



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
INTERFIRST TWO BUILDING, 1201 ELM STREET
DALLAS, TEXAS 75270

SEP 27 1984

Mr. A. Schwencer
Chief
Licensing Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Schwencer:

We have completed our review of the Draft Environmental Impact Statement (EIS) related to the operation of River Bend Nuclear Power Station, (Docket No. 50-458), located near St. Francisville, West Feliciana Parish, Louisiana. The proposed action is to issue an operating license to Gulf States Utilities Company for startup and operation of Unit 1. We understand that plans for Unit 2 have been cancelled. Loading of fuel into Unit 1 is scheduled to begin in April 1985.

The following comments are provided for your consideration:

Radiological Impacts

Decommissioning

We note that the Nuclear Regulatory Commission (NRC) is currently developing a more explicit overall policy and specific licensing requirements (p. 5-56) which will include financial arrangements, but specific financial arrangements for decommissioning of the River Bend Station have not been made. Instead, the Draft EIS treats this and other issues related to decommissioning generically. Although the costs of decommissioning are estimated to be a small fraction of total cost, the costs will still represent a large cost burden when needed, if not accumulated out of revenues during the plant's operating lifetime. We believe that specific financial arrangements should be made as a part of the licensing process. This will ensure that sufficient funds will be available when needed. These arrangements should cover the contingency case where decommissioning may have to be considered before significant operating revenues have accrued. The accident at Three Mile Island demonstrates that this possibility cannot be dismissed entirely.

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One option that appears to be available to the licensee is SAFSTOR, which allows deferral of decommissioning for up to 100 years following end of plant lifetime. The purpose of such an extended deferral is to permit residual radioactivity to decay, thus reducing occupational radiation exposures during decontamination (NUREG-0586, Draft Generic EIS on Decommissioning of Nuclear Facilities, January 1981). We note that most of the occupational dose savings occurs in the first 30 years after shutdown. Also, it was only recognized after NUREG-0586 was published that at least two particularly troublesome activation products, niobium -94 and nickel -59, will cause this dose savings to be even less than anticipated. Consequently, it appears to us that 100 years is an excessive amount of time for deferral to be allowed. We are concerned about the increased likelihood that the operator-owner will not remain financially healthy, or financial arrangements will not be adequate over such an extended period of time. Consequently, we urge the NRC to consider eliminating the possibility that decommissioning can be deferred for as long as 100 years.

Public Risk from Radiation Exposure

In the EIS the progeny of workers are considered members of the general public. The EPA agrees that this is appropriate. Based on the genetic risk and annual integrated dose estimations provided, it appears that the individual members of the public which will be at highest risk from exposure to radiation from the plant, are the children born to workers with the highest gonadal dose exposure history. We believe that the Final EIS should include an estimate of the maximum individual risk to this class of members of the public at highest risk from radiation, in addition to the total genetic impact on the population.

Accident Probabilities

In the discussion of accidents (p. 5-48) the probability of an accident leading to severe damage of the nuclear core is given as 10^{-4} per reactor year. This does not include externally-caused accidents such as earthquakes, floods, and human-caused events, including sabotage. The risk of externally-caused accidents has been estimated for other reactors, however, and is reported (p. 5-51) as, "a factor of less than 100 times greater" than for internally - initiated ones. We understand this to mean that the probability of a severe core melt accident from all causes is therefore estimated to be less than 1% per year, or less than 40% over the operating lifetime of the River Bend Station. We believe the uncertainty in this estimate should be narrowed in the Final EIS, because 40% probability of a severe core melt accident seems to us unacceptably high.

Direct Radiation Dose

On page 5-24 the direct radiation dose from boiling water reactor (BWR) plants is discussed generically, and the annual population dose is given as, "much less than 1 person - rem". EPA's uranium fuel cycle standard, 40 CFR 190, sets annual dose limits to any member of the public, and these limits

include any contribution from direct radiation. Consequently, the maximum dose to any individual, from this pathway, should be estimated from operation of the River Bend Station, and presented in the Final EIS. Confirmatory measurements should be made after the Station is operational to verify that direct radiation dose is not excessive.

Unresolved Safety Issues

Our complete review of safety and environmental protection provisions was prevented because of the numerous confirmatory items and unresolved safety issues whose resolution have not been made or confirmed. (These items are listed and described in the Safety Evaluation Report for the River Bend Station, NUREG-0989, issued in May, 1984). Consequently our conclusions, in these areas, and our rating of the proposed action, are contingent on the successful resolution of these issues, and subject to change.

Spills

On page 4-7 the EIS discusses spills in the transformer yard. If any of these spills include PCB's or if there are any PCB transformers on the project site, then applicable EPA procedures should be followed. This should be clarified in the Final EIS.

Noise

Noise impacts are discussed in various areas of the EIS but a noise contour map is not provided. The Final EIS should contain the LDN noise contours of 55,60 and 65 dBA on an area map depicting residences. Contours for both before and after project action should be shown. It would also be helpful if the noise figures in Chapter 5 were located convenient to the narrative discussion of noise impacts in Section 5.12.

Groundwater

On page 4-13 the EIS states that Baton Rouge has pumped so much water from the tertiary aquifers that the resulting cone of depression has reached St. Francisville. The Applicant needs to estimate and discuss in the Final EIS how this drawdown will affect pumpage from the two River Bend wells that tap the Tertiary Zone 3 aquifer.

Additional Comments

1. The preoperational radiological environmental monitoring program is described entirely in terms of the Applicant's plans. Since, according to those plans preoperational monitoring should have begun more than a year ago, we believe the Final EIS should at least address the results of this program to date.

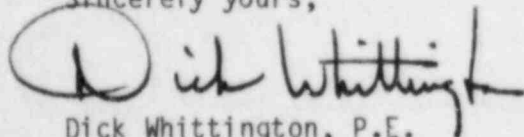
2. In a footnote to Table D-7 the average background radiation dose equivalent for Louisiana is cited as 84 mrems/yr by reference to an EPA report. This value is incorrect and should be 64 mrems/yr. The value cited is the U.S. average annual natural dose equivalent. Consequently, the 80 km total body population dose listed in Table D-7 is too high.
3. In Table 4.2 the Condenser temperature rise is given as -2.8C° (27F°), and should be instead, 15C° (27F°).
4. The notes under Figure 5.6 refer to a hatched area and to an uppermost curve, neither of which are displayed in the figure. Also, the miles/km conversion formula is not appropriate for this figure and should be deleted.
5. On page 5-31 reference is made to Section 5.9.2.1.4.(7) which does not exist. Correct reference appears to be to Section 5.9.4.5.(7).

We classify your Draft EIS as LO-2. Specifically, we have no objections to the project as it relates to EPA's legislative mandates. However, we are requesting additional information on radiological impacts, spills, noise, and groundwater in order to evaluate fully the environmental impacts of the proposed project. Our classification will be published in the Federal Register according to our responsibility to inform the public of our views on proposed Federal actions under Section 309 of the Clean Air Act.

Definitions of the categories are provided on the enclosure. Our procedure is to categorize the EIS on both the environmental consequences of the proposed action and on the adequacy of the EIS at the draft stage, whenever possible.

We appreciated the opportunity to review the Draft EIS. Please send our office five (5) copies of the Final EIS at the same time it is sent to the Office of Federal Activities, U.S. Environmental Protection Agency, Washington, D.C.

Sincerely yours,

A handwritten signature in black ink that reads "Dick Whittington". The signature is written in a cursive style with a large, looped initial "D".

Dick Whittington, P.E.
Regional Administrator

Enclosure

ENVIRONMENTAL IMPACT OF THE ACTION

LO - Lack of Objections

EPA has no objections to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER - Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to re-assess these aspects.

EU - Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

ADEQUACY OF THE IMPACT STATEMENT

Category 1 - Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2 - Insufficient Information

EPA believes the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3 - Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement. If a draft statement is assigned a Category 3, no rating will be made of the project or action, since a basis does not generally exist on which to make a determination.