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SUBJECT: Forwards comments re facilities DES.Inadequately addresses issues re EPA stds for radiation levels & emergency response planning.Also addresses potential see page tran evaporation ponds holding cooling tower effluent..

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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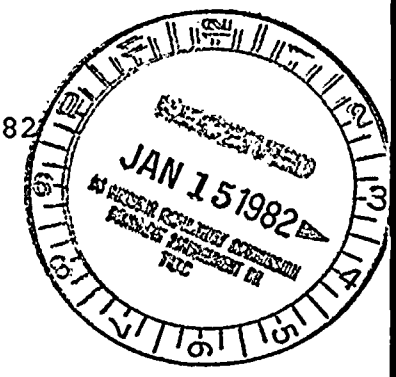
San Francisco, Ca. 94105

January 12, 1982



Mr. Frank J. Miraglia, Chief
Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20055

Dear Mr. Miraglia:

The Environmental Protection Agency (EPA) has received and reviewed the Draft Environmental Impact Statement (DEIS) titled THE OPERATION OF PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, and 3.

The enclosed comments discuss specific areas of concern which our review has shown to be inadequately addressed in the DEIS. These issues include the EPA's standards for radiation levels, emergency response planning, and other factors which warrant further discussion. In addition, our comments address potential seepage from evaporation ponds holding cooling tower effluent.

We appreciate the opportunity to review and comment on the operational phase of Palo Verde Nuclear Generating Station, Units 1, 2, and 3. If you have any questions regarding our comments, or if further information is required, please contact Susan Sakaki, EIS Review Coordinator, at (415) 974-8137 or FTS 454-8137.

Cordially yours,

SONIA F. CROW
Regional Administrator

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Radiation Comments

1. The DEIS states on page 5-39 that "Emergency preparedness plans including protective action measures for the Palo Verde facility and environs are in an advanced but not yet fully completed stage." The draft plan has not been issued, and EPA is unaware of any activity beyond preliminary planning. Thus, there is no evidence that the critical issues of public safety have yet been addressed, including establishment of planning zones and protective action guides, as well as design of the information network. The EPA assumes that the State of Arizona will have a plan in place by the time Palo Verde Nuclear Generating Station (PVNGS) is scheduled to be ready for operation. The statement, however, as presented in the DEIS, is misleading and should be corrected.

2. Although the radioactive-waste-management systems may be designed to comply with 10 CFR 50.34(a) (Domestic Licensing of Production and Utilization Facilities), we find no statement indicating that 40 CFR 190 (Uranium Fuel Cycle Standard) will be enforced. A statement to this effect should be included in the Final Environmental Impact Statement (FEIS).

3. The staff's intent in the discussion presented in Section 5 (5.9 Radiological Impacts) is not clear. The discussion of 10 CFR 20 (Radiation Protection Standards) does not apply to the operation of a nuclear power reactor. In fact, the 100 mrem exposure in any 7 consecutive days (page 5-16) would exceed the allowable annual exposure of 25 mrem to the whole body or to any organ, as indicated by 40 CFR 190.

   Further, we recognize that the DEIS incorporates some updated material previously published in 1975 as part of the EIS for the Construction Phase of Palo Verde, Units 1, 2, and 3. Statements regarding doses still require updating (page 5-18). Regulations establishing the Uranium Fuel Cycle Standard (40 CFR 190) have been issued since the previous document was published. "Radioisotopes in the station's effluents that enter restricted areas will produce doses to members of the general public through their radiation at levels similar to the doses from background radiations (cosmic, terrestrial, and internal radiations)," does not appear to reflect the fact that an operating reactor produces doses equivalent to a very small percentage of the natural background. This statement should be clarified.

4. The DEIS uses a dose commitment period of 50 years. This should be changed to reflect a period of 70 years, as used by the EPA mortality-morbidity studies, which more closely matches the population's life expectancy.

5. The occupational dose indicated in the DEIS (pages 5-21) and expressed in 10 CFR 20 is not necessarily satisfactory. The EPA estimates for the year 1975 indicate 130,000 person-rems and 26 premature deaths based on 200 fatal cancers per 1,000,000 person-rems. Thus the fatality incidence rates (now 23) as indicated in Table 5.6 would become 37.

6. Recent findings by the Nuclear Regulatory Commission (NRC) (docket 50-2-6 October 16, 1981) would seem to contradict the statement contained in the DEIS regarding direct radiation for Pressurized Water Reactors (PWR's) (page 5-22). The DEIS indicates that there is virtually no increase in background radiation. It is our understanding that during the operation of San Onofre the exposure adjacent to the reactor is of such a magnitude that would prevent an exposure of 12 microrem per hour from being detected. We note that an increase of 3 microrem per hour for one year is approximately 25 mrem.

7. The DEIS mentions the airborne emissions of krypton (page 5-24) and discusses 40 CFR 190 (page 5-26); however, there is no discussion provided regarding the NRC's responsibilities for limiting the krypton-85 releases to less than 50,000 curies by January 1, 1983. The FEIS should address the need for any controls at Palo Verde to ensure that the krypton standard is not exceeded.

8. The meaning of "D/Q", contained in Table 5.8 should be indicated.

9. The graphics used on page 5-50 should be revised to make the table more readable.

10. The DEIS states on page 5-37, "If normal offsite power is maintained, the ability of the plant to send contaminated steam to the condenser instead of releasing it through the safety valves or atmospheric dump valves can significantly reduce the amount of radioactivity released to the environment." It is not clear why this safety feature cannot be ensured by the use of on-site auxiliary power. The FEIS should clarify this issue.

11. The DEIS indicates that 0.08 Ci/years per unit of iodine-131 will be released (Table C-1, page C-4). The EPA questions whether these calculations represent the PVNGS because of the use of the unique cooling system at the facility and the potential for a site emission of iodine-131 resulting from the use of the sewage effluent. The EPA commented on this issue during the facility construction phase and it would appear that our concerns still have not been addressed. At present, the site could have 240 mCi/year of I-131 released. If an additional 57 mCi/year resulted from the use of sewage effluent, it would represent a significant increase. The ALARA impact of this increase should be addressed in the FEIS.

12. The DEIS does not address the problems related to waste disposal. It is indicated that approximately 1600 curies of solid waste will be shipped off-site annually to a licensed burial site. At this time it is not clear whether the State of Arizona will enter into an inter-state compact or provide an approved disposal site. Therefore, the FEIS should address the effect of this material on annual exposures if it cannot be shipped off-site.

Water Quality Comments

The DEIS does not adequately address the potential impacts to groundwater which may result from the evaporation ponds which will hold cooling tower effluent. The DEIS states that "very little water will seep through the evaporation pond liner" (p. 5-5, 5.3.2.1). The Final Environmental Impact Statement (FEIS) should provide documentation to support this statement. In addition to determining seepage volumes from the evaporation ponds, the FEIS should evaluate any impacts to groundwater which may result.