



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

Docket File

May 17, 1971

R. C. DeYoung, Assistant Director for PWRs, DRL  
THRU: C. G. Long, Chief, PWR Project Branch No. 2, DRL *chl*

MEETING WITH WISCONSIN PUBLIC SERVICE CORPORATION ON KEWAUNEE NUCLEAR POWER PLANT (DOCKET NO. 50-305)

The first technical meeting with Wisconsin Public Service Corporation to discuss probable questions regarding the FSAR was held in Bethesda on May 11, 1971. A list of attendees is enclosed.

Summary

Subject areas discussed at the meeting included the site description, environmental monitoring, radwaste disposal, meteorology, hydrology, radiation protection, and structural matters relating to containment and other Class I structures. In general, the applicant indicated no serious reservations about responding to questions posed by the staff, except for a question regarding a pressure test of the shield building. The applicant agreed, reluctantly, to consider such a test, but he feels that this is a new requirement which has not been imposed on other applicants.

The applicant announced that he is in the process of negotiating a contract with Industrial Biotest to assume consultant services for the site meteorology. Up until now, the NUS Corporation has been handling the site meteorology. It was agreed that the staff would make arrangements for a meeting to be held at an early date to discuss meteorology questions with NUS to clarify data presented in the FSAR and that it would be in the best interest of all parties to have Industrial Biotest also meet with the staff to discuss the type of data we require.

The applicant made a short presentation on the design changes that have been made in the liquid radwaste system which he feels will avoid problems such as have recently been experienced at Ginna. While the changes appear to be improvements, the staff still expressed concern regarding the small (2 gpm) evaporator and the overall system performance.

The applicant has now made tentative plans to remove the filter-recirculation system from the shield building annulus. The staff indicated that this proposal would have to be approved by our management and that we have real reservations about the deletion of this system.

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Discussion1. Site Description

A. Kenneke outlined the portions of the FSAR site description which the staff feels should be modified or expanded. Primarily what is required is a more complete presentation of data. The principal items identified for additional effort were:

- a. A better map of the site is needed which clearly shows the restricted area. This area is presently undefined in the FSAR.
- b. The staff needs more current population figures, resulting from the 1970 census, with projections of population growth by decades through the year 2010. We are interested specifically in the growth of the city of Kewaunee. We suggested to the applicant that he compare his figures with those from the Point Beach FSAR and that he compare his new data with his PSAR to determine if there are any significant differences. We need population distribution figures out to 50 miles from the plant.
- c. The FSAR needs to be reworded to better indicate the low population zone. As written, the LPZ can be taken as either 3 miles or 10 miles.
- d. We requested that the applicant examine the possible effect the facility might have on the many small hospitals reported to be in the vicinity of the plant.
- e. We requested a detailed list of industries in the vicinity of the plant together with an examination of the possible interactions between these industries and the plant.
- f. The FSAR lists two airports in the general vicinity of the plant but presents no information on runway orientation and flight paths. This type of information is required.
- g. We asked for documentation on the future plans for the cemetery located within the plant boundaries. The applicant reported that the cemetery will no longer be used, although it will remain in its present location.

## 2. Environmental Monitoring

The FSAR does not contain a sufficiently detailed description of the environmental monitoring program. The applicant pointed out that greater detail is presented in the Environmental Report, but we stated that we need a complete description in the FSAR as well since these are different documents. Further, we indicated several areas where the sampling intervals do not meet the requirements of the soon-to-be-published Safety Guide on Monitoring and Reporting of Effluents and Environmental Levels. We agreed to furnish a copy of this guide to the applicant as soon as it is published.

The staff also questioned the data presented in the FSAR regarding details on the commercial and sport fish catch from Lake Michigan, inasmuch as these data appear to be at variance with other recently published data.

The possibility of sampling cattle as part of the environmental program was also discussed, but with a generally negative reaction by the applicant. However, he will consider this possibility.

## 3. Meteorology

The meteorology data presented in the FSAR is considered to be not sufficient to justify the conclusions reached by the applicant. We indicated to the applicant the problems the staff has with the wind variance data as presented in the FSAR. This subject was discussed in general terms only, since the applicant's meteorological consultant (NUS Corporation) was not present. It was agreed, however, that we should arrange a meeting in the near future to talk with NUS about the problem areas. The applicant informed us that he is now in the process of negotiating a contract with Industrial Bioteest to handle future site meteorology, as well as the environmental program. The consensus was that it would also be well to have the staff meet with Industrial Bioteest to assure a meteorological program which meets our requirements.

## 4. Hydrology

The staff requested sufficient additional data and analyses to enable an independent hydrologic engineering review in the areas of:

- a. Probable maximum water level
- b. Shore protection and wave runup
- c. Protective measures against flooding
- d. Dynamic loadings on structures due to water level
- e. Effect of high water level on the screenhouse.

We asked also for an estimate of the probable minimum lake water level and the effect on the plant operation. The possibility of flooding due to ground water runoff was questioned, as was the potential for surface or ground water contamination in the event of an unspecified radioactive spill. Finally, we asked for details of the offshore structures and for elevation drawings of the crib-intake line - screenhouse complex.

##### 5. Radiation Protection

This subject was discussed only briefly during the meeting. The staff asked for a detailed analysis of the protection provided for control room personnel following an accident. The design reportedly is based on a maximum dose of 5 Rem to these personnel due to the accident. Also discussed was the question of whether the low-as-practicable criterion does or should extend to the plant personnel. The applicant strongly disagrees with this possibility since implementation would virtually preclude plant maintenance activities.

##### 6. Radwaste Disposal

We asked the applicant to describe his liquid radwaste disposal system, indicating the changes that have been made since the PSAR. The applicant is aware of the problems that have been encountered at Ginna, but feels his revamped design solves these problems.

First, the plant liquid waste has been separated into four categories which are handled separately.

- a. The normal path for steam generator blowdown is straight to the circulating water discharge. Should there be excessive activity in the blowdown, a treatment system consisting essentially of coolers and two 25 gpm demineralizers in parallel is provided.
- b. Laundry and hot shower wastes are routed from the monitor tanks direct to the sewage treatment facility if the activity is within limits. Should the contained activity be excessive, these wastes are routed through the waste treatment chain.
- c. Deaerated (primary coolant) wastes are processed through the chemical and volume control system which provides the capability for cleanup and reuse of the water or discharge to the waste treatment chain for ultimate disposal.
- d. Aerated wastes are collected from the various plant drains and sumps and are processed through a 2 gpm waste evaporator for ultimate disposal to the circulating water discharge. This evaporator is the new Westinghouse design and is expected to demonstrate superior performance to the older AMF model evaporators. If necessary, the waste can be recycled through the evaporator or it can be routed to the 25 gpm demineralizers in the steam generator blowdown chain.

The applicant does not now propose to install a larger waste evaporator or multiple evaporators, nor has he planned for a polishing demineralizer in the waste treatment chain.

We indicated our concerns about liquid radwaste disposal to the applicant and he is aware that there may be a requirement for more or better equipment to serve this function.

#### 7. Containment and Class I Structures

The staff discussed with the applicant a number of structural questions relating to containment, shield building, penetrations, missiles, miscellaneous Class I structures, allowable stresses and strains, construction practice, and testing and surveillance. Some of these questions were discussed at some length by A. Gluckmann to provide the applicant with the reasons for our concern while the bulk of the questions were presented merely for the advance information of the applicant. The only question which raised serious objection from the applicant is the matter of an acceptance strength pressure test of the shield building. While the shield building has been designed to withstand at least 3 psi internal pressure, the applicant feels that such a test is beyond the scope of what has been required in the past. However, he agreed, reluctantly, to consider such a test.

#### 8. Shield Building Annulus

As a result of the joint meeting held on April 14, 1971, with the Kewaunee and Prairie Island applicants (see memo of April 23 to R. C. DeYoung), and further internal discussions since that meeting, the applicant announced tentative plans to remove the filter-recirculation trains from the shield building annulus. The reasons given for this decision were:

- a. The difficulty the applicant sees in attempting to test and prove the worth of this system from the standpoint of holdup, mixing, and multiple-pass filtration.
- b. The calculated ability to meet the Part 100 criteria at the Kewaunee site without this system.
- c. The expense and effort involved in the maintenance and testing of this system over the plant lifetime.
- d. The apparent lack of benefit to the applicant in terms of reduced testing due to the larger allowable containment leak rates which could be allowed with this system installed.

There was considerable discussion regarding this tentative decision and the staff urged the applicant to consider carefully all aspects of the decision. The matter was left on the note that the staff would seek a management decision on whether removal of the system can be allowed at this time since the applicant committed to the system at the CP stage.



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ATTENDEES - KEWAUNEE MEETING

May 11, 1971

Wisconsin Public Service Corporation

R. C. Straub  
C. W. Giesler  
E. R. Gasser (Southern Nuclear)

Pioneer Service & Engineering Co.

H. Hollingshaus  
D. E. Sahlin  
F. W. Furrer  
S. Inouye

DRS

A. Gluckmann (Part time)  
G. Arndt (Part Time)

DRL

C. Long  
A. Kenneke (Part time)  
H. Schierling (Part time)  
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