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PROJECT MANAGER ____
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Regulatory Docket File

United States Department of the Interior
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

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Mr. William H. Regan, Jr.
Chief, Environmental Projects Branch 4
Division of Reactor Licensing
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Regan:

We have reviewed Supplement No. 6 to the environmental report for Palo Verde Nuclear Generating Station, Units 1, 2 and 3 Arizona. The following comments are provided for your technical assistance only as they do not represent formal review comments from the Department of the Interior.

COMMENTS ON SUPPLEMENT NO. 6

The supplement is inadequate with regard to the evaluation of impacts upon Lake Mead National Recreation Area (NRA). The proposed transmission line corridor appears to border Lake Mead NRA (Figure S6-10.9-1, sheet 2) and the statement indicates under Section S6-2.3.2.2 Natural Areas, that the proposed transmission line passes close to Lake Mead NRA. The extent of any direct and/or indirect impact upon this important scenic, recreational and educational resource should be included under this impact section.

The section Rare Species (paragraph S6-4.2.1.1.3.7) refers to Section 4.2.1.1.3.7 of the environmental report for all impact information. The correct section to refer to should be 4.2.1.1.3.6; however, the little information contained in this section is inadequate for Project No. 4. The environmental report contains information relating to the generating station and little information relating to transmission lines of Project No. 1, 2 and 3. It does not provide information on rare, threatened and endangered species habitat within the proposed project. The proposed Project No. 4 occurs nowhere near the other projects described in this report. The report should show breeding areas and habitat of all rare, threatened and endangered species within the Project No. 4 impact area and describe in detail, potential impacts upon protected wildlife and mitigation measures to be implemented for their protection. There are two endangered species (United States Department of the Interior, Fish and Wildlife Service, 1974. The

United States List of Endangered Fauna.) which are not included in the report but have known distributions in Arizona and the southern Colorado River area:

Southern Bald Eagle - Haliaeetus l. leucocephalus (Linnaeus)
Yuma Clapper Rail - Rallus longirostris yumanensis (Dickey)

The desert tortoise (Gopherus agassizii) is also considered endangered and should be discussed in the report. (International Union for the Conservation of Nature and Natural Resources, Survival Service Commission, 1968.) The desert tortoise has a present distribution in Northern Arizona and Utah. Also occurring in the Northern Arizona area is the poisonous Gila monster (Heloderma suspectum), the status of which is as yet undetermined. (U.S. Department of the Interior, Fish and Wildlife Service, 1973. Threatened Wildlife of the United States.) The report should include coordination with the Fish and Wildlife Service on the project impact on rare and endangered species.

The supplement presents inadequate documentation of the factual data necessary for our review. Until such factual data are available regarding the presence or absence and significance of archeological resources along the proposed transmission corridors, access roads and proposed plant site, it is impossible for us to evaluate either the impact of the project or its alternatives upon the archeology of the area.

The two areas of historic interest (paragraph S6-2.3.2.1 and page 2-81 in the Environmental Analysis) should be evaluated for their National Register of Historic Places potential in accordance with the criteria set forth in Title 36, CFR 800.10, and the potential impacts evaluated as specified in Title 36, CFR 800.4.

The judgements made in the supplement (paragraph S6-2.3.2.3.1) regarding the significance of archeological sites discovered on or along the proposed corridor, need to be documented by full descriptions and evaluations of these sites in accordance with Title 36, CFR 800. This section should be expanded to include a discussion detailing specific measures to be implemented upon the discovery of archeological sites. Wherever possible, we would recommend impacts to sites be avoided, as site loss due to any action, including salvage excavation results in a reduction in the amount of such resources remaining for future examination and an irreversible loss of potential scientific information.

The creation of 123 miles of new access roads, (paragraph S6-10.9.1.1.6.5) has a significant potential for adverse impacts to the archeological resources of the area. This fact should be recognized and given

consideration in the design and planning of the project. It appears that the new access routes have been given field inspection and evaluation (page S6-10.9-9). These routes should be surveyed by a professional archeologist. The archeologist's report and recommendations should be included in the final supplement. Any significant sites, discovered during the survey should be evaluated for National Register potential. The effect of increased access to motorists upon the cultural resources of the area should be considered as a potential indirect impact.

Again, in paragraph S6-10.9.1.1.7.13, assessment of potential impact of a Federal project can only be made on the basis of hard factual data as to the presence or absence and significance of sites in the transmission corridor and at the plant site.

The use of sensitivity maps (i.e., the concept of areas of archeological sensitivity) is inappropriate when compliance with Federal legislation is involved. Sensitivity maps are predictive models that are useful in long term planning, but will not substitute for concrete data required for actual projects that will involve Federal agencies. Sensitivity maps represent probabilities as to certain archeological surveys of varying quality and over only a small percentage of the area. Often, such maps are projections based on present land forms and water distributions coordinated with expected occupational patterns of the prehistoric peoples. Thus, they are predictive models and are not an adequate substitute for hard data.

In previous projects involving transmission line construction, damage to archeological resources has been largely avoided by implementation of the following procedures: After a corridor route has been chosen, a reconnaissance archeological survey locates major resources within the corridor. In this manner, it is possible to adjust transmission tower locations to avoid the identified sites, and an archeological survey team then accompanies the project surveyers in the final placement of the towers to avoid any archeological resources not identified in the reconnaissance survey. Adequate programs should be provided to recover those to be affected by roads, construction camps, etc. Such action greatly reduces the amount of damage done to archeological sites by construction. It also reduces the amount of mitigating salvage excavation necessary while still providing hard data regarding the resources present in the corridor. However, it is inappropriate with Title 36, CFR 800 to undertake mitigative activities, such as excavation or extensive collection, without first complying with the requirements of Section 106 of the National Historic Preservation Act of 1966 and Sections 1(3) and 2(b) of Executive Order 11593. The necessary steps to follow in order to comply with these requirements are set forth in Title 36, CFR 800.

Any reports on the archeology of the project area should be sent to the National Park Service, Western Archeological Center, P. O. Box 49008, Tucson, Arizona 85717.

We appreciate the opportunity to comment on this supplement of the environmental impact report.

Sincerely,

Bruce M. Kilgore

Bruce M. Kilgore
Associate Regional Director,
Professional Services