads within the area is offered. At the end of this report we still know virtually nothing about the actual and real people who inhabited the project area over time, and yet we have reams of padded and irrelevant paper work.

As for National Register eligibility, structures illustrated on Inventory Forms #2, 4, 11, 12, 15 and probably 20 and 21, architecturally represent fragments of a wide-spread regional southern culture that persisted from the initial settlement period through ca. WW I. Their significance derives from this fact and is established as much by the form (floor plan) as by the fabric (even if that fabric is clad in modern siding). An appreciation of that context is therefore essential to the evaluation, from a National Register eligibility standpoint, of these humble and simple structures. Unfortunately, that context is not clearly addressed in the report.

In summation, it is the opinion of the Missouri Historic Preservation Program, that the aforementioned properties are potentially eligible for inclusion in the National Register of Historic Places as important extant examples of traditional southern vernacular architecture in the Trans-Mississippi West.

In conclusion, the Missouri Historic Preservation Program does not agree with the recommendations proffered in the report concerning the National Register of Historic Places eligibility of the cultural resources located within the Callaway Nuclear Power Plant project area. The report fails to provide sufficient explicit documentation to support the determination of eligibility or non-eligibility on an individual basis for the cultural resources involved. We feel major fundamental problem for this are the eight "criteria" presented on page 417-418 to evaluate cultural properties to ascertain National Register eligibility are not the criteria set forth in 36CFR Part 60 and utilized by the Department of the Interior in determining National Register eligibility but are arbitrary in nature. Therefore, they are inappropriate in determining eligibility from a legal framework.

Furthermore, we do not believe that the statement presented on pages 435-436 that a National Register District is not warranted because of it is "not in the best interest of U.E. Company" is not sufficient justification, neither from a professional point of view or based on the Criteria set forth in 36CFR Part 60. It is obvious that the authors place the opinion of the client over the importance of the protection of the cultural resources.

In addition, the report fails to fulfill Section 5.0(h) of the Scope of Work which states that the contractor...~~conduct sufficient investigations to~~ satisfactorily evaluate such sites [discovered] in terms of published criteria of eligibility for the National Register of Historic Places...All sites located within the study area must be fully evaluated and complete documentation forwarded in order to substantiate recommendation of eligibility (or non-eligibility) for the National Register." However, on pages 435 and 440 of the report it is recommended that Phase II archaeological testing be conducted for sites which the authors feel are potentially eligible for the National Register. This evaluation, in accordance with the Scope of Work, should have already been completed.

In regards to the Cultural Resource Management Plan, we are unable to provide substantive comments as we are in disagreement with the authors as to which properties are eligible for inclusion in the National Register. However based on preliminary review, we are in general agreement with the section on

Management Recommendations and Guidelines, with the aforementioned exception which specifies properties as eligible.

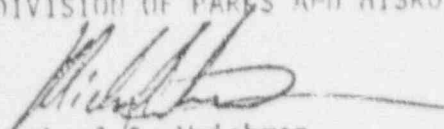
It is the opinion of the Missouri Historic Preservation Program that collectively, the archaeological and architectural resources located within the Callaway Nuclear Power Plant project area constitute an historic district. Furthermore, contrary to the authors basic assumption, the review process mandated by Section 106 of the National Historic Preservation Act is timely and efficient. Given the significance of the cultural resources present within the project area, we feel that the protection of these non-renewable resource supercedes any "...possible inconvenience which may occur from state and federal review"(page 435) and by employing a district, will greatly reduce future review processes and will result in substantially less paper work than dealing with sites individually.

It is the recommendation of this office that the draft report and management plan be revised to address the aforementioned comments, including explicit documentation supporting National Register eligibility or non-eligibility of the cultural properties involved and the report returned to this office in draft form for further review and comment. Pending completion of the Section 106 process, Union Electric should refrain from taking or sanctioning any action or making any irreversible or irretrievable commitment that could result in an adverse effect on any potential National Register eligible property or which would foreclose the consideration of modifications or alternatives to the proposed undertaking that could avoid, mitigate, or minimize such adverse effects.

If I can be of further assistance, please call or write.

Sincerely,

DIVISION OF PARKS AND HISTORIC PRESERVATION

  
Michael S. Weichman  
Chief, Review & Compliance

MSW:c1

cc: Ron Anzalone  
Michael Quinn  
Dr. Louis Bykoski