

UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of:)
)
 Sacramento Municipal)
 Utilities District)
)
 (Rancho Seco Nuclear)
 Generating Station))
 _____)

Docket No. 50-312

STATEMENT OF ISSUES OF CONCERN TO THE CALIFORNIA ENERGY COMMISSION

The State Energy Resources Conservation and Development Commission ("California Energy Commission") as an interested state in the above-captioned proceeding, hereby submits this Statement of Issues. Pursuant to Rule 2.715(c) of the U.S. Nuclear Regulatory Commission's Rules of Practice, the California Energy Commission is not required to take a position with respect to the issues considered by the Atomic Safety and Licensing Board in these hearings. Nor, unlike other parties, is the California Energy Commission obligated to submit contentions at the outset of the hearings. Nevertheless, the California Energy Commission submits this statement for the convenience of the Board and other parties. In doing so, the California Energy Commission does not waive its right to address issues other than those set forth in this statement pursuant to Rule 2.715(c).

The California Energy Commission's concerns, as set forth below in greater detail, center on several major issues. First, according

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to the May 7 Order, these hearings must seriously examine "whether the [short-term] actions required by the ... Order are sufficient to provide reasonable assurance that the facility will respond safely to feedwater transients, pending completion of the long-term modifications [and] whether the long-term modifications are sufficient to provide continued reasonable assurance that the facility will respond safely to feedwater transients." ^{1/} The California Energy Commission seriously questions the Board's ability to reach an affirmative conclusion on this issue absent development of a thorough record. This record must demonstrate that the measures required by the NRC for Rancho Seco are sufficient to provide the needed "reasonable assurance". Such a demonstration on the record is essential since this is the first opportunity afforded by the NRC for public validation of the adequacy of the actions required to ensure Rancho Seco's safe operation. Therefore, unless this Board develops such a public record, there will be no basis for it to conclude that the required actions are sufficient to provide the needed reasonable assurances.

In order to reach an affirmative conclusion, analysis will be needed to determine what information on the consequences of transients was available to the NRC and SMUD at the time the NRC issued its Order and what measures to improve Rancho Seco's ability to respond such transients were known by the NRC and SMUD at that time.

^{1/} We assume the hearings will cover all types of transients since the original shutdown order of May 7 explicitly states that the long-term modifications were imposed to "further enhance the capability and reliability of the reactor to respond to various transient events." (Emphasis added.)

The Board must also focus on how the NRC determined which measures should or should not be required and in what time frame. Finally, the Board must probe the criteria the NRC used to determine that the measures set forth in the Order were sufficient in the NRC's view to provide a reasonable assurance of safety so that the plant could resume normal operation upon their successful completion.

The California Energy Commission believes that this analysis is required not only to meet the terms of the NRC hearing order, but also to restore credibility in the NRC's licensing of nuclear reactors and SMUD's operation of Rancho Seco. The events at Three Mile Island dramatically demonstrate that the NRC in the past has seriously misunderstood the necessary measures, whether design or operational, that are needed to provide adequate assurances of safety. Furthermore, both the NRC and the nuclear industry have ignored the benefits and necessity of meaningful public input into their decision-making process. More and more examples are coming to light of assumptions, analyses, and decisions made by the NRC and the nuclear industry which, when subject to broader public scrutiny, have proved to be unwarranted. The present widespread public distrust of the safety of Rancho Seco is based in large part upon the failure of the NRC and the nuclear industry, subsequent to Three Mile Island, to clearly identify through a process of public validation the criteria that has been used to determine the appropriate level of safety for Rancho Seco and the measures that are required to achieve such criteria. Since this opportunity now exists in this proceeding, it should not be ignored.

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A second major focus of these hearings must be an intelligent analysis of the impact of information on Three Mile Island or other relevant events that has been developed since issuance of the May 7 Order. This information must be examined to determine whether the terms of the Order, which did not have the benefit of the more recent information, are still sufficient to provide a reasonable assurance of Rancho Seco's safety. For instance, the NRC's Lessons Learned Task Force issued its first staff report just last week. The report outlines 23 short-term recommendations for utility and vendor action over the next 18 months which, in the words of Roger Mattson, the director of the Task Force and chief of system safety analysis in the nuclear reactor regulation branch of the NRC, "would provide substantial additional protection which is required for public health and safety."^{2/} Given this statement by the NRC staff itself that additional measures are required for public health and safety, the Board must examine this and other information about Three Mile Island or other relevant events that was not available when the May 7 Order was issued, in order to conclude whether the terms of the Order are in fact sufficient. It will be necessary to explore which of the Task Force recommendations or other new information is relevant to the safety of Rancho Seco, which of the potential improvements have been implemented at Rancho Seco or are planned for implementation, and whether failure to implement any of them affects Rancho Seco's ability to respond safely to various transients.

^{2/} Statement by Roger Mattson quoted in The Energy Daily, July 23, 1979, p.3.

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In sum then, the California Energy Commission sees that certain essential items must be examined in public hearings in order for this Board to conclude that there is a reasonable assurance of Rancho Seco's ability to provide safe and reliable service and so satisfy the concerns of the people of California. In particular, there must be a clear identification of the criteria the NRC and SMUD have used in determining the level of safety needed to provide reasonable assurance, specification of the actions required to achieve such safety, consideration of relevant evidence developed since the May 7 Order which shows the need for additional safety measures, and an opportunity for public involvement and validation.

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ISSUES

1. What criteria were used by the NRC to determine that the measures specified in the May 7 shutdown Order were sufficient to provide reasonable assurance of the safe and reliable operation of Rancho Seco?

2. Are the short-term actions required by subparagraphs (a) through (e) of the May 7 Order sufficient to provide adequate assurance of the reactor's current capability to respond reliably and safely to various transient events?

3. Are the short and long-term measures required by the May 7 Order sufficient to provide reasonable long-term assurance of the safe and reliable operation of Rancho Seco?

4. What criteria were used by the NRC in determining which of the measures specified in the May 7 Order warranted short-term response and which warranted long-term response?

5. Were there any other safety measures (design or operating procedure changes) which were considered by the NRC or SMUD for Rancho Seco in response to Three Mile Island prior to issuance of the May 7 Order but which were not included in the Order?

6. If so, what criteria were used for determining that such measures should not be included within the scope of the Order?

7. What procedures and criteria are now being used by the NRC and SMUD to determine what corrections or improvements (both design and operational) are necessary to provide a reasonable

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assurance of the safe and reliable operation of Rancho Seco?

8. How has the process used by the NRC and SMUD to determine that there is a reasonable assurance of the safe and reliable operation of Rancho Seco been modified since Three Mile Island?

9. Are there additional measures not included within the short and long-term modifications of the May 7 Order identified by the NRC, SMUD, or other entities that would enhance the safety and reliability of Rancho Seco in responding to various transient events or provide a greater assurance of the safe and reliable operation?

10. For any improvement that could increase safe and reliable operation of Rancho Seco identified in response to Question 9, what criteria and procedures are used by SMUD and the NRC in determining whether to implement them and the timetable for implementation, and whether to shut down or derate the plant pending successful implementation?

11. How have the NRC and SMUD determined that there is a reasonable assurance of the safe and reliable operation of Rancho Seco since additional safety measures have been identified subsequent to the May 7 Order, in documents such as NUREG-0560, NUREG-0396 the Three Mile Island Lessons Learned Task Force Report and by the Governor's Nuclear Power Plant Emergency Review Panel which have not been implemented at Rancho Seco?

12. How can the NRC and SMUD determine there is a reasonable assurance of Rancho Seco's ability to respond safely to various transients based on the actions of the May 7 Order since the information on needed safety measures contained in more recent documents, such as the TMI Lessons Learned Task Force Report,

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was not even available when the Order was issued?

13. Is implementation of (or at least consideration of the need to implement) any or all of the measures identified by the NRC in NUREG-0560, NUREG-0396, and the Lessons Learned Task Force Report or other relevant documents necessary to provide a reasonable assurance of the safe operation of Rancho Seco?

14. Does the NRC foresee more safety measures yet to be agreed upon with SMUD that will impact the operation of Rancho Seco?

15. Are the safety design and operation requirements for Rancho Seco as stringent as for new plants applying for operating or construction licenses?

16. If not, are there two different NRC standards for design and operation requirements necessary to provide a reasonable assurance of safe and reliable operation?

17. Is there a reasonable assurance of safety since Rancho Seco is operating at less than the original intended safety design standards?

18. If there are more stringent design and/or operation requirements that must be met by new plants what criteria and procedures has the NRC used to determine that Rancho Seco need not satisfy such requirements?

19. Are the procedures and criteria used by the NRC and SMUD for determining when to shut down Rancho Seco in the event

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of various transients sufficient to provide the least risk to the safety of the people of California?

20. Are the procedures and criteria used by SMUD and the NRC for determining what actions are necessary prior to restart after Rancho Seco is shut down due to various transients sufficient to provide the least risk to the safety of the people of California?

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21. Which, if any, of the following are necessary to provide a reasonable assurance of Rancho Seco's safe and reliable operation?

- Redundant power operated relief valves that can override releases of primary system radioactive coolant.
- A recombiner to mitigate hydrogen formation.
- Better radiation monitoring devices at Rancho Seco and surrounding areas to properly quantify radiation releases in the event they occur.
- Use of other reactor systems that would provide less risk to the public in the event of feedwater transients.
- Venting of hydrogen from the reactor core at Rancho Seco if it is created by circumstances similar to those that occurred at Three Mile Island.
- A revised evacuation and emergency response plan for Rancho Seco and surrounding communities.
- An automatic accident notification system.
- A controlled, filtered venting system to mitigate unavoidable releases of radionuclides.
- A revised measurement system to better inform Rancho Seco operators of hydraulic conditions in the steam generator, pressurizers, and reactor vessel.
- Redesign of Rancho Seco's control room to be consistent with modern principles of human engineering.
- Revised consideration of the possibility of multiple and common-mode failures in Rancho Seco's design and operating procedures.

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22. Are there any additional design features in B&W reactors that have been identified since the May 7 Order as being unusually sensitive to certain off-normal transient conditions that would affect Rancho Seco's ability to respond safely?

23. Are there any accident scenarios at Rancho Seco in which a secondary side-trip of the reactor, such as loss of off-site power, would lead to undesirable conditions?

24. When feedwater transients occur at Rancho Seco, are the steam generator and steam supply system of such design that unstable conditions may occur given certain additional failures?

25. Are there other generic types of steam supply systems which avoid these conditions and would be preferred in lieu of the present system at Rancho Seco so as to provide greater protection to public health and safety and allow more reliable operation?

26. Prior to Three Mile Island, what criteria did SMUD and NRC use to determine that the sensitivity of Rancho Seco's steam supply system to feedwater transients did not pose an undue hazard?

27. How have the criteria changed in light of Three Mile Island?

28. Is Rancho Seco unusually prone to bubble formation in hydraulic high points? Can these be vented if hazardous?

29. Are the plant and operations personnel at Rancho Seco properly qualified and trained so as to provide reasonable assurance of the plant's safe operation? Consideration should be given to the following factors:

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- Are personnel properly apprised of new information pertinent to Rancho Seco, particularly information on operating experience of other reactors?
- How do NRC and SMUD ensure that emergency instructions are available to plant personnel in a manner that allows quick reference and use during an emergency?
- What procedures are used to encourage plant personnel and SMUD management to report unsafe or improper practices or conditions at the facility to SMUD, the NRC or others?
- Are plant personnel at Rancho Seco being asked to mitigate design deficiencies at the facility with a higher degree of operator proficiency than was envisioned when the plant was licensed?
- Are the qualification and training of operators consistent with the complexity of the equipment and safety systems they are handling?
- Do personnel adequately understand the mechanics of the facility, basic reactor physics, and other fundamental aspects of its operation and what process is used by the NRC and SMUD to determine this?
- What specific changes have been made to the Rancho Seco control room to allow operators to better comprehend and respond to unscheduled, abrupt shutdowns?
- Are there any other changes that could be made to ensure better comprehension and response by operations personnel?

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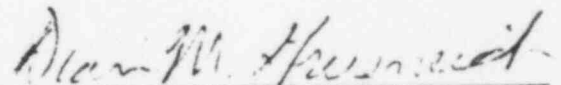
30. Have the NRC and SMUD given proper consideration to the views and expertise of individuals on its staff, the nuclear industry, and the utilities in their decisions on the safety of Rancho Seco?

31. Have the NRC and SMUD given proper consideration to the views and expertise of individuals, private organizations, and state, regional and local governments in their decisions on the safety of Rancho Seco?

32. Have the NRC and SMUD properly informed the nuclear industry, the utilities, state, regional, and local governments, and the public of information and events pertaining to the safety of Rancho Seco?

Dated: August 1, 1979

Respectfully submitted,



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