



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
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KANSAS CITY, MISSOURI - 64106



March 12, 1982

Mr. B. J. Youngblood  
Chief, Licensing Branch No. 1  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Wolf Creek Generating Station, Unit No. 1, Coffey County, Kansas

54-482

Dear Mr. Youngblood:

We have reviewed the Draft Environmental Statement for the proposed operation of the planned nuclear power plant identified above. The project and draft statement have been rated ER-2 (environmental reservations - insufficient information), respectively. Our primary environmental reservation with the proposed operation is a lack of detailed descriptions of the gaseous and liquid waste treatment systems. The failure to provide the often referenced Safety Evaluation Report with the Draft Environmental Statement prevented a thorough evaluation of the planned facility.

The following comments are provided for your consideration when preparing the Final Environmental Statement:

Generic Comments

In our past reviews of Draft Environmental Impact Statements (EIS) relating to light-water nuclear power facilities, we have included generic comments which are applicable to all such facilities. As a result of the Three Mile Island accident, we have decided that we must revise our generic comments to consider these events and activities. We will provide our revised generic comments to the Nuclear Regulatory Commission (NRC) as soon as they are completed. Generic issues undergoing review are:

- o Population dose commitments
- o Reactor accidents
- o Fuel cycle and long-term dose assessments
- o High-level radioactive waste management
- o Transportation impacts
- o Decommissioning

Radioactive Waste Management Systems

The Draft EIS does not contain detailed descriptions of the radioactive waste treatment systems or the NRC staff's detailed evaluations of these systems. Such matters are referenced to the Safety Evaluation Report (SER), which has not yet been received by our office for use in this review.

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Section 3.5 of the applicant's Environmental Report (ER) states that, "Only minor design changes have occurred in the evolution of the Wolf Creek radwaste systems design . . . ." Our comments on the Draft EIS-Construction Permit (DEIS-CP) indicated concerns regarding inconsistencies between the DEIS-CP and the ER (Construction Permit Stage) regarding treatment of containment building ventilation and a lack of consideration of buildup of radionuclides in the cooling lake. These concerns were resolved in the FEIS-CP and the ER. It now appears that, if the staff's detailed evaluation of the gaseous and liquid radwaste systems are shown in the SER to meet the requirements of Appendix I to 10 CFR Part 50, the operations will be within EPA's Environmental Radiation Standards (40 CFR 190). However, an explanation is required for the significantly higher gaseous effluents calculated by NRC for this Draft EIS versus those calculated for the FEIS-CP and the calculated liquid of 0.16 curies per year in this document versus 0.6 curies per year in the FEIS-CP.

#### Reactor Accidents

When discussing accident risk and impacts of design basis accidents, the Draft EIS addresses probabilities of occurrence qualitatively. Yet, when discussing the more severe core melt accidents, the probabilities of occurrence are quantified (Tables 5.8 and 5.9). For consistency in the presentation of all environmental risks, the probabilities of occurrence of infrequent accidents and limiting fault design basis accidents should also be provided.

#### Operational Environmental Monitoring

The applicant's preoperational environmental radiation monitoring program will be implemented at least two years before initial criticality. The program as described in the Draft EIS and the ER are acceptable. The applicant's proposed operational program will be reviewed in detail by the NRC staff and incorporated into the technical specifications for the operating license. It is stated that the operational program will be essentially a continuation of the preoperational program. This will be acceptable with the following modifications:

- o Samples of drinking water from the town of LeRoy should be collected and analyzed according to provisions of the National Interim Drinking Water Regulations. This would require, in addition to the proposed analyses, quarterly analysis for iodine-131, based on a composite of five consecutive daily samples, and annual analysis for strontium-90, based on a composite of four consecutive quarterly samples or analysis of four quarterly samples.

- o There is an inconsistency between the Draft EIS, Table 5.5, and the ER, Table 6.1-17, regarding the sampling frequency for TLD. The ER states that they will be collected quarterly while the DEIS states that they will be collected quarterly and semi-annually. Although quarterly TLD measurements may be acceptable for the preoperational program, monthly measurements would be more suitable for the operational program. Monthly sampling periods provide the only potential for measuring the airborne dose from the plant in excess of normal background dose variations. (See: "Natural Radiation Measurements for Environmental Surveillance at Nuclear Power Stations," W.L. Brinck, et. al., in the Proceedings of Papers Presented at the Meeting of the Tenth Midyear Topical Symposium of the Health Physics Society).

o Other inconsistencies were noted between the Draft EIS and the ER regarding types of samples, number and location of samples or sampling frequency for the following pathways: surface water, rooted aquatic plants and shoreline sediments, bottom sediments, algae, fish and invertebrates, livestock feed and fodder, milk, poultry and eggs, and domestic and non-domestic meat animals. These inconsistencies should be resolved in the Final EIS.

#### Decommissioning

The Draft EIS states that planning for decommissioning can affect health and safety as well as cost. We concur in this assessment but were unable to find in the Draft EIS any arrangements for financing decommissioning costs. The applicant's Environmental Report (Section 5.8.4) outlines a number of financing options but does not select a preferred choice. Decommissioning costs are noted in the range of \$42 million (applicant, 1978 dollars) to \$80 million (staff, 1984 dollars). These are large sums and will represent a large cost burden when needed if not accumulated out of revenues, during the plant's operating lifetime. The Final EIS should explain what specific arrangements have been made, or are planned, to assure that funds will be available for decommissioning when required.

It is not clear at what point the licensee's financial responsibility is to be terminated. Termination of the nuclear license is required at the end of facility life, and this requires decontamination of the facility such that unrestricted uses can be allowed. Although the applicant's Environmental Report (Section 5.8) does not specify a decommissioning alternative, one option to achieve such decontamination is SAFSTOR, which allows deferral of decontamination for up to 30 years. It is not clear, in such a case, whether license termination would occur prior to, or at the end of such an extended storage period. If termination occurs at the beginning of the storage period, financial arrangements evidently will be necessary to pay for security and the deferred decontamination. The Final EIS should clarify this point.

#### Economic Risks

As the Three Mile Island accident demonstrated, the cost of reactor building decontamination and replacement power following an accident can be considerable. This underscores the need to develop standard methodologies for estimating the contribution of these costs to economic risks. Economic risks are addressed in Section 5.9.4.5 of the Draft EIS and, based on low probability of occurrence, annualized risk is calculated to cost \$3,500 in 1980 dollars (Table 5.10). We note this cost is much less than the expense of emergency planning to the affected states. The costs of emergency planning must be included in the economic analysis. Because of the potentially severe economic costs in the case of an accident, however, we cannot agree with the NRC staff assessment of these costs as "small (Table 6.1).

#### Timing of Supporting Documentation for the EIS

The practice of issuing the Draft EIS in advance of the SER has prevented our performing a complete review of the environmental impacts of the Wolf Creek plant. As discussed in our comments on radioactive waste treatment systems, this is believed to be detrimental to our review of this Draft EIS. Also, the Draft EIS refers to several other topics which are still under NRC review. These include:

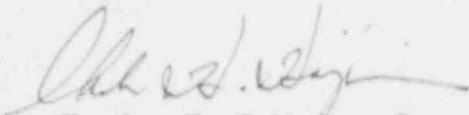
1. Facility safety features. Reference is made (5.9.4.4) to the forthcoming SER for the NRC staff evaluation of safety features and characteristics of the facility and description of some of the accident mitigation features. This evaluation should include the consequences of a major steam generator tube rupture (Ginna accident).
2. Site features. Reference is made (5.9.4.4) to a review of potential external hazards that might adversely affect operation of the plant. A more detailed discussion of site features is referenced to the SER.
3. Emergency preparedness. Emergency preparedness plans including protective-action measures for the Wolf Creek facility and environs are reported to be in an advanced, but not yet fully completed stage. We are unable to comment on this topic since a draft of the State and local emergency preparedness plans for Wolf Creek has not yet been submitted to the Federal Emergency Management Agency for review. NRC Staff findings of adequacy and implementability for both the on-site and off-site plans have not yet been finalized.

In view of the above, any conclusion such as that in Section 5.9.4.6 regarding the plant's environmental impact, would seem to be contingent on favorable results from some important ongoing staff reviews, and hence premature. The Final EIS should be withheld until the above-mentioned reviews are completed, or should specifically discuss any of the areas which are still undergoing review.

We urge the NRC to ensure that, in the future, the Safety Evaluation Report is available before issuing the Draft EIS unless the Draft EIS is a complete document not requiring reference to the SER. Material incorporated into an EIS by reference should be reasonably available for inspection within the time allowed for comment (40 CFR 1502.21). We do not believe the citations of missing but forthcoming information in the SER constitutes a "reference" in the common meaning of the word.

Thank you for the opportunity to review and comment on the Draft Environmental Statement. If you have questions regarding the concerns we expressed in this letter, please contact our office. The staff members most familiar with this project are Messrs. William Brinck and Robert Fenemore. They can be reached at FTS 758-6525 and 758-2921, respectively.

Sincerely yours,



Charles H. Hajinian, Branch Chief  
Environmental Review Branch