

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

In the Matter of the Application by }
SACRAMENTO MUNICIPAL UTILITY DISTRICT }
For a Provisional Construction Permit }
for Rancho Seco Nuclear Generating }
Station Unit No. 1 in Sacramento }
County, California }

DOCKET NO. 50-312

Appearances

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Attorney for the Sacramento Municipal
Utility District

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Attorney for the Regulatory Staff
of the
Atomic Energy Commission

DECISION

Preliminary Statement

1. This proceeding involves the application of Sacramento Municipal Utility District (Applicant) for a provisional construction permit to construct a light-water moderated pressurized water reactor for initial operation at core power levels up to 2452 megawatts thermal, to be located on the Applicant's 2,480-acre site located

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in southeastern Sacramento County, California. However, the site and hazards evaluations are based on the proposed ultimate power of 2568 Mw thermal.

2. The application was reviewed by the Regulatory Staff (Staff) of the Atomic Energy Commission (Commission) and by the Advisory Committee on Reactor Safeguards. They concluded that the described facility can be built at the proposed site with reasonable assurance that it can be operated without undue risk to the health and safety of the public.

3. Pursuant to a duly published Notice of Hearing (33 Fed. Reg. 11099, August 3, 1968) a hearing was held before this Atomic Safety and Licensing Board (Board) in Sacramento, California. The parties to the proceeding were the Applicant and the Staff. There were no intervenors; however, limited appearance statements were made by two local area residents and by the Economic Development Agency of the State of California.

4. The hearing record shows that this is not a "contested proceeding" as defined in Section 2.4(n) of the Commission's Rules of Practice. Hence, the Board is instructed by the Rules and in the Notice of Hearing to determine herein only the issues of whether the application and the record of the proceeding contain sufficient information, and the review by the Commission's Staff has been adequate, to support the findings proposed to be made and the provisional construction permit proposed to be issued by the Director of Regulation.

The findings and the permit proposed by the Director of Regulation were set out in and with the published Notice of Hearing.

5. The Applicant submitted its proposed findings and conclusions after presentation of the direct evidence on behalf of each party, and concurrence therein was subsequently expressed by the attorney for Staff. The parties waived their rights to explicit rulings by the Board upon the findings and conclusions so jointly proposed, and that waiver was and is approved by the Board. Consideration has been accorded to that pleading and to the evidence of record in deriving the findings and conclusions and order hereinafter stated.

Findings of Fact

6. The Applicant is a municipal utility district formed under the laws of the State of California. It is financially sound and plans to finance the cost of construction of the proposed facility by the issuance and sale of revenue bonds as authorized by California law. The electrical generating capacity of this facility is uncommonly large in comparison to the size of the District's projected peak and average load.^{1/} This appears to raise no unusual safety questions within the purview of the issues before the Board.

^{1/} This facility will produce about 850,000 kilowatts. The 1967 peak demand for Applicant's power was 740,000 kilowatts; in July of 1968 a peak demand of "about 800,000 kilowatts" was experienced. Applicant now supplies power from its owned hydroelectric generators (240,000 kilowatts), and by purchases as needed.

7. The site of the proposed facility consists of 2,480 acres of land all of which has been acquired by the Applicant except for 320 acres lying outside the exclusion area. The minimum distance from the facility to the boundary of the exclusion area is 2,100 feet. The nearest residence is approximately 0.7 mile from the facility. The site is about 25 miles southeast of the City of Sacramento and about 26 miles north-northeast of the City of Stockton. The nearest population center with more than 25,000 inhabitants is Lodi, which is 17 miles south-southeast of the facility. The low population area, within a 5-mile radius of the facility, is almost exclusively agricultural. All the water requirements for the facility will be supplied from a pumping station on the Folsom South Canal which will be located about five miles west of the site. Should completion of the canal be delayed, the Applicant will construct a pipeline about 20 miles to Lake Natoma on the American River.

8. The application and the hearing record contain a description of the site and the basis for its suitability, a detailed description of the proposed facility including those reactor systems and features which are essential to safety, analyses of the safety features provided for in facility design, evaluations of various postulated accidents, and the engineered safety features designed to limit their effect. The evidence sets out the consideration which was given by the Staff to the important safety features of the proposed facility and the significance assigned to those systems and features important

to the prevention and mitigation of accidents. Discussions and testimony of record also encompassed safety-related areas of design and construction wherein currently available information, data, and details must be augmented by further analyses, experience, research and development.

9. The proposed findings and conclusions submitted by the parties included--but these findings omit as not decisionally important--many details about the facility which are essentially consistent with and supported by the record evidence. On the other hand, the Board deems it consonant with its responsibilities to comment upon some matters which were not considered in depth in the pleading offered by the parties. The Board has encountered difficulty in concluding either that the application and the record are sufficient or that the Staff review has been adequate to support a finding by the Director of Regulation that the Applicant is technically qualified to design and construct the proposed facility. This subject is deemed to warrant some exposition of the Board's misgivings about the issue.

10. The Notice of Hearing stated that the Director of Regulation proposed to make an affirmative finding upon the issue of whether the Applicant is technically qualified to design and construct the proposed facility. The Proposed Findings and Conclusions submitted to the Board by the parties proposed a finding "that the Applicant and its contractors are technically qualified to design and construct the facility". The direct evidence for the Staff (its Safety Evaluation) states its

conclusion that, "the Applicant, with the support of its contractors, is technically qualified to design and construct the proposed facility". The Board's findings and conclusions upon this matter are that the application and the record support the pleading's contention that the Applicant and its contractors are technically qualified; the Staff review has been adequate to support its conclusion that the Applicant, with the support of its contractors, is technically qualified to design and construct the proposed facility.

11. It is recognized that the published issue concerning technical qualifications of the Applicant may not have been clearly resolved by the above conclusion that Applicant and its contractors have the requisite technical competence. The Board's position did not evolve solely from whatever intention or inadvertence led the parties to expand the area of search for technical competence so as to include the contractors as well as the Applicant. The license for this facility is to be issued to the Applicant solely, and not to its contractors whose obligations and responsibilities are subject to such definition as might be found in the existing or potential contract terms as evolved by the parties. That such private contractual arrangements are not reviewed by the Staff or by the Board suggests that further safety evaluations of this facility do and will require attentive surveillance by the Commission's

licensing officials.^{2/}

12. The Board gave considerable attention to another elusive finding proposed to be made by the Director of Regulation; namely, "Such further technical or design information as may be required ... will be supplied in the final safety analysis report". The undescribed technical aspects of quality control and inspection programs, and of operating procedures, include interpretations of the "state of the art" as well as the timely results to be expected of research and development. At this stage, the practical question about such interpretations is whether they may be expected to represent the result of sound engineering judgment. The Board concludes that an affirmative answer to this question is supported by the record's showing of the engineering capability and promise of the Applicant and its contractors and consultants, and of the promised vigilance and competence of the Staff.

13. The Staff's analyses of possible accident consequences, made on assumptions appropriately conservative for this facility site and projected meteorology, suggest an area of need for data

^{2/} It is not a function of the Board, in an uncontested proceeding such as this one, to make an initial or basic finding upon the published technical issues; see paragraph 4 above. Were it otherwise, the Board's testing of the sufficiency and adequacy of the record and the Staff review might well have probed more deeply--albeit with less than a de novo review--the technical qualifications matter. The Applicant's electricity generating experience is limited to a period of about seven years during which time its generating capacity, exclusively hydro-electric, has grown to 240,000 kilowatts.

and evaluations not yet available. The evidence indicates that a chemical agent in the spray system, or some alternate, is required to attain the iodine dose reduction factors to meet the limits stated in 10 CFR 100. It appears that it is not now possible to specify the chemical additive to be used.^{3/} The Board finds this adequate in reliance upon the opinion of the Staff, that the proposed research and development program will conclusively demonstrate and qualify a satisfactory agent or, in the event that no agent can be qualified, that the necessary dose reduction factor can be attained by the addition of more and sufficient charcoal absorbers to the engineered safeguards system. In the Board's opinion, the record supports the Staff's conclusion that the proposed research and development programs are reasonably designed to resolve identified safety questions on a timely schedule.

Conclusions and Order

14. The Board has given careful consideration to the documentary and oral evidence and pleadings produced by the parties for the purpose of resolving the specific issues before it. Based on that review of the entire record and upon the foregoing findings of fact and discussions, the Board concludes that the application

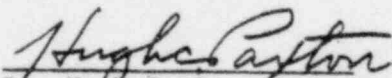
^{3/} The Staff's witness stated: "... Our position is that more research and development work is needed for the use of either sodium hydroxide or thiosulfate."

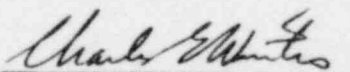
and the record of the proceeding contain sufficient information, and the review by the Commission's regulatory staff has been adequate, to support the findings proposed to be made and the provisional construction permit proposed to be issued by the Director of Regulation.

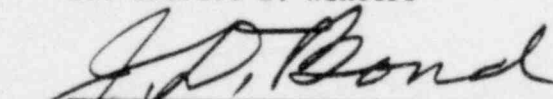
IT IS ORDERED, this 10th day of October, 1968 that the Director of Regulation issue to Sacramento Municipal Utility District a provisional construction permit as set out in Appendix "A" to the Notice of Hearing on this application which was published at 33 Fed. Reg. 11099, dated August 3, 1968.

IT IS FURTHER ORDERED, in accordance with 10 CFR Sections 2.760, 2.762, and 2.764, that this Initial Decision shall be effective immediately and shall constitute the final action of the Commission forty-five days after the date of issuance, subject to the review thereof and further decision by the Commission upon its own motion or upon exceptions filed pursuant to the cited rules.

ATOMIC SAFETY AND LICENSING BOARD


Dr. Hugh C. Paxton


Dr. Charles E. Winters


J. D. Bond, Chairman

Issues:
October 10, 1968
Germantown, Maryland