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Portland March 13, 1984

US Nuclear Regulatory Commission
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Dear Commission Members,

Enclosed is a lengthy comment on EIS No. 840014, concerning the operating licence of WPPSS No. 3 in Grays Harbor County in Washington. I realize my comment is a few days over the deadline, but I had difficulties finding out where to send it. The paper was submitted for a class offered in the winter term at Portland State University. The class was 'Environmental Impact Assessment' and in the enclosed critique, I point to some of the strengths and weaknesses of this particular EIS, based upon a reading of assessment itself, NEPA regulations, as well as class discussions.

Please send this on to the appropriate reviewer.

Also, I would like to be on a list of people to recieve the FEA when it comes out on this project.

Thank You,

Sebastian Degens

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CRITIQUE OF AN EIS PREPARED BY THE NRC

" DRAFT ENVIRONMENTAL STATEMENT RELATED TO THE OPERATION OF
WUPSS NUCLEAR PROJECT NO.3 "

PREPARED BY THE U.S. NUCLEAR REGULATORY COMMISSION

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Geog 523 Winter 1984

The proposed action which required the Draft ES Related to the Operation of the WPPSS Nuclear Project No.3 (DES-OL) is the issuance of an operating license to the Washington Public Power Supply System (WPPSS) for start-up and operation of its nuclear project no. 3 (WPN-3), located in Grays Harbor County, WA. The project consists of a two-loop pressurised water reactor (PWR) with a projected electrical output of 1240MW. A cooling tower and pumping station to draw water from an aquifer below the Chehalis River are included on the 2570 acre site.

The U.S. Nuclear Regulatory Commission (NRC), and its staff in the Office of Nuclear Reactor Regulation, prepared the document in response to an application for an operating license for this facility from the NRC. The projected water withdrawals as well as the radioactive emissions by the facility clearly make this a Federal action significantly affecting the quality of the human environment (§ 1502.3). The statutory requirements for an EIS are met.

WPN-3 was 75% complete at the time of application for the operating license. Construction delays since that time have pushed the anticipated fuel-loading date into 1987-1989. The staff noted that this DES could therefore be issued up to six years prior to the fuel loading date. This constitutes an unusually early issuance. It was the staff's judgement that the facility's operational characteristics were sufficiently known *to allow* the present assessment. (WNP-3 DES, 1-2).

The DES is dated December 1983. The Notice of Availability

(NOA) was published by the Environmental Protection Agency in the Federal Register on Friday, January 27, 1984 (FR; Vol 49, No 19). A 45 day comment period was scheduled ending on March 12. A copy of this critique has been submitted.

NRC licensing procedures for nuclear power plants are separated into distinct phases. The NRC has tiered their environmental statements to correspond with the construction and operating stages. This enables "... focus on the actual issues ripe for decision at each level of environmental review." (S1502.20)

The purpose of the DES-OL is to center on issues specifically related to the operational system of the nuclear plant. An additional purpose emerges in the text. The DES-OL evaluates design changes in the project which have occurred since the time of the Final Environmental Statement on the construction permit (FES-CP). The bulk of the design and environmental impact information is contained in the FES-CP written in 1975. This information is summarized in the DES text and incorporated by reference.

Tiering has a number of important implications for the DES. First, it is physically shortened by the ability to reference the document in the previous stage in the process. More importantly, the range of issues covered is also reduced. The NRC has interpreted tiering to obviate evaluations of the need-for-power issues during the operation-license phase. Discussion of the need-for-power issue has occurred during the construction permit stage and is considered resolved.

The NRC has assumed that nuclear power plants cost less to

operate than fossil fueled plants. The NRC concludes that nuclear power would be a preferred energy source, even were a reduction in demand to eliminate the need for any additional generation. (WPN-3 DES, 2-1) Need for the proposed action is eliminated as an issue and barring special circumstances, the operating license is not subject to a test of need.

The logic of the environmental review process, as conducted by the NRC in the licensing of nuclear power plants, thus eliminates a broad range of alternatives during the OL stage. Both alternative energy sources as well as alternative sites are no longer relevant. Committed resources and the advanced stage in the process have left no feasible alternatives and none are presented in this DES.

Alternative plans of operation were not considered, though I feel they would have been appropriate for comparison. Examples could have been alternative monitoring programs for the surrounding earth, water, and air resources. Also, in addition to mitigative responses to water removal at times of low stream flow, an operational plan which synchronized refueling with all or part of the seasonal dry periods could have been presented.

The existing environment was described adequately in the DES. Unchanged portions of the project were summarized from previous documents and referenced. A comparative evaluation of the impacts of alternatives could not be undertaken in the absence of alternatives. However, design changes since the FES-CP had altered many impacts. These new impacts were discussed in a comparative manner with the initially anticipated ones.

The major change was the cancellation of a second unit,

WPPSS No. 5, which had been planned for that site as well. In many respects this change afforded the DES quite a bit of leeway in the discussion of impacts. For example, WPPSS increased its estimate for the sulfuric acid requirement to control scale in the circulating water system. There will be an acknowledged effluent impact of sulfates on the Chehalis River. This increase in the concentration of sulfates was swept away in the text with the recollection that the planned second unit had now been scrapped and the resulting ambient concentrations for one plant were lower than had previously been projected for two.

I feel this type of analysis is more round-about than direct. While it is important to know that the sum of the impacts is less than those previously planned, if the design changes represent significant alterations, they should be described absolutely (ie. How much effluent results from one unit with an increased requirement of sulfuric acid?).

A troublesome feature in the DES was a multiple reference to a Safety Evaluation Report (SER) which is scheduled for release six months after the closure date for comments on the DES. In appendix form, the water and air effluents were summarized in anticipation of this report. The capability of the proposed radwaste system to accomodate the solid wastes expected during normal operations was not evaluated nor summarized. This seems to me a significant omission..

The DES covered an extensive set of impacts both analytically and in concise and understandable language. The methodologies

were explained clearly and included in the text and appendix. I did not feel the impact discussions were each of the same quality. Direct impacts were evaluated in each of the environmental areas. Indirect impacts were addressed in certain of these. Cumulative impacts were not evaluated by each of the DES contributors. It was not clear whether these writers entertained such impacts and excluded them, or whether they had been ignored.

Cumulative impacts on regional water use should be more explicitly evaluated, for one. In the area of endangered species, the theorization that because of an eagle's keen eyesight, collision with a cooling tower seemed unlikely, seemed less important than some field data on the effects of construction noises on the habitat as a proxy for the anticipated noise from the pumping station.

Radiological impacts were described very well. The conclusions seemed reasonable, and areas of uncertainty and issues of public debate were outlined. Tables of radiation emissions were confusing upon occasion when the units of measurement did not compare (curies/rem) or when the base levels of background radiation were presented for comparison in some tables and not in others. An evaluation of the cumulative impact of the regional nuclear program was not included.

Mitigation measures were developed for a range of expected environmental impacts. The majority of these were required in the design of the facility itself and operated through avoidance and minimization of environmental impacts. Future mitigative measures will^b be developed based on monitoring programs to detect unanticipated

impacts. The preparers did a very thorough job in matching mitigation measures to potential impacts.

Two potential environmental impact areas which deviated from this generally factual, analytical discussion of impacts, were those of the uranium fuel cycle as well as the decommissioning of the plant once its operating life is over.

Discussion of the impacts of the fuel cycle centered around theoretical design criteria incorporated by reference to optimistic NRC rules and research documents. ^{A presentation of} Actual experience in storage, reprocessing, and waste management would have been very useful.

Socio-economic impacts of WNP-3 should have been expanded to include discussion of the regional waste management costs, decommissioning impacts.

Finally, scenarios of three types of accidents (frequent and infrequent events, and a much less probable limiting fault) were very interesting and well explained. The methodology for conducting the Worst Case analysis seemed very accurate and scientifically reliable. Mitigation measures were proposed to rectify and compensate the impacts of even the low probability/ high risk events.

In conclusion, I would like to argue that the WNP-3 DES is adequate but not really necessary as a decision-making tool. An alternative to going ahead with the operation of the facility was never presented. It does not provide the type of comparative evaluation NEPA encourages. Also, the licensing procedures require more stringent evaluations than were contained in the DES, (ex. Safety Evaluation Report). The document does not seem relevant to the agency decision. In many respects, the Environmental Statement

comes to late in the game to matter and simply becomes a procedural hoop.

There is a procedural contradiction with the NRC in their implementation of NEPA which limits the usefulness of this document. This stems from the dual role played by the DES. Firstly, it reviews the operational stage of project development. But at the time of the review, the plant was not complete, the radwaste system was not fully evaluated, the financial state and ownership of the plant were even in question, and there is no national consensus on the management of high-level radioactive wastes. This leads me to feel the operational review is premature.

The second purpose of this DES is to identify and evaluate changes in the project since the construction stage of review in 1975. It acts as a supplemental EIS, but unlike a supplemental EIS, the NRC procedures have eliminated the re-evaluation of fundamental circumstances, as in this case, a determination of the need for a project.

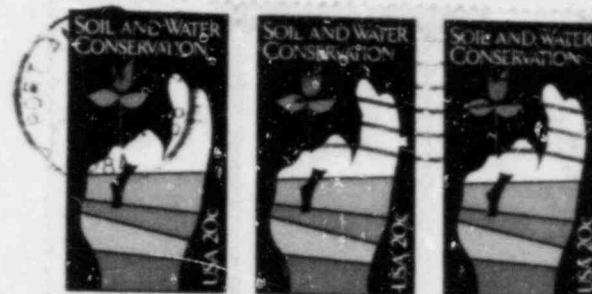
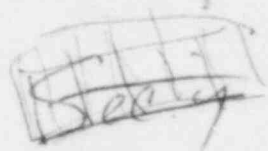
If the DES is to act as a supplement, then all altered environmental circumstances should be open for review. If it is specifically concerned with the operating license stage of the program, environmental review should be conducted at a time when basic conditions are known

40 CFR Parts 1500-1508 NEPA Regulations

Draft Environmental Statement Related to the Operation of WPPSS
Nuclear Project No.3, NUREG-1033, U.S.NRC:December, 1983

Federal Register, Vol 49. No 19:January 27, 1984

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