

8005190427



SACRAMENTO MUNICIPAL UTILITY DISTRICT □ 6201 S Street, Box 15830, Sacramento, California 95813; (916) 452-3211

May 12, 1980

Director of Nuclear Reactor Regulation
Emergency Planning Review Team Leader
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. Frank Pagano

Docket No. 50-312 - Regulatory Guide 1.101
Emergency Planning for Nuclear Power Plants
Rancho Seco Nuclear Generating Station Unit No. 1

Gentlemen:

The revised draft Rancho Seco Emergency Plan has been updated following your April 2, 1980 letter. To meet the five week deadline, we are sending the draft before internal review by the Plant Review Committee and the Management Safety Review Committee. Any resulting modifications will be promptly forwarded.

The draft Emergency Plan was written before the issuance of the criteria in NUREG-0654 FEMA-REP-1 and reviewed while the criteria were in their initial stages of public comment. There are many unresolved questions associated with these draft criteria. Evaluation of the Rancho Seco Emergency Plan against every item in the draft is inappropriate until these questions are answered.

Emergency Plans should be "living documents" in that they should evolve as drills uncover needs for improvement. Plans should also be workable and not just be able to satisfy a list of requirements. The revised draft Rancho Seco Emergency Plan is a good plan. In our opinion, it satisfies the intent of NUREG-0654, is flexible, workable, and provides safety to the public with a wide margin of safety. The following comments clarify our position on particular items.

Comments

NUREG-0654
FEMA-REP-1
B-5 (Table B-1)

Table 4-3 provides current estimates of manpower and response times for Rancho Seco staff, and are felt to be realistic and appropriate. It is my understanding that the 30-minute criteria is for high population density sites only. Rancho Seco is an isolated and low population site.

A043

S
1/10

Enc to:

F/ES

PDR

LPDR

I+E (2)

BC (2)

EPB-DOR

~~State Reg~~

~~REG~~

STATE PROG

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

Comments (continued)

- C-2 Responsible individuals from each governmental emergency operations group will be at the offsite Emergency Operations Facility. These individuals would be involved in the offsite environmental data analysis, recommendations and response decisions, and will be able to direct their people from our EOF. Sacramento, Amador, and San Joaquin County emergency groups and the State emergency group and SMUD believe this is a waste of manpower and an unnecessary duplication of effort.
- H-6b A minimum of 40 TLD stations will be in position around Rancho Seco by July 1, 1980 in compliance with the NRC Radiological Assessment Branch Technical Position for the Environmental Radiological Monitoring Program. Agreements are in progress to obtain easement rights to private land to the north, east, and south of Rancho Seco. Meetings are in progress to duplicate five locations with the NRC Region V and the State of California. Details will be provided when the project is complete.
- H-8 (Appendix 2) Comments provided in enclosure.
- I-5 Meteorological data is available to all locations via telephone. Computer data transfer will be available July 1981.
- I-7 A detection capability of 5×10^{-8} uCi/cc is an unreasonable request for emergency response measurements. A value of 10^{-6} uCi/cc would be much more realistic and attainable.
- J-10a Sacramento County Emergency Operations Office is preparing these maps. They will be completed in June 1980. SMUD will distribute copies to the Technical Support Center, Onsite Emergency Operations Center, and the Offsite Emergency Operations Facility.
- J-10b Sacramento County Emergency Operations Office is updating the population distribution around Rancho Seco in five mile increments for the 16 sectors. The one mile increments from 0-10 miles is unreasonable and provides unnecessary detail for the emergency situation.
- J-10c SMUD is working with the Sacramento County Emergency Operations Office and FEMA in researching the most appropriate way of notifying the public in the vicinity of Rancho Seco. Much progress has been made on the project. Completion should be well in advance of the July 1981 deadline.

Mr. Frank Pagano

- 3 -

May 12, 1980

If you have any questions concerning the revised plan or the above comments, please contact either Don Martin or Edward Bradley on (916) 452-3211, ext. 603.

Sincerely,

Wm. C. Walbridge
Wm. C. Walbridge
General Manager

Enclosure

SACRAMENTO MUNICIPAL UTILITY DISTRICT COMMENTS REGARDING
NUREG-0654 APPENDIX 2

NUREG-0654 Appendix 2 sets new requirements to ensure that valid meteorological data is available at nuclear power plants before and during accidents involving radioactive releases to the atmosphere. The primary aspects of NUREG-0654 Appendix 2 are:

Meteorological Tower

- Sufficient well maintained instrumentation
- Redundant power supplies

Primary Acquisition System

- Redundant power supplies
- Real-time data acquisition and display
- Historical, accessible data files in 15 minute averages for the previous 12 hours
- Ability to project dispersion factors out to 50 miles for 24 hours in advance
- Ability to be remotely interrogated

Backup System

- Must be on-line within 5 minutes of primary system failure
- Must supply basic meteorological parameters
 - o stability class via delta-T or wind direction fluctuations
 - o wind speed
 - o wind direction

Quality Assurance

- Ensure accuracy and reliability of systems

To bring Rancho Seco's present system into compliance would involve several changes and purchases probably exceeding \$250,000 total cost. These changes include:

Meteorological Tower

- Add precipitation gauge, may cost several hundred dollars.
- Change procedures to ensure that only one of redundant delta-T's, wind speeds and wind directions is out of service at one time.
- Move relative humidity instrument from 6' (1.8 meter) to 33' (10 meter) level and calculate dew point from r.h.
- Have one 33' level sensor read out temperature as well as input to delta-T.
- Provide redundant power supply via battery backup or by tying existing power source (administration building motor control center) to redundant power supply. Redundant power for the tower could cost over \$30,000.

Primary Acquisition System

- Purchase new data acquisition computer having abilities to meet the NUREG requirements.
 - o real-time data acquisition and display
 - o historical data files
 - o projection abilities
 - o remote interrogation abilities
- Consider integrating offsite dose calculations with this unit since the same meteorological data files are used in both cases. Total computer costs will run between \$100,000 and \$200,000 depending on which job functions are included.
- Provide redundant power supply, can probably be done for under \$10,000. If tied off Bailey 855 redundant power can probably be supplied for less than \$5000 although this power supply may not have the excess capacity required by the new computer.

Backup System

- Use existing acquisition system in whole or in part to provide the backup system.
 - o reprogram NOVA for 15 minute averages
 - o modify multipoint recorder to allow manual switching from A to B sensor if A sensor fails.
- Keep backup on-line continuously or provide auto start upon primary system failure (on-line is easiest).
- Provide redundant power supply.

Quality Assurance

- Update Quality Assurance procedures to account for any new equipment or procedures.

NUREG-0654 is currently out for interim use and comment. While we have listed the requirements to comply with NUREG-0654 Appendix 2 it is our opinion that not every detail is necessary. We have the following comments:

Meteorological Tower

NUREG-0654 does not state anything about backup towers although verbal contacts with the NRC has indicated a desire for at least a "wood pole" backup. Rancho Seco currently has redundant delta-T, wind speed and wind direction on the same tower. Any incident likely to cause tower failure along with a radioactive plant release is more than likely to also cause failure of the wood pole. Any incident that could fail the primary tower (e.g. vehicle collision) and not affect the "wood pole" is also unlikely to cause power plant damage with a radioactive release. We do not think a backup tower or pole is necessary if the main tower has redundant instruments and a redundant power supply.

Additionally, we feel that if we already have temperature indication and relative humidity at 1.8 meters (6') it should not be necessary to move these to 10 meters as required by NUREG-0654. Also, since we have relative humidity already it should be acceptable in lieu of dew point.

Primary Acquisition System

NUREG-0654 requires radiological projections out to 50 miles distance. This can be done with existing on-the-market systems using Gaussian models. The validity of projecting out to this distance with Gaussian is highly questionable. We feel that Gaussian projections should be limited to 10 miles and that NRC work with DOE to make the only known system capable of realistic projections compatible with and available to nuclear power plants (i.e., Atmospheric Release Advisory Capability (ARAC), at Lawrence Livermore Laboratory).

ARAC has capability of using complex models that are much more valid at distances up to 50 miles.

Appendix 2 to NUREG-0654 requires that the primary system have a dial up connection with a functional backup. It cites radio or satellite as examples. The costs and frequency problems would be enormous. Dedicated phone lines or microwave should be sufficient.

Backup System

It has been assumed that the backup system should provide basic data:

- wind speed
- wind direction
- stability category by either:
 - o delta-T or
 - o sigma-theta

It is also assumed that communication of this data would be by reading data over the phone. Hand calculations could be used to determine diffusion factors offsite. These equations are being included in the 0654 upgraded Emergency Plan.

To require anything more from the backup system would rapidly drive up costs and take up room with additional equipment to backup equipment that would already have high reliability due to redundant instruments and redundant power supplies.