



Federal Emergency Management Agency

Washington, D.C. 20472

JUL 11 1984

MEMORANDUM FOR: Edward L. Jordan
Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission

FROM: *Richard W. Krimm*
Richard W. Krimm
Assistant Associate Director
Office of Natural and Technological
Hazards Programs

SUBJECT: Interim Finding on State of California Nuclear Power
Plant Emergency Response Plan (CNPPERP)

Reference is made to my memorandum to you dated April 2, 1984, subject; Offsite Emergency Preparedness at Diablo Canyon. In that memorandum, item numbers 1,2 and 4 of the four items considered by the Atomic Safety and Licensing Board (ASLB) as requirements were considered completed. In regard to item #3, we stated that we would provide additional comments on the State plan after the Federal Emergency Management Agency (FEMA) Region IX Regional Assistance Committee (RAC) completed their review. Attached is a memorandum from FEMA Region IX dated June 15, 1984, transmitting an interim finding on the CNPPERP.

With regard to the Protective Action Levels adopted by the State, we realize they are not consistent with Federal recommendations from the Environmental Protection Agency (EPA). In our further assistance to the State, we will attempt to persuade the State of California to adopt the EPA Protective Action Guides. However, FEMA does not consider their plan inadequate because of this discrepancy in adopted values, since the State has a more conservative approach and would recommend taking protective actions at an earlier time. Overall the revised CNPPERP has been determined to be adequate to protect public health and safety by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency.

Attachment
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Federal Emergency Management Agency

Region IX Building 105
Presidio of San Francisco, California 94129

JUN 15 1984

MEMORANDUM FOR: ASSOCIATE DIRECTOR
STATE AND LOCAL PROGRAMS AND SUPPORT

FROM:

[Handwritten Signature]
Regional Director

SUBJECT: State of California Nuclear Power Plant Emergency
Response Plan (CNPPERP) -- Interim Finding Report

Subject report is attached.

The RAC have determined that the CNPPERP is adequate to protect public health and safety by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency.

Attachment



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INTERIM FINDING ON PLAN REVIEW
OF THE
STATE OF CALIFORNIA NUCLEAR POWER PLANT EMERGENCY RESPONSE PLAN (CNPPERP)

BACKGROUND

The CNPPERP was submitted to the Federal Emergency Management Agency (FEMA) Region IX by letter from the State of California Office of Emergency Services dated November 8, 1983. Because the plan had been previously reviewed as a draft, and since the transmittal letter made no specific reference to its being a draft plan, regional staff assumed this to be a final plan for formal submission and mistakenly processed a Federal Register Notice. Immediately upon receipt of state clarification as to the draft status of the plan, the notice was rescinded. The plan was distributed to the Regional Assistance Committee (RAC) for review. Staff of the California Office of Emergency Services briefed the RAC on the plan at a meeting called for that purpose on January 30, 1984.

The RAC was reconvened, along with staff of the California Office of Emergency Services, on May 30, 1984 for a discussion of the CNPPERP review findings. The data contained herein will cover the salient points of the review discussion, report the findings of the RAC, and advance suggestions subsequently offered by the RAC toward plan enhancement.

The CNPPERP consists of seven volumes:

1. Office of Emergency Services
2. Department of Health Services
3. Radiologic Health Branch
4. Emergency Medical Services Authority
California Highway Patrol
Department of General Services
Department of Forestry
Department of Food and Agriculture
Department of Fish and Game
Department of Rehabilitation
Department of Social Services
5. Military Department
6. Youth Authority
7. Department of Corrections

The CNPPERP is subordinate to the State Emergency Plan which establishes the State's emergency organization. All offsite cities and counties surrounding power plants within the State of California have either an adopted and published offsite emergency response plan or a draft of such a plan. The state and most local governments in California have entered into a Master Mutual Aid Agreement. Pursuant to this agreement, operational plans for rendering mutual aid have been developed by the agencies associated with a given emergency function or service. The provisions of these mutual aid plans are compatible with the State Emergency Plan.



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Interim Finding - CNPPERP - continued - Page Two

The specific function of the Office of Emergency Services (assisted by other state agencies) is to exercise overall coordinating responsibilities for state agency emergency operations in support of local government. In coordination and cooperation with local and federal governments, the state will establish priorities for the use of state resources. The ingestion pathway zones are a primary responsibility of the state.

The state plan has been in existence for a number of years and has been exercised several times in conjunction with local offsite jurisdictional planning exercises.

REVIEW DISCUSSION (Editorial Comments)

The CNPPERP contains a "Record of Changes" section at page 11. The RAC have reviewed and commented on previous draft plans, yet there are no changes recorded.

In accord with the state concept of planning, as it is understood, the administrative portion of the plan would establish the basic premises of authority, purpose/objectives, references, concept of operations, assignments and functions and then be followed by standard operating procedures (SOPs) that could effect a checklist approach for use by anyone having to perform the response activities covered by a particular SOP. In the opinion of the RAC, the CNPPERP does not adhere to that concept.

The overall plan does contain extremely qualitative data necessary to a sound understanding of the operational aspects of emergency response requirements, but the format is redundant and the organization confusing.

The administrative section of the plan addresses the roles, assignments, functions, and responsibilities of all levels of government. There are charts that depict the primary and support roles of the individual levels of government. However, there does not appear to be a clear definition of the inter-relationships of each level of government, one to the other.

The role of the state could be easily misunderstood by one who did not know the state's dual responsibility for supporting local government and a primary action agent for the ingestion pathway zones. The two are separate functions and might be better addressed separately.

In the Table of Contents, local offsite response plans are reflected as annexes and the administrative portion indicates that the CNPPERP is to serve as the basis for local planning—yet the local governments have a primary emergency response assignment and the state is in support of the local governments. Thus, many valuable aspects of the planning effort cannot be addressed (reviewed) without benefit of the local plan. Similarly, because of the evolutionary nature of planning, reference to federal level plans is misrepresented, incomplete, and/or lacking clear identification of authority. The plan should either reference the Federal Radiological Emergency Response Plan (FRERP) or plans related thereto, state agency plans, and/or local plans as appropriate without attempting to describe the functions contained in the plans.

While state participation in local offsite plan exercises has proven to be effective, it is not now known whether those activating the emergency response



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Interim Finding - CNPPERP - continued - Page Three

operations at the state level were actually following the CNPPERP or enacting familiar roles assigned by the State Emergency Plan. The CNPPERP does not appear to be in a form that could be instantaneously operational.

A good example of the inadequacy of the SOP portion of the plan can be found in the Communications SOP. The material actually required for directing an individual assignment is located in the Procedures section: Page marked OPS, 31, 4-83, entitled Appendix IV-1, Communications Protocol. See NUREG 0654 Findings, Item F.

Much of the data contained in the administrative portion of the plan is repeated in the procedures portion of the plan (in one form or another) and then again in the text of the individual SOPs. This gives the appearance of a good training tool, but not an operational plan.

While NUREG 0654 does not specify a particular format for emergency response plans, it does emphasize the importance of clearly setting forth all the criteria contained therein. It specifically states: "The plans should be kept as concise as possible...The plans should make clear what is to be done in an emergency, how it is to be done and by whom." The CNPPERP does contain a variety of data addressing those aspects and presents an excellent training tool for those assigned to emergency response operations. It falls far short of providing a particular individual with the capability to effect operations in a timely manner, relying solely on the CNPPERP.

See Suggestions for Plan Enhancement in this report.

PLAN ERRORS NOTED

Page 24. There is a reference to Appendix D which should be Appendix "C".

Pages 25 and 26 are reversed in order of text.

NUREG 0654 FINDINGS

The findings presented below are based on and keyed to NUREG-0654/FEMA-REP-1/Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

<u>NUREG Number</u>	<u>Finding</u>
II.A.1.a.	Adequate.
II.A.1.b.	Adequate. Consideration toward improved definition of the role of the state should be given during update of the plan. Possible separation of the support role to local government and the primary role for the ingestion pathway zones may be necessary.
II.A.1.c.	Inadequate. The CNPPERP does not clearly define the roles of various governmental levels or their interrelationships. There should be a mechanism for identifying the primary local responsibility, state support, and federal level support, as well as the primary ingestion pathway zone response requirement of the state.
II.A.1.d.	Adequate.
II.A.1.e.	Adequate.
II.A.2.a.&b.	Adequate. Requires update and clarification. Refer to FRERP, NRC revised response plan, and authorities that



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Interim Finding - CNPPERF - continued - Page Four

- relate to other primary functions detailed in the plan; i.e., Table IV has no primary role for transportation; Table V shows sheriff and city police have the responsibility; Table VI reflects DOD supportive to DOT; the RAD Health Plan, Page I-14 does not reflect USDA as part of FEMA's RAC; and the state's dual primary/support roles are not clear.
- II.A.3. Adequate. Presented in a fragmented manner; i.e., M-8-1 provides the procedures for obtaining agreements, but all support groups should be clearly identified, with the authorities, arrangements, and agreements of all organizations confirmed in writing and made a part of the plan.
- II.A.4. Adequate.
- II.B. Not applicable.
- II.C.1. Adequate. Update should provide clear delineation of roles and responsibilities in consonance with FRERP.
- II.C.1.a. Adequate.
- II.C.1.b. Adequate.
- II.C.1.c. Adequate.
- II.C.2.a. Adequate.
- II.C.2.b. Not applicable.
- II.C.3. Adequate.
- II.C.4. Adequate. California State Universities reflected in the Annex section of the Table of Contents was not included in the plan text provided. Assume they are contained in the local plans. Perhaps a notation would clarify.
- II.D.1. Not applicable.
- II.D.2. Not applicable.
- II.D.3. Adequate.
- II.D.4. Adequate.
- II.E.1. Adequate.
- II.E.2. Adequate.
- II.E.3. Not applicable.
- II.E.4. Not applicable.
- II.E.5. Adequate. Responsibility is detailed in local plans.
- II.E.6. Adequate. Responsibility is detailed in local plans.
- II.E.7. Adequate. Responsibility is detailed in local plans.
- II.F.1.a. Adequate.
- II.F.1.b. Adequate.
- II.F.1.c. Adequate, though not all personnel are provided with a backup communications capability.
- II.F.1.d. Adequate.
- II.F.1.e. Adequate.
- II.F.1.f. Adequate.
- II.F.2. Not applicable. Utility/County responsibility.
- II.F.3. Adequate.

NOTE:

While it is shown that the communications capability exists and portions of the plan reflect implementation procedures, the data is provided in an unorganized manner and difficult to locate. The SOP is inadequate in its present form and should be updated to provide specific information as to exact communications resource availability, how it is to function and be used, and who is responsible for implementation. See review discussion comments portion of this report.



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Interim Finding - CNPPERF - continued - Page Five

- II.G.1. Not applicable. Utility/County responsibility.
- II.G.2. Not applicable. County responsibility.
- II.G.3.a. Adequate. Update should incorporate joint effort described in FRERP.
- II.G.3.b. Not applicable.
- II.G.4.a. Adequate. See II.G.3.a. above.
- II.G.4.b. Adequate. See II.G.3.a. above.
- II.G.4.c. Adequate. See II.G.3.a. above.
- II.G.5. Adequate. See II.G.3.a. above.
- II.H.1. Not applicable.
- II.H.2. Not applicable.
- II.H.3. Adequate.
- II.H.4. Adequate.
- II.H.5.&6. Not applicable.
- II.H.7. Adequate.
- II.H.8.&9. Not applicable.
- II.H.10. Adequate.
- II.H.11. Adequate.
- II.H.12. Adequate.
- II.I.1-6. Not applicable.
- II.I.7. Adequate.
- II.I.8. Adequate. Update should include specific information on radio communications systems for the State RAD Health field operations (monitoring teams). This data could not be located in the plan.
- II.I.9. Adequate.
- II.I.10. Adequate.
- II.I.11. Adequate.
- II.J.1.a-d. Not applicable.
- II.J.2. Not applicable. Utility/County responsibility.
- II.J.3-8. Not applicable.
- II.J.9. Questionable. DOE requires clarification of the appropriateness and liability aspects of the state's effecting response operations at lower limit of exposure resulting from passage of radioactive airborne plume at less than the federally recommended level. The plan asserts activation of response operations at 0.5 Rem. This is being addressed by separate memorandum requesting advice of FEMA National Office technical staff and General Counsel.
- II.J.10.a-d. Not applicable. County responsibility.
- II.J.10.e. Adequate.
- II.J.10.f. Adequate. Plan recommends administration of radioprotective drugs to emergency workers, but does not detail criteria for doing so. Update requirement.
- II.J.10.g-1. Not applicable. County responsibility.
- II.J.10.m. Adequate.
- II.J.11. Adequate.
- II.J.12. Adequate. The plan contains procedures to manage the registration and monitoring of evacuees at relocation centers. NUREG-0654 establishes the goal of monitoring all residents within about 12 hours. The sites have the capability to process one person every 2 minutes or a maximum of 360 persons in 12 hours. County has primary responsibility.
- II.K.1&2. Not applicable.
- II.K.3.a. Adequate.
- II.K.3.b. Adequate.
- II.K.4. Adequate.



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Interim Finding - CNPPERP - continued - Page Six

- II.K.5.a. Adequate.
 II.K.5.b. Adequate. Needs to address decontamination of instruments and equipment.
 II.K.6&7. Not applicable.
 NOTE: The RAC/EPA member stated that there are questionable areas in the plan, but that it is a draft plan that has been exercised a number of times and found to be operational and therefore no comment is submitted.
- II.L.1. Adequate. To evaluate radiation exposure and uptake prerequisites requires knowledge of method for reading the exposure or dose on a self-reading dosimeter--particular training is to be developed.
 II.L.2. Not applicable.
 II.L.3. Inadequate. A list of facilities to treat contaminated patients is provided; however, yet to be developed is information including type of facility, capacity, and any special radiological capabilities.
 II.L.4. Not applicable. County responsibility.
 NOTE: The EMS sections that have been completed are well done; however, the entire training section has yet to be completed.
- II.M.1. Adequate.
 II.M.2. Not applicable.
 II.M.3. Adequate.
 II.M.4. Adequate.
 II.N.1.a. Adequate.
 II.N.1.b. Adequate.
 II.N.2.a. Adequate.
 II.N.2.b. Not applicable.
 II.N.2.c. Not applicable.
 II.N.2.d. Adequate.
 II.N.2.e.(1) Adequate.
 II.N.2.e.(2) Not applicable.
 II.N.3.a-f. Joint determination at all levels of government.
 II.N.4. Adequate. Update should provide more specific information. In a general statement the plan provides arrangements for qualified observers to critique the exercises.
- II.N.5. Adequate. Update should provide more specific information. The plan calls for submission of both formal and informal critiques. It does not, however, establish management control to ensure that corrective actions are implemented.
- II.O. ALL Inadequate. Entire standard is to be implemented.
 II.P. ALL Adequate.

SUGGESTIONS FOR PLAN ENHANCEMENT

In many instances, criteria was not specifically applicable to the state because of the division of authority/responsibility between the state and local government. The plan should be more specific in addressing the support role and how it relates to local planning efforts and operational capability.

The USDA suggests that the State of California may wish to include farmers as emergency workers in order that they may reenter the evacuated area to tend livestock and/or other necessary agricultural practices.

Many of the RAC members were informed by state personnel that certain portions of the plan were being completely rewritten and the RAC felt that review of



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Interim Finding - CNPPERP - continued - Page Seven

those sections of the plan to be a waste of valuable time better spent on other tasks. In the future when it is known that certain sections are to be replaced in their entirety immediately after submittal of the plan, it may be wise to consider holding the plan to incorporate those sections -- rather than to wait a complete year for update submittal.

Reference within the plan to the FRMAP includes USDA in the list of participating agencies, but USDA's responsibilities are not included in the summaries that follow. For the state's consideration and information, the following statements have been included in the October 1983 draft of the FRMAP:

- USDA will assist in the collection of samples of agricultural products including animal feed, water, and soil for radiological contamination. USDA can also assist in the monitoring of agricultural soil and water in the event that additional capability is needed. USDA can provide from five to ten experienced personnel for these collection and monitoring activities. However, monitoring equipment would have to be provided by other federal/state agencies.
- USDA can assist in developing agricultural protective measures and assessing damage to agricultural resources and monitor, in coordination with HHS/FDA, emergency production, processing and distribution of food.
- The USDA Forest Service will make available its National Fire Cache on request of DOE. These resources are stored throughout the country and include fire-fighting equipment, heavy machinery, aircraft, and radio communications systems.

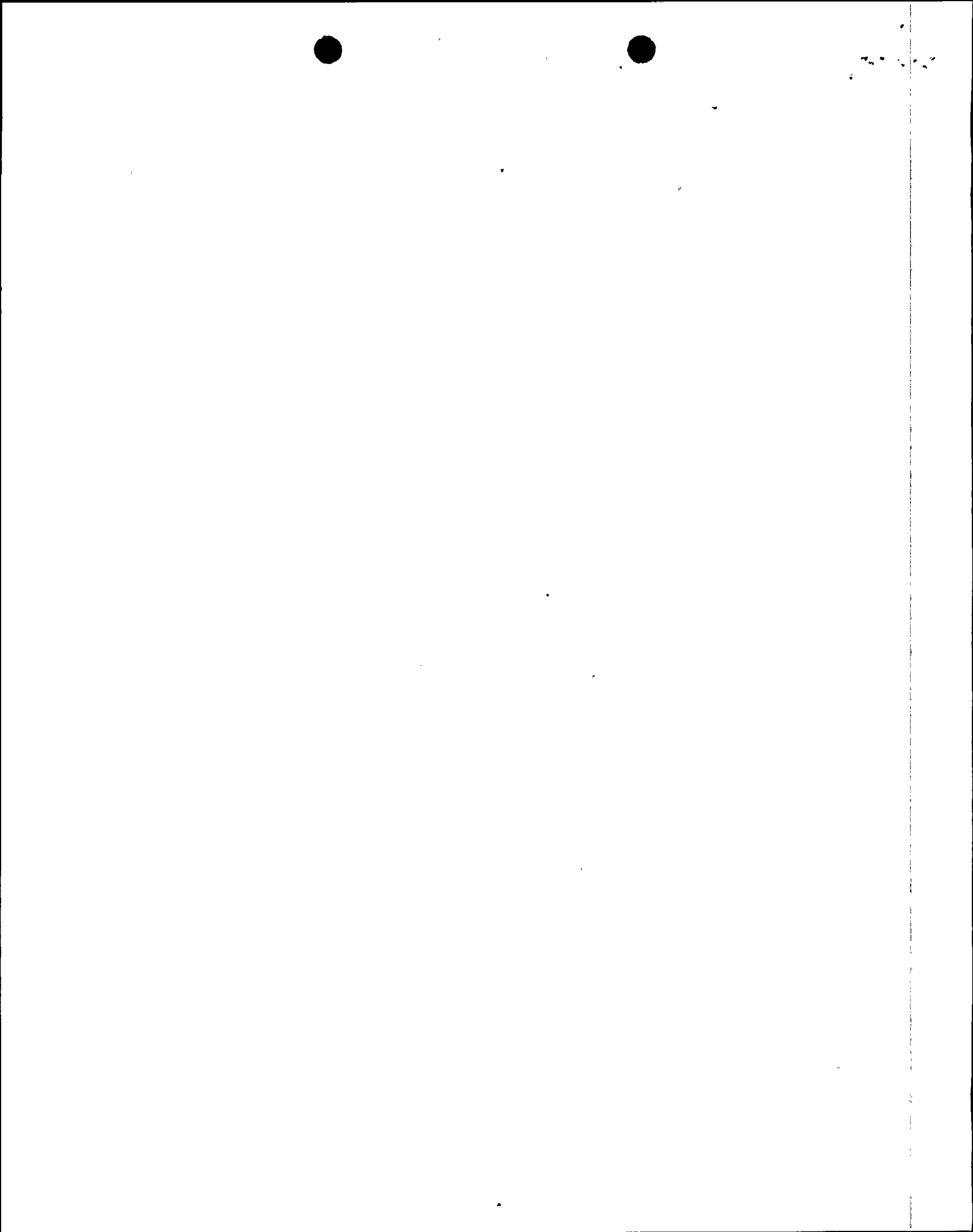
Page 28 of the Administrative portion of the plan refers to activation of the Los Angeles CA-OES EOC without benefit of establishing the state's regional configuration or if there are other CA-OES EOCs. Consideration may be given to establishing the CA-OES regions and regional capabilities in the plan update.

The plan is very vague with regard to the direction and control procedures of RHB during ingestion pathway zone activities. It is assumed that the RHB would take a lead role to CA-OES, but would continue to coordinate through the CA-OES as a state assistance agency. What is the role of local government?

This report has been circulated to the RAC members in draft form and return comments incorporated therein. Each RAC member has requested that the report contain a statement as to the vast improvement in the CNPPERP and to extend to the state their willingness to assist in future endeavors to enhance the emergency response implementation of the CNPPERP.

Attachment

(Memorandum for the Record, dated June 8, 1984, from FEMA Region IX Chief of the Technological Hazards Branch, Subject: State of California Nuclear Power Plant Emergency Response Plan (CNPPERP).)





Federal Emergency Management Agency

Region IX Building 105
Presidio of San Francisco, California 94129

June 8, 1984

MEMORANDUM FOR THE RECORD

FROM: John P. Sucich, Chief *JPS for*
Technological Hazards Branch
Natural & Technological Hazards Division

SUBJECT: State of California Nuclear Power Plant
Emergency Response Plan (CNPPERP)

During the RAC review of subject plan, the DOE RAC member requested FEMA to determine the appropriateness and liability aspect of the state effecting protective measures based on the lower limit of whole body exposure at 0.5 Rem. The DOE RAC member asserts:

"All elements for DOE evaluation have been noted as "acceptable except for one. This element is J.9 as found in Page 61 of NUREG 0654 which states:

"Each state and local organization shall establish a capability for implementing protective measures based upon protective action guides and other criteria. This shall be consistent with the recommendations of EPA regarding exposure resulting from passage of radioactive airborne plumes (EPA 520/1-75-001)..."

The EPA recommendation regarding exposure resulting from passage of radioactive airborne plume for whole body is 1-5 Rem. In accordance with NPPERP, California had opted for the lower limit of whole body exposure at 0.5 Rem. The basis of 0.5 Rem, as discussed in Page I-27, is on Section 30268, CAC, Title 17.

Title 17 of the CAC, similar to 10 CFR 20, contains rules and regulations pertaining to normal routine operations with radiation. There is a probability that members of the public in unrestricted/uncontrolled areas may be subjected to some planned exposure. That annual exposure limit, pursuant to Title 17, CAC is 0.5 Rem per year. For the planning of nuclear power plant accidents, the emergency exposure is not routine, nor the emergency to be an annual event. In fact, this emergency dose can most probably be expressed as once-in-a-lifetime exposure.

It is further noted that the 25 Rem limit for emergency workers and the 75 Rem limit for lifesaving activities are not in accordance with Title 17 CAC, which authorizes no more exposure than 3 Rem in any quarter. Then, why should Title 17 not be exempted in all unplanned emergency situations commensurate with health and safety considerations.

The health and safety considerations are recognized as based on value judgements, not on regulations. These value judgements should have the following factors:



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°Are the risks associated with taking protective actions at the projected doses greater than the risks associated with the low projected radiation doses?

°Is there a reasonable probability that the protective actions being considered can be successfully implemented?

°Could efforts to protect the population do more harm than good where low doses are projected?

The State of California, besides citing regulations, should justify their position for the lower limit of exposure to 0.5 R-m or accept the EPA guideline of 1 Rem."

The State of California has alleged to be within their legal right to effect protective actions based on the lower limit.

The Region would request the technical staff of SLPS-ONTH-TH to provide advice based on the criteria presented by the RAC DOE member and enforcement of the NUREG-0654. Also, consideration by General Counsel as to the liability of providing any support to state and local governments effecting protective measures at the lower limit of exposure. If such advice should result in a negative finding on both the appropriateness and liability aspects, should the plan be found to be inadequate?

An early response to these issues will be appreciated.



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