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Docket Nos.: 50-528, 50-529
and 50-530

Mr. E. E. Van Brunt, Jr.
Vice President - Nuclear Projects
Arizona Public Service Company
Post Office Box 21666
Phoenix, Arizona 85036

Dear Mr. Van Brunt:

Subject: Request for Additional Information - Palo Verde Emergency Plan

In Supplement No. 4 to the Palo Verde SER, the staff identified several areas of the revised Palo Verde Emergency Plan which were still under review. Based on that review, the staff has determined that additional information is required as discussed in Enclosure 1.

We request that you provide the information requested in Enclosure 1 in a timely manner so that we may complete our review.

Please advise us as to when you plan to respond to this request. If you have any questions regarding the request, you should contact Manny Licitra, the Licensing Project Manager.

Sincerely,

George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

Enclosure:
As stated

cc: See next page

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DATE	6/20/83	6/20/83					

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ENCLOSURE

Request for Additional Information
For Palo Verde Nuclear Generating Station Emergency Planning Items

1. The staff requires additional information in order to resolve item H(3) of NUREG-0857, Supplement 4, section 13.3.2.2. It is requested that you provide a discussion of your capability to characterize meteorological conditions in the vicinity (up to 10 miles) of the plant site.

2. The staff requires additional information in order to resolve item I(3) of NUREG-0857, Supplement 4, section 13.3.2.2. It is requested that you provide a discussion of the bases used for your offsite dose assessment methods (i.e., computer and hand calculational methods).

3. Based on a review of Revision 2, to the emergency plan dated June 1982, the following comments with respect to evacuation time estimates should be addressed. This request for upgraded information corresponds to item J(6) of NUREG-0857, Supplement 4, section 13.3.2.2..

   - The maps of the site and roadways should be upgraded to provide sufficient detail in the vicinity of the plant to determine if four lanes of capacity exist.
   - Additional detail is required on how plant traffic is routed.
   - More information should be provided concerning how the 2395 transient vehicle figure was determined. For example, what is the number of workers per vehicle for those using cars and how many workers are transported by bus and how many buses are used?
   - The evacuation time estimate information should be reviewed by appropriate State and local officials.

4. Based on a review of your emergency classification and action level scheme as presented in Revision 2 of the emergency plan, dated June 1982, the staff has developed the attached comments on your emergency action levels. These comments reflect the considerations of items D(1) and I(i) of section 13.3.2.2 of NUREG-0857, Supplement 4 and should be incorporated into the emergency plan.

COMMENTS ON EALs

FOR PALO VERDE NUCLEAR POWER GENERATING STATION

UNUSUAL EVENT CLASSIFICATION

Initiating Condition 10 (fire within the plant lasting more than 10 minutes). The applicant should consider using the initiating condition version given in NUREG-0654 Appendix 1. Any fire lasting more than 10 minutes is sufficient reason for the shift supervisor to declare an Unusual Event.

Initiating Condition 17 (rapid depressurization of PWR secondary side). The applicant did not address this initiating condition.

ALERT CLASSIFICATION

Initiating Condition 9 (coolant pump seizure leading to fuel failure). The applicant should consider listing the alarms, instrument readings, etc., that are indications of no coolant flow in the EAL set (e.g., "Reactor coolant pump auto trip alarm").

Initiating Condition 10 (complete loss of any function needed for plant cold shutdown). The applicant should consider using the initiating condition version given in NUREG-0654 Appendix 1.

Initiating Condition 12 (fuel damage accident). The applicant should consider using the initiating condition version given in NUREG-0654 Appendix 1. The applicant should also consider adding a "Shift Supervisor's Opinion" EAL to take into account false alarms or radiation releases from other events that would give the same instrument readings on the monitors listed in the EALs.

Initiating Condition 17 (flood, low water). The applicant did not address this initiating condition.

SITE AREA CLASSIFICATION

Initiating Condition 2 (degraded core with possible loss of coolable geometry). The applicant's EAL fulfills the requirements for indicating core damage. However, the EAL does not indicate possible loss of coolable geometry.

Initiating Condition 8 (complete loss of any function needed for plant hot shutdown). It is not clear what is meant by the applicant's "Shutdown margin cannot be made 1%" EAL.

Initiating Condition 10 (major damage to spent fuel). The applicant's EALs list the same radiation monitors as given in Alert Initiating Condition 12. The applicant should consider listing seperate

monitor setpoints for Site Area Emergency. The applicant should also consider adding a "Shift Supervisor's Opinion" EAL to take into account false alarms or radiation releases form other events that would give the same instrument readings on the monitors.

Initiating Condition 11 (fire compromising the function of safety systems). The applicant's EALs give good indications that a fire is in progress or is beyond the capability of the PVNGS Fire Team. However, the intent of NUREG-0654 in this case is an EAL which indicates that any fire compromising the function of safety systems is sufficient reason for declaring a Site Area Emergency. The applicant should consider using an EAL such as "Any fire, in the Shift Supervisor's Opinion, that is compromising the function of safety systems."

Initiating Condition 13 (effluent monitor readings exceeded). The specific setpoints that have been pre-calculated to exceed the dose rates under adverse meteorological conditions should be specified.

Initiating Condition 15b (flood, low water). The applicant did not address this initiating condition.

GENERAL EMERGENCY CLASSIFICATION

Initiating Condition 2 (loss of 2 or 3 fission product barriers). The applicant's EAL is inadequate because specific EALs have not been provided.

Example PWR Sequences 5a and 5b. The applicant's EALs are inadequate because specific EALs have not been provided.

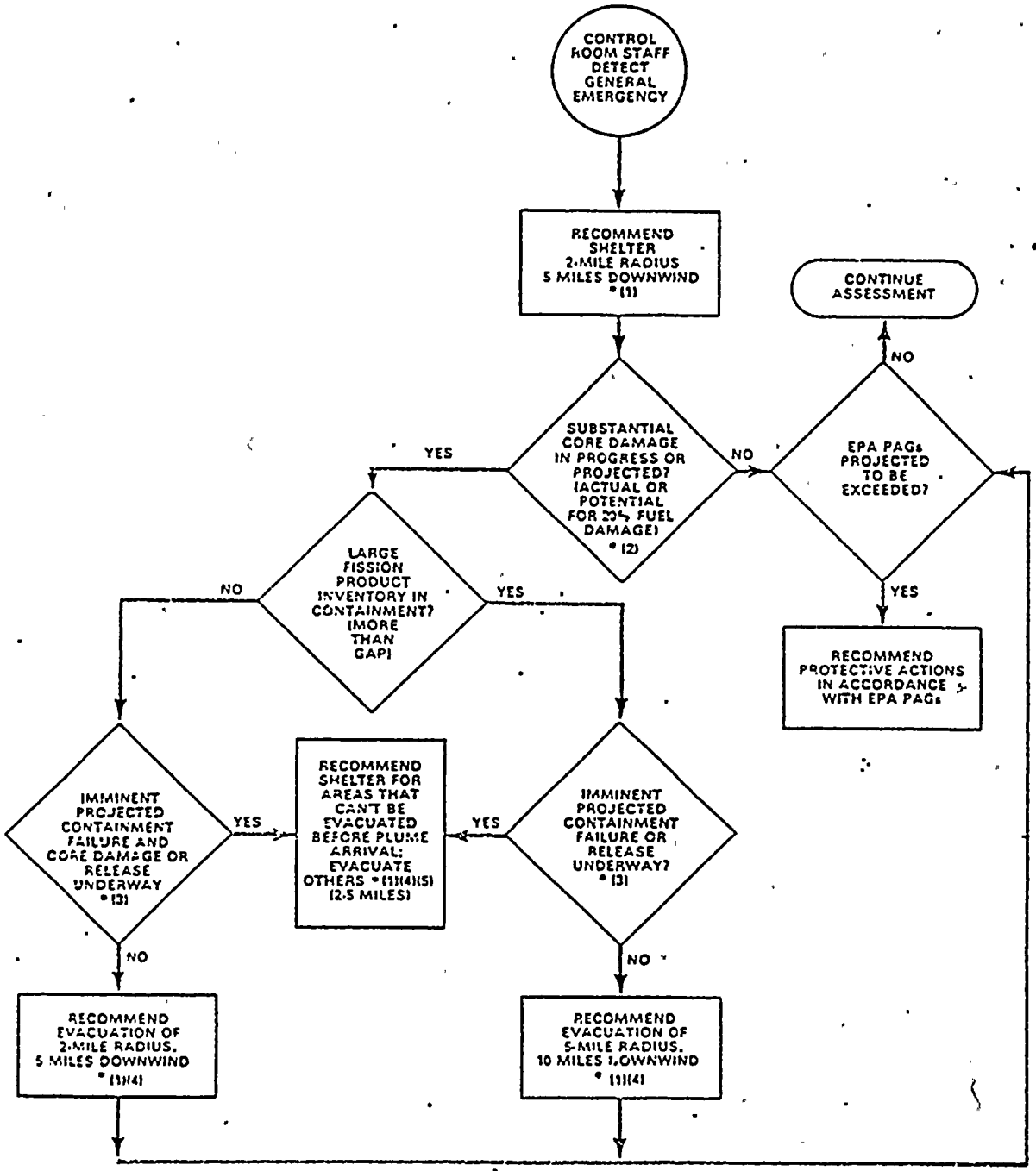
PROTECTIVE ACTION DECISION MAKING EALs

General Emergency Initiating Condition 4 (other plant conditions). The applicant did not address this initiating condition. In order to assure that all criteria in General Emergency Initiating Condition 4 are met, the applicant must prepare EAL sets and protective actions that specifically address the conditions and actions given in notes a, b, c, and d of General Emergency Initiating Condition 4 of NUREG-0654 Appendix 1.

In order to aid in this task, two attachments are included: (1) protective action decision flow chart (2) 82-38 information notice on EALs. With respect to protective action decision making in general as it concerns General Emergencies, each decision point "◇" on the flow chart should be associated with EALs.

FLOW CHART FOR GENERAL EMERGENCY OFFSITE PROTECTIVE DECISIONS

The following actions will be based on predetermined observable instrumentation and plant status indicators (EALs) contained in the emergency plan and that have been reviewed by offsite officials. However, responsible offsite officials must decide on the feasibility of implementing the protective actions at the time of the accident.



SOURCE: Appendix 1, NUREG-0654/FEMA-REP-1, Rev. 1

*(1) SITUATIONS REQUIRING URGENT ACTION BY OFFSITE OFFICIALS
(Based on Control Room Indicators, No Dose Projections Required)
- 15-Minute Decisionmaking, Activation of Alerting System and EBS Message

*(2) Actual or projected release of 20% gap from core or loss of physical control of the plant to intruders.

*(3) "Puff" release (rate much greater than designed leak rate).

*(4) For all evacuations, shelter the remainder of the plume EPZ and promptly relocate the population affected by any ground contamination following plume passage.

*(5) Concentrate on evacuation of areas near the plant (e.g. may be time to evacuate 2-mile radius and not the 5-mile radius).