



Federal Emergency Management Agency

Washington, D.C. 20472

*Schwartz/Sagano
perhaps we should
attach this to
Callaway SER
as an appendix
BSJ*



19 MAR 1982

MEMORANDUM FOR: Brian Grimes
Director
Division of Emergency Preparedness
U.S. Nuclear Regulatory Commission
FROM: *Richard W. Krimm*
Richard W. Krimm
Assistant Associate Director
Office of Natural and Technological Hazards

SUBJECT: Interim Findings of Offsite Emergency Preparedness
for the Callaway Nuclear Power Plant (Missouri)

Attached is a copy of the Federal Emergency Management Agency (FEMA) Region VII's A thru P interim finding of the adequacy of State and local plans for offsite radiological emergency preparedness for the Callaway (Missouri) nuclear power generating facility. A schedule of events for improvement of offsite emergency preparedness is included on the last page. Please note "...that it is the finding of the Region VII Regional Assistance Committee that the State of Missouri is progressing at an adequate pace to ensure the safety of the public surrounding the Callaway Nuclear Plant by the scheduled date of operation."

Attachment
as stated

8203250575 820319
PDR ADOCK 05000483
F PDR

*TE35
s
//*



Federal Emergency Management Agency

Region VII 911 Walnut Street Kansas City, Missouri 64106

FEB - 2 1982

MEMORANDUM TO: Chief, Technological Hazards Division
Office of Natural & Technological Hazards

FROM: *Patrick J. Breheny*
Patrick J. Breheny, Regional Director Region VII
Federal Emergency Management Agency

SUBJECT: Interim Finding of Preparedness for the State and Local
Planning Surrounding the Callaway Nuclear Plant.

Enclosed is the interim finding of preparedness for the state and local planning surrounding the Callaway Nuclear Plant located near Fulton, Missouri. This interim finding is based solely on the review of existing plans, as no exercise has been conducted to date. The plans reviewed were the "Missouri Nuclear Accident Plan" and the "Callaway Offsite Emergency Response Plan," the combined local plan for the Counties of Callaway, Osage, Montgomery and Gasconade.

These plans, especially the local response document, are still in rudimentary form and presently fall short of satisfying NUREG 0654/FEMA-REP-1. The principal deficiencies detailed in this finding are as follows:

1. No warning and notification system is presently in place (Planning Standard E)
2. The details of the public information program have not been developed, particularly an adequate publication outlining protective actions for public safety (Planning Standard G)
3. A potential conflict of interest exists with the designation of the local government official spokesperson (Planning Standard G)
4. There exists a lack of host area planning for Boone and Cole Counties (Planning Standard J)
5. There exists a lack of implementing procedures particularly for the local response (Planning Standards A-P)
6. Lack of state data and procedures site-specific to the Callaway facility. (Planning Standards A-F)

Until adequate implementing procedures are further developed, we cannot judge the ability of the local response to protect the health and safety of the public in the vicinity of the Callaway Plant.

It appears that continuing development of the plan will result in the final version satisfying the NUREG 0654 requirements prior to the scheduled operating date for the facility.

INTERIM FINDING OF PLANS OF STATE AND LOCAL GOVERNMENTS IN MISSOURI IN THE
10 AND 50 MILE EPZs AROUND THE CALLAWAY NUCLEAR PLANT

I. Introduction

The Callaway Nuclear Plant is located in Callaway County, Missouri and impacts the State of Missouri in the following manner:

10 Mile EPZ: Callaway, Montgomery, Gasconade and Osage Counties

50 Mile EPZ: Monroe, Ralls, Pike, Audrain, Randolph, Howard, Boone, Cooper, Moniteau, Cole, Miller, Maries, Phelps, Crawford, Franklin, Warren, St. Charles, Lincoln

The State of Missouri Disaster Planning and Operations Office coordinates actions and operations involving response, coordinates resources required to support decisions affecting the emergency, and is responsible for the overall planning for radiological emergencies. The local government counterpart is the Civil Defense Office in each of the four counties located within the 10 Mile EPZ. The Division of Health, through the Bureau of Radiological Health, is responsible for all decisions affecting protective responses, dose, dose commitment during the emergency, and recovery/reentry operations. Other state and local agencies and departments are assigned specific supporting roles based on their respective capabilities.

The title of Missouri's plan is the "Missouri Nuclear Accident Plan". The State portion is undated, except for updated pages, but was received by FEMA, Region VII, in January, 1981. The plan was developed by the Disaster Planning and Operations Office. Supporting plans have been developed for the following agencies: Disaster Planning and Operations (DPOO), Bureau of Radiological Health (BRH), Department of Agriculture, Department of Natural Resources, Division of Insurance, Division of Family Services, State Highway Patrol, National Guard, Highway and Transportation Department, Department of Conservation, Public Service Commission and the State Water Patrol. These plans appear as appendices to the Basic Plan. The plan, as it presently exists, was developed site-specific to the Cooper Nuclear Station in Nebraska. Considerable data on the Callaway facility was included in the Cooper Plan. While many procedures are common to both, detailed procedures, site-specific to Callaway, are presently awaiting finalization of the local government planning.

A local government plan in support of emergency operations at Callaway has been prepared by a contractor funded by Union Electric (the licensee). A single plan has been developed for all local offsite emergency response. This plan is entitled "Callaway Offsite Emergency Response Plan", dated September, 1981. Local governments did not participate in the initial development of the document. The plan, whose deficiencies are presented here, is a first draft of a basic document which describes concepts of operation and assigns responsibilities for the accomplishment of various functions. This basic plan was presented to local governments and FEMA Region VII for comment in October, 1981. Since that date, the contractor and county representatives have met to revise this first draft. The revisions have not been published as of this date. The plan, as reviewed, does not contain the necessary implementing procedures; however, these are presently under development.

INTERIM FINDING OF PLANS OF STATE AND LOCAL GOVERNMENTS IN MISSOURI IN THE
10 AND 50 MILE EPZs AROUND THE CALLAWAY NUCLEAR PLANT

II. Evaluation (by Planning Standard)

- A. Assignment of Responsibility (Organization Control): Primary responsibilities for emergency response by the nuclear facility licensee and by state and local organizations within the Emergency Planning Zones have been assigned; the emergency responsibilities of the various supporting organizations have been specifically established; and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

Finding:

The State Plan identifies fourteen State officials and agencies, three volunteer and eleven Federal agencies that will be part of the overall response organization. Each State organization has a procedure which specifies its concept of operations and outlines its areas of responsibility. The Director, Division of Health, is designated as the lead official for operational response concerning decisions affecting protective response. The major resource coordination role for state response is vested in the Director, Disaster Planning and Operations Office. Ultimate decisions affecting public health and safety are the responsibility of the Governor. Provisions for protracted operations are assigned to each appropriate response organization.

The local plan does not clearly identify the response organizations within and without local government which will be relied upon in an emergency at Callaway. The organizational structure that will function at the local level in this emergency response is not described, as the implementing procedures on how various functions will be performed are still under development. The Presiding Judge (administrative) in each county is given the ultimate responsibility for emergency actions. The four counties in the 10 Mile-EPZ have agreed that Callaway County will serve as "lead county", with support from the state and Federal response agencies. The plan states that each county will be prepared to conduct continuous operations, but implementing procedures are lacking.

- B. Onsite Emergency Organization: On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

Finding:

This section is the sole responsibility of the licensee.

- C. Emergency Response Support and Resources: Arrangements for requesting and effectively utilizing assistance resources have been made; arrangements to accommodate state and local staff at the licensee's near-site Emergency Operations Facility have been made; and other organizations capable of augmenting the planned response have been identified.

Finding:

The State Plan assumes the participation of various Federal response agencies through the Interagency Radiological Assistance Plan (IRAP). However, no specific resources are identified. Six individuals are specified as having authority to request IRAP assistance through DOE. A representative of the State, familiar with nuclear emergency operations and representing both state and local government, will be assigned to the facility EOF. In addition, a nuclear engineer has been assigned by the State to the facility control room. The licensee has not indicated its consent in allowing this individual in the control room. The plan clearly identifies laboratory facilities, their capacities, and turn around times for processing environmental samples. Additionally, Missouri has identified their MoNET (Missouri Nuclear Emergency Team) which is a group of technically qualified citizens which have volunteered their services in response to requests for assistance from the State.

The local plan provides for space and telephone communications for Federal assistance, if requested, including the location of airport facilities. The plan calls for sending a representative from Callaway County to the Forward Command Post located in the EOF. A difference exists between the state and local plans on the location of the Forward Command Post.

- D. Emergency Classification System: A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and state and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

Finding:

The State Plan provides for the four classification levels of Notification of Unusual Event, Alert, Site Emergency, and General Emergency which are consistent with those of the utility. The plan identifies actions to be taken by the State at each of the classification levels.

The local plan identifies the same classification scheme outlined in the State's plan. Actions to be taken offsite are provided in a general manner, but they do not provide specific actions that local government around Callaway will accomplish at each level. These are awaiting the development of detailed implementing procedures.

- E. Notification Methods and Procedures: Procedures have been established for notification, by the licensee, of state and local response organizations and for notification of emergency personnel by all response organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

Finding:

The State Plan provides for a notification system that is initiated through State Patrol Troop F upon declaration of an Alert or higher emergency. Verification will be accomplished via call-back to the facility on an unpublished telephone number. Alerting of the response organizations is accomplished by a cascade call system. The public will be kept informed via the use of the Emergency Broadcast System. Initial messages contain instructions to stay tuned for further updates. As of the date of this finding, no public alerting and notification system has been installed. However, the system's design has been finalized and should be operable by the date of operation scheduled for the plant.

The local plan provides for notification to Callaway County from the licensee via commercial telephone or radio. A second path of notification will flow from the utility to the State Highway Patrol Troop F and then to the Callaway County Sheriff. Messages, whether initial or follow-up, will be broadcast over local radio and television stations. Sample messages are provided. However, considerable revision is required to define the area of consideration and for specific protective measures to be taken by the public. The warning and notification system is under development by Union Electric and will rely heavily on outdoor sirens to be activated by the Callaway County Sheriff.

- F. Emergency Communications: Provisions exist for prompt communication among principal response organizations to emergency personnel and to the public.

Finding:

The State Plan, in the various appendices and agency operating procedures, provides for prompt communications among the emergency personnel response organizations and field personnel via telephone, with backup using NAWAS and radio. Emergency personnel will utilize hand-held radios to communicate with the Forward Command Post.

The local plan provides general information on emergency communications, but lacks the specifics of the methods and systems to be utilized among the licensee, the EOF, the State EOC, rad monitoring teams and the other county EOCs in the 10-mile EPZ. A detailed diagram of the communications network would be helpful for all parties concerned.

- G. Public Education and Information: Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

Finding:

The State Plan provides for joint State and Union Electric conducted public meetings for the education of the public and the news media on radiation information, protective actions, evacuation procedures, and the methods by which the information will be transmitted in an emergency. The plan does not presently address how the public information system around Callaway will function, how information will be made available to the resident and transient population, or the procedures of public information peculiar to the Callaway facility.

While the local plan calls for a News Media Center to be established in Jefferson City, no details of location or facilities are provided. A problem arises in naming a member of the media (in this case the Station Manager of Radio Station KFAL) as County Spokesperson with access to all information. FEMA does not object to this individual serving as County Public Information Officer as long as the duties are limited to public education programs, media relations and public information planning. However, his duties as official spokesperson represent a potentially severe conflict of interest. It is the position of FEMA Region VII that the county spokesperson should be a county employee or an elected official, such as the Presiding Judge, to ensure objectivity and maintain appropriate discretion during a sensitive situation.

The local plan provides procedures for staffing and release of information to the public and the media. All information, except that necessary for the immediate protection of the public in the 10 mile vicinity of Callaway, will be released by the Governor's designated Public Information Officer after coordination with all counties and the licensee.

A rudimentary document for public information is included in the plan which covers the specifics of warning and protective actions. However, maps referenced in the document are not provided, nor are procedures listed for its distribution to the public.

- H. Emergency Facilities and Equipment: Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

Finding:

The State Plan identifies offsite monitoring equipment but also lists equipment considered essential, but presently unavailable.

The local plan identifies the EOCs in each county and references the facility EOF. These EOCs are to be partially activated at ALERT (by whom is not specified) and fully operational at SITE or GENERAL EMERGENCY. The plan estimates that all EOCs can be staffed within 30 minutes. The plan identifies the type and location of radiological monitoring equipment. The Forward Command Post is identified as the central point for receipt and analysis of field monitoring data.

- I. Accident Assessment: Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

Finding:

The State Plan provides for the Bureau of Radiological Health and the Callaway facility to maintain continuous liaison during all stages of the emergency in order to confirm measurements and coordinate suggested protective actions, if necessary. Trend plotting, analysis, and evaluation of field data are to be performed at the Field Command Post in the Callaway County EOC. Initial assessments will consist of evaluation of the information provided by the facility. Subsequent assessments will include evaluation of the facility information as well as data from field monitoring, dosimetry data, meteorological changes, and any other assessment factors. Field monitoring will be accomplished by RADCON (Radiation Control) teams and/or MoNET Teams dispatched to the affected areas. Transportation arrangements, deployment times, and field communications are not adequately addressed. No fixed monitoring points have yet been established within the 10-Mile EPZ nor does the State presently have field equipment capable of measuring radioiodine concentrations as specified in element I-9 of this planning standard.

The local plan defers most aspects of accident assessment to the BRH and the licensee. Local monitoring support is reported to be available from fire and law enforcement personnel.

- J. Protective Response: A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

Findings:

The State Plan provides for protective actions for the public within the plume exposure pathway ranging from shelter to evacuation. Protective Action Guides (PAGs) consistent with FDA and EPA guidelines have been incorporated. The planning, at present, is particularly weak in the evacuation procedures around Callaway. Virtually no information is included on evacuation routes, reception areas, or monitoring procedures. The State has opted not to use thyroid blocking agents under any circumstances, thus emergency worker protective actions are limited to dosimetry procedures. The ingestion pathway PAG's follow FDA guidelines, however, the lack of implementing procedures and the identification of processing facilities outside the 50-mile EPZ raises questions about the State's ability to effectively isolate the food chain.

The local plan contains considerable information on protective response measures including evacuation and sheltering. Evacuation time studies done by contractor for the licensee are included.

The Presiding Judge has the authority to initiate evacuation and has the sole responsibility for the conduct and control of evacuation/shelter operations. Sheltering will be utilized whenever possible provided total projected dose does not exceed PAGs. Detailed procedures are lacking for the actual implementation of any protective action decision. The handling of evacuees is left to the host counties of Cole and Boone which have no procedures for the operation of the monitoring and reception centers.

- K. Radiological Exposure Control: Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

Finding:

Direct reading dosimeters are the only devices available for the State's use in determining emergency worker dose accumulation. No permanent record devices are available, but the plan calls for borrowing thermoluminescent dosimeters (TLDs) from the EPA Regional Office. No procedures for the acquisition or distribution of these borrowed TLDs is included in the plan. No procedure is addressed for maintenance of emergency worker dose records. EPA guidelines for exposure are incorporated in the State Plan.

The local plan abdicates exposure control measures to the BRH. However, the plan identifies dosimetry devices available to local emergency personnel but does not provide procedures for their distribution or reading.

- L. Medical and Public Health Support: Arrangements are made for medical services for contaminated injured individuals.

Finding:

The State Plan provides maps and lists of hospitals for use in the area of Callaway. No capacities or special facilities are listed for these hospitals and it is unclear if any methods exist for the evaluation or measurement of radiological uptake or contamination.

The local plan identifies the same hospitals as the State Plan. This plan goes further, however, with the identification of the emergency equipment available in the hospitals necessary to handle contaminated victims. Transportation for contaminated injured is also identified. Procedures are lacking for the use of National Guard and Highway Patrol aircraft in transporting victims to distant facilities.

- M. Recovery and Reentry Planning and Postaccident Operations: General plans for recovery and reentry are developed.

Finding

The State Plan provides for reentry decisions to be made by BRH and carried out by them using facility, state, and local resources. Advice will be provided by the Department of Agriculture on the recovery aspects for the ingestion pathway, including guidance on the use and disposal of foods which may be contaminated.

The local plan calls for the relaxation of protective measures based on a collective, unified decision by Callaway, Gasconade, Montgomery and Osage Counties after recommendations from BRH and the licensee.

- N. Exercises and Drills: Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

Finding:

The State Plan calls for an annual exercise to demonstrate their ability to respond to an accident at Callaway and for drills of the various response organizations to develop and maintain technical proficiency.

The local plan calls for an exercise which will simulate an actual incident at Callaway to be conducted on an annual basis simultaneously with the state exercise. The plan only calls for a joint exercise to be conducted once every five years with Federal, state and county agencies, and plant personnel. The plan also describes warning, communications, medical and radiological monitoring drills to be conducted at specified intervals to maintain particular proficiencies. A matrix of scheduled exercises and drills has been included in the plan.

- O. Radiological Emergency Response Training: Radiological emergency response training is provided to those who may be called on to assist in an emergency.

Finding:

The State Plan provides for 40 hours of instruction of personnel from the Division of Health, Radiological Monitoring Team, Disaster Planning and Operations' MoNET Team, selected highway patrol members, selected National Guardsman, Highway Department, local RADEF organizations, sheriff's offices, health officers, and directors or coordinators of the response organizations. It will be repeated annually. A course outline is included. The course appears to be quite comprehensive.

The local plan calls for each county Emergency Preparedness Coordinator to ensure that each response organization identified in the plan institutes appropriate initial and retraining for their personnel. The training is intended to address the following general topics:

- 1) Orientation in the content of the Callaway Offsite Emergency Response Plan.
- 2) Orientation in the implementation of the Plan, including the assignment of duties and responsibilities and location of emergency centers.
- 3) Orientation in the content and implementation of the plans and SOPs of the parent organization, with emphasis on individual responsibilities, location and use of emergency equipment, and notification and communications procedures.
- 4) Orientation in radiation protection with emphasis on the principles and use of protective clothing, equipment, and personnel dosimetry.
- 5) Familiarization with response capabilities and resources available within mutual aid agreements.

Annually, key personnel are scheduled to participate in a training program at the Callaway Plant. This program will include an overview of the station emergency preparedness plan and procedures, with emphasis on classification of emergencies, emergency action levels, reporting requirements, assessment, protective and corrective actions, and communications networks. Personnel will also participate in the 40 hour course offered by the State.

- P. Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans: Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

Finding:

At the state level the responsibility for overall plan development, updating, distribution, currency certification and planner training is vested in the Director, Disaster Planning and Operations Office. An effective cross reference is provided in the plan.

The local plan assigns the responsibility for maintenance of the overall plan to the Emergency Preparedness Coordinator for Callaway County. Individual county operating procedures are maintained by the appropriate County Emergency Preparedness Coordinators. No implementing procedures are provided in the plan. No cross reference to NUREG 0654/FEMA-REP-1 is provided.

INTERIM FINDING OF PLANS OF STATE AND LOCAL GOVERNMENTS IN MISSOURI IN THE
10 AND 50 MILE EPZs AROUND THE CALLAWAY NUCLEAR PLANT.

III. Schedule of Corrections

Because the local plan reviewed for this report was a first draft, much effort remains to be accomplished before an acceptable product is in place. However, the State of Missouri and the Counties of Callaway, Montgomery, Osage, and Gasconade appear to be progressing on a schedule that should produce a final document that will meet NUREG 0654/FEMA REP-1 standards. As previously discussed, implementing procedures for the responding agencies in the respective counties were not available for review. However, discussions have been held between the State, appropriate county officials, and representatives of the contractor that should result in the accomplishment of the following timetable.:

First Draft of County SOPs (implementing procedures)	February 1982
Final Draft of County SOPs	June 1982
Updating of State Plan to include local responsibilities	July 1982
Exercise (projected)	Fall 1982

In summary, it is the finding of the Region VII Regional Assistance Committee that the State of Missouri is progressing at an adequate pace to ensure the safety of the public surrounding the Callaway Nuclear Plant by the scheduled date of operation.