



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 16, 1984

Docket Nos. 50-424
50-425

MEMORANDUM FOR: Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
Office of Nuclear Reactor Regulation

FROM: David B. Matthews, Acting Chief
Emergency Preparedness Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

SUBJECT: REVIEW OF THE VOGTLE ELECTRIC GENERATING
PLANT EMERGENCY PLAN

We have completed our review of the Vogtle Electric Generating Plant Emergency Plan which is not dated, but was received for our review on September 16, 1983. The plan was reviewed against the requirements of 10 CFR 50.47(b); 10 CFR 50, Appendix E; Supplement 1 to NUREG-0737 (Generic Letter 82-33); and the guidance criteria in NUREG-0654, Revision 1, which has been endorsed as Regulatory Guide 1.101, Revision 2. Our review has indicated that the plan is incomplete and a large amount of additional information and many additional commitments are required from the applicant before we can find this plan acceptable.

It is requested that the enclosed comments and a letter similar to the enclosed draft be sent to the applicant. Please provide this Branch with a copy of the final correspondence. In addition, it is suggested that a meeting between the applicant and the staff of this Branch be established to review and discuss the enclosed comments to ensure that the applicant understands the requirements for an acceptable emergency plan.

The Emergency Preparedness Branch contact is Ed Williams (492-7611).

David B. Matthews, Acting Chief
Emergency Preparedness Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Enclosures:
1. Comments on Vogtle EP
2. Draft Ltr

8405020101 XA

cc: See Attached

Elinor G. Adensam

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cc: E. L. Jordan, IE
J. N. Grace, IE
S. A. Schwartz, IE
C. R. Van Niel, IE
F. Kantor, IE
E. F. Williams, IE

D R A F T

Docket Nos. 50-424
50-425

Mr. D. O. Foster
Vice President and General Manager
Vogtle Project
Georgia Power Company
Post Office Box 4545
Atlanta, Georgia 30302

Dear Mr. Foster:

We have completed our review and evaluation of your Emergency Plan submitted on August 29, 1983 for the Vogtle Electric Generating Plant, Units 1 and 2. The acceptance criteria used as the basis for the staff's review of your Emergency Plan are specified in Section 13.3 "Emergency Planning" of the Standard Review Plan (SRP), NUREG-0800 dated July 1981 and include the Planning Standards of 10 CFR 50.47(b); the requirements of 10 CFR 50, Appendix E; the specific guidance criteria of 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", dated November 1980 and Supplement 1 to NUREG-0737, "Requirements for Emergency Response Capability (Generic Letter 82-33)", dated December 17, 1982. The guidance criteria of NUREG-0654 have been endorsed in Regulatory Guide 1.101, Revision 2, "Emergency Planning and Preparedness for Nuclear Power Reactors", dated October 1981.

Enclosed are the staff's comments on your Emergency Plan indicating the need for additional information and commitments which are necessary before we can find your Emergency Plan acceptable. We request that you provide this office written

D. O. Foster

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responses to these comments, along with page changes for your Emergency Plan reflecting your commitments within 90 days of the date of this letter. In addition, it is requested that your staff meet with the NRC staff on May , 1984 to review and discuss these comments and your plans for addressing each item.

Sincerely,

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
Office of Nuclear Reactor Regulation

ENCLOSURE 1

Review Comments On The Alvin W. Vogtle Electric Generating Plant, Units 1 and 2 Emergency Plan (August 1983) Docket Nos. 50-424 and 50-425

The following comments apply to the Vogtle Electric Generating Plant Units 1 and 2 Emergency Plan (herein after referred to as the plan) and identify in parentheses, the applicable evaluation criteria of 10 CFR 50 or Regulatory Guide 1.101, Revision 2 (NUREG-0654/FEMA-REP-1, Revision 1) or Supplement 1 to NUREG-0737.

A. Assignment of Responsibility

1. The plan does not identify the State and local organizations in the State of South Carolina, all the local organizations in the State of Georgia and the principal Federal organizations that are intended to be part of the overall response. (A.1.a & App.5)
2. The plan does not specify the concept of operations of many of the organizations and suborganizations having an operational role or their relationship to the total effort. For those organizations and suborganizations for which their role and relationship to the total effort is described, the description is not adequate to determine their concept of operations or their exact relationship to the total emergency effort. (A.1.b & A.3)
3. The block diagram provided in the plan does not include all the organizations and suborganizations which have a role in the overall response and does not adequately illustrate the interrelationships between those organizations and suborganizations which are included. (A.1.c & A.3)
4. The plan does not identify all the specific individuals by title who are in charge of the emergency response. (A.1.d)
5. The plan does not specify adequately the functions and responsibilities for major elements and key individuals by title including command and control, alerting and notification, communications, public information, accident assessment, public health and sanitation, social services, fire and rescue, traffic control, law enforcement, transportation, protective response and radiological exposure control. (A.2.a)
6. The plan does not contain the legal basis for emergency response authorities by reference to specific acts, codes or statutes. (A.2.b)
7. The plan states that the written agreements with the various Federal, State and local organizations having an emergency response role are provided in Appendix 1, but no written agreements are provided. These agreements are not described adequately in the plan and no signature page format is provided. (A.3)

8. The plan does not describe how each principal organization is capable of continuous (24 hour) operations nor does it provide the specific title of individual for assuring the continuity of resources for the licensee, the States of Georgia and South Carolina and the local government agencies. (A.4)
 9. The plan provides for a plume exposure pathway EPZ 5 miles in radius which is not in compliance with the regulatory requirements. The basis for establishment of this 5 mile plume exposure pathway EPZ is not provided and the factors used in determining the exact size of this EPZ are not identified. [10 CFR 50.47(c)(2)]
 10. The radiological response plans of State and local government within the plume exposure pathway EPZ are not provided in accordance with regulatory requirements. [10 CFR 50.33(g)]
- B. Onsite Emergency Organization
1. The plan does not specify the relationship of the normal plant staff for all shifts to the onsite emergency organization. (B.1)
 2. The plan does not identify the specific conditions for higher level utility officials assuming the function of emergency director. (B.3)
 3. The plan does not establish adequately the functional responsibilities assigned to the emergency director. (B.4)
 4. The plan does not specify the positions or titles and major tasks to be performed by persons to be assigned to functional areas of emergency activity. Specific assignments are not made for all shifts and plant staff members both onsite and away from the site. The plan does not demonstrate how the assignments shall cover the minimum on-shift staffing levels as indicated in Table B-1 of NUREG-0654 and it is not clear if the minimum on-shift staffing meets this criteria. The plan does not specify whether the augmentation of the on-shift staff will meet the recommended emergency staffing levels and does not indicate the exact size of the emergency staffing levels within the plant emergency organization. (B.5 & Table B-1)
 5. The plan does not specify adequately the interfaces between and among the onsite functional areas of emergency activity, licensee headquarters support, and State and local government response organizations to determine if they will be effective. The block diagram provided does not illustrate adequately how these interfaces and interrelationships will operate. (B.6)
 6. The plan does not specify the corporate management, administrative and technical support personnel who will augment the plant staff in the areas of logistics support, technical support for planning and reentry/recovery operations, management level interface with governmental authorities and

release of information to the news media coordinated with governmental authorities during an emergency. (B.7)

7. The plan does not specify all the local agencies or identify all of the services to be provided by local agencies. Copies of the arrangements and agreements reached with contractor, private and local support agencies delineating authorities, responsibilities and limits are not appended to the plan. (B.9)

C. Emergency Response Support and Resources

1. The plan does not specify by title the individuals authorized to request Federal assistance. (C.1.a)
2. The plan does not specify the Federal resources expected, including expected arrival times at the vicinity of the plant site. (C.1.b)
3. The plan does not specify the command posts, telephone lines, radio frequencies and the telecommunications centers available from State and local resources to support the Federal response. (B.1.c)
4. The plan does not provide for the dispatch of Georgia Power Company representatives to principal offsite governmental emergency operations centers. (C.2.b)
5. The plan does not identify radiological laboratories, their general capabilities and expected availability to provide radiological monitoring and analyses services which can be used during an emergency. (C.3)
6. The plan does not adequately identify nuclear and other facilities, organizations and individuals which can be relied upon to provide assistance during an emergency. Appropriate letters of agreement are not provided in Appendix 1 of the plan as indicated. (C.4)

D. Emergency Classification System

1. The emergency classification system provided in the plan does not identify the specific instruments and does not always specify the necessary parameter values for each emergency class for each emergency action level. (D.1)
2. The plan does not describe why the initiating conditions in all the postulated accidents in the Final Safety Analysis Report (FSAR) are classified as meeting a specified emergency action level. (D.2)

E. Notification Methods and Procedures

1. The plan does not state that notifications of offsite licensee, Federal, State and local officials will be verified or the method to be used for this verification. (E.1)
2. The plan does not provide sufficient information on the method to be used for alerting, notifying and mobilizing emergency plant personnel during nonworking hours and emergency corporate personnel to determine if the methods will be effective. (E.2)
3. The plan does not establish the contents of the initial emergency messages and whether the messages were developed in conjunction with State and local officials. (E.3)
4. The plan does not provide adequate information about the followup emergency messages to determine if they will include the information required by the criteria. (E.4)
5. - The plan does not provide sufficient information on the administrative and physical means of notifying and providing prompt instructions to the public within the plume exposure pathway EPZ to demonstrate that the system meets the criteria. (E.6 & Appendix 3)
6. The plan does not contain examples of draft messages intended for the public consistent with the Georgia Power Company's classification scheme giving instructions with regard to specific protective actions for specific locations within the plume exposure pathway EPZ. (E.7)

F. Emergency Communications

1. The plan does not provide for communications with the local emergency operating centers. (F.1.d)
2. The plan does not provide the titles and alternates for those in charge at both ends of the communications links. (10 CFR 50, Appendix E,IV.E.9)
3. The plan does not specify the backup power source for onsite and offsite communications. (10 CFR 50, Appendix E,IV.E.9)
4. The plan does not provide for testing the communications with the NRC Headquarters and the NRC Regional Office Operations Center from the control room, TSC and EOF on a monthly basis. (10 CFR 50, Appendix E,IV.E.9.d)

G. Public Information

1. The plan does not provide sufficient details on the types and topics of public information to be disseminated to determine if it will meet the criteria. (G.1)
2. The plan does not designate the point of contact and the spokesperson for the Georgia Power Company who will have access to all the necessary information for dissemination to the media. (G.3.a & G.4.a)
3. The plan does not provide sufficient information on the arrangements for the timely exchange of information among designated spokespersons to evaluate these arrangements against the criteria. (G.4.b)
4. The plan does not provide adequate details on arrangements for coordination in dealing with rumors. (G.4.c)

H. Emergency Facilities and Equipment

1. - The plan does not provide adequate details with regard to the TSC size, location, layout, staffing, functions, habitability, equipment, data acquisition system and technical support to the control room and the EOF to determine if it meets the criteria. (H.1)
2. The plan does not provide adequate details with regard to the EOF and back-up EOF size, location, layout, staffing, functions, equipment, habitability, data acquisition system and evaluation and coordination of all Georgia Power Company activities to determine if it meets the criteria. (H.2 & Supplement 1 to NUREG-0737)
3. The plan does not provide sufficient details on the timely activation and staffing of facilities and centers to determine if the goals are met. (H.4 & Table B-1)
4. The plan does not provide adequate information with regard to onsite monitoring systems and instrumentation to determine if the criteria are met for initiating emergency measures and conducting accident assessment. (H.5)
5. The plan does not provide sufficient information on provisions to acquire or access offsite data for emergency monitoring and analysis to determine if the access of this data meets the criteria. The plan does not discuss laboratory facilities other than to mention the normal plant laboratory. (H.6)
6. The plan does not provide adequate information on provisions for offsite radiological monitoring equipment and instrumentation for emergency use

to determine if the criteria are met. (H.7)

7. The plan does not provide sufficient information on meteorological diffusion and transport models and methods of projecting offsite radiological exposure to determine if the criteria are met. (H.8 & Supplement 1 to NUREG-0737)
8. The plan does not provide adequate details with regard to the size, location, layout, staffing, equipment and instrumentation for the OSC to determine if it meets the criteria. (H.9)
9. The plan does not provide sufficient information on the reserves of instrumentation and equipment for emergency kits to determine if the criteria are met. (H.10)
10. The plan does not contain an appendix and the information is not provided on the identification and contents of emergency kits to determine if they meet the criteria. (H.11)
11. The plan does not contain provisions for a central point or the capability to receive, analyze and coordinate all field monitoring data other than the normal plant laboratory. (H.12)

I. Accident Assessment

1. The plan does not identify in sufficient detail the plant systems, the effluent parameter values, the kinds of instruments and other information which will be used to characterize off-normal conditions and accidents in the plant to determine if the criteria are met. (I.1)
2. The plan does not provide adequate information on the capabilities and resources for accident assessment including post-accident sampling, effluent monitors, in-plant iodine and particulate measuring instrumentation and radiation monitoring in containment to determine if the criteria are met. (I.2)
3. The plan does not describe adequately the methods and techniques to be used for determining the source term for releases of radioactivity within plant systems to evaluate whether they meet the criteria. (I.3.a)
4. The plan does not provide sufficient information on methods and techniques for determining the magnitude of the radioactive release based on plant parameters and effluent measurements to evaluate whether they meet the criteria. (I.3.b)
5. The plan does not provide information to establish the relationship between effluent monitoring readings and onsite and offsite radiological exposures and contamination for various meteorological conditions. (I.4)

6. The plan does not provide an adequate description of the acquiring and evaluating of meteorological information and how this information will be used by the control room, TSC, EOF and State authorities to provide radiological dose projections. (I.5 & Supplement 1 to NUREG-0737)
7. The plan does not provide the methodology to be used for determining release rates and dose projections if the instrumentation used for these assessments are offscale or inoperable. (I.6)
8. The plan does not describe the capability and resources for field monitoring within the plume exposure pathway EPZ. (I.7)
9. The plan does not describe the methods, equipment, expertise, activation, field team composition, transportation, monitoring equipment and estimated deployment times for making rapid assessments of the magnitude and locations of radioactive liquid or gaseous releases. (I.8)
10. The plan does not indicate whether the capability to measure radioiodine concentrations in air as low as 10^{-7} microcuries per cubic centimeter in the presence of high levels of noble gases will be provided under field conditions and how these measurements will be obtained. (I.9)
11. The plan does not describe adequately the means for relating various measured parameters to dose rates for key radionuclides and gross radioactivity measurements to estimate projected and actual dose rates and for comparing them with the PAGs. (I.10)

J. Protective Response

1. The plan does not provide sufficient details on evacuation routes, assembly areas, transportation for onsite personnel, alternative evacuation routes and offsite relocation areas to determine if they meet the criteria. (J.2)
2. The plan does not provide an adequate description of the radiological monitoring methods and techniques to be used on personnel evacuated from the site to determine if the criteria are met. (J.3)
3. The plan does not describe the radiological decontamination capability for personnel evacuating the site. (J.4)
4. The plan does not provide an adequate description of the accounting methods and procedures to ascertain the names of missing individuals onsite at the start of an emergency, to find the missing individuals if any, and to account for all onsite individuals thereafter. (J.5)

5. The plan does not describe in sufficient detail the provisions for individual respiratory protection, protective clothing and the use of thyroidal blocking techniques and radioprotective drugs for individuals arriving or remaining onsite during the emergency. (J.6)
6. The plan does not describe adequately the mechanism for recommending protective actions to be appropriate State and local authorities to determine if it meets the criteria. (J.7)
7. The plan does not contain evacuation time estimates for the plume pathway EPZ. (J.8 & Appendix 4)
8. The maps provided in the plan are illegible and do not provide the information on evacuation routes, evacuation areas, preselected radiological sampling and monitoring locations including designators, relocation centers, shelter areas, and the population distribution by evacuation areas and sectors. (J.10.a & J.10.b)
9. The plan does not describe adequately the means for notifying all segments of the transient and resident population. (J.10.c)
10. The plan does not provide the bases for the choice of recommended protective actions for the plume exposure pathway EPZ, the expected protection afforded by residential units or other shelter for direct and inhalation exposure and evacuation time estimates. (J.10.m)

K. Radiological Exposure Control

1. The rationale is not given for the establishment, of the emergency personnel exposure guide values provided in the plan so that their adequacy can be evaluated. The values for nonlifesaving assessment actions and nonlifesaving first aid appear to be excessive and the lifesaving ambulance service and medical treatment values appear to be overly restrictive.
2. The plan does not provide sufficient details about the onsite radiation protection program to be implemented during emergencies to determine if it meets the criteria. The plan does not identify individual(s) by position or title who can authorize emergency workers to receive doses in excess of 10 CFR, Part 20. The plan does not contain the procedures for permitting onsite volunteers to receive radiation exposures while carrying out lifesaving and other emergency activities or the procedures for making these decisions and estimating the relative risks. (K.2)
3. The plan does not provide for 24 hour per day dose assessment capability for emergency personnel and does not describe adequately the distribution and sensitivity range of personnel dosimetry. (K.3.a)

4. The plan does not indicate the frequency for reading dosimeters or the methods for maintaining dose records for emergency workers involved in a nuclear accident. (K.3.b)
5. The plan does not specify the action levels for determining the need for radiological decontamination during emergencies. (K.5.a)
6. The plan does not describe the means or methods for radiological decontamination of personnel, wounds, supplies, instruments and equipment and provisions for waste disposal during emergencies. (K.5.b)
7. The plan does not specify the measures for onsite radiological contamination control, area access control, use of food and drinking water supplies and the criteria for returning areas, items and equipment to normal use. (K.6)
8. The plan does not provide for the decontamination of relocated onsite personnel or the provisions for extra clothing and methods of decontamination. (K.7)

L. Medical and Public Health Support

1. The plan does not provide for a specific backup hospital and does not describe the capability for evaluation of radiation exposure and uptake of radioactive materials. The plan does not describe adequately the preparation or services to handle radiologically contaminated personnel who are injured to determine if the criteria are met. (L.1)
2. The plan does not provide sufficient detail on the onsite first aid capability to determine if it meets the criteria. (L.2)
3. The plan does not describe the arrangements for the transport of radiological accident victims other than to state that this service will be provided by the Buke County Ambulance Service. (L.4)

M. Recovery and Reentry Planning and Post-Accident Operations

1. The plan does not provide sufficient details on the plans and procedures for recovery and reentry to determine if the criteria are met. The plan does not describe the means for making decisions to relax protective measures as needed to carry out recovery operations. (M.1)
2. The plan does not provide the authority and responsibilities of the individuals who will fill the key positions in the recovery organization and does not indicate who these key individuals will be by position and title. The organizational chart of the recovery team does not provide sufficient detail to determine how the organization will function and is incomplete in that all the components are not included (e.g., Recovery Review Board). (M.2)

3. The plan does not provide adequate detail on the methods to be used to estimate total population dose to determine if they meet the criteria. The plan does not provide for the continuation of total population dose estimates during the reentry and recovery phase of operations. (M.4)

N. Exercises and Drills

1. The plan does not describe the methods and procedures for conducting emergency exercises in sufficient detail to determine if they will meet the criteria. The plan does not state that exercises shall be conducted in accordance with current NRC and FEMA rules. (N.1.a)
2. The plan does not provide for unannounced exercises. (N.1.6)
3. The plan does not describe how communications drills will be conducted to test the understanding of the contents of messages. (N.2.a)
4. The plan does not describe how fire drills will be conducted or the methods used to ensure that they comply with the technical specifications. (N.2.b)
5. The plan does not describe how medical emergency drills will be conducted to simulate the treatment of a contaminated individual. (N.2.c)
6. The plan does not describe how radiological monitoring drills will be conducted to test the collection and analysis of sample media, communications and record keeping. (N.2.d)
7. The plan does not describe how health physics drills will be conducted to test the analysis of airborne radioactivity measurements, liquid samples and direct radiation measurements. The plan provides for these drills on an annual rather than a semi-annual basis as indicated by the criteria. [N.2.e.(1)]
8. The plan does not provide for the testing of the analysis of elevated radioactivity levels using the post-accident sampling system. [N.2.e(2)]
9. The plan does not describe how exercises and drills will be carried out to allow free play for decisionmaking and how they will be evaluated to determine if the objectives are met. (N.3)
10. The plan does not provide sufficient details on the management control to be used to ensure that corrective actions resulting from the evaluation of drills and exercises will be implemented. (N.4)

0. Radiological Emergency Response Training

1. The plan does not provide for practical drills to demonstrate the ability of emergency personnel to perform assigned functions with on-the-spot correction of erroneous performance. (0.2)
2. The plan does not describe adequately the scope and nature of the training program to determine if it meets the criteria. The curriculum for the various types of training programs, all the specific categories of personnel receiving specialized training and with the exception of the fire brigade, the frequency of training is not provided. (0.4)

P. Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans

1. There is no provision to date and mark the pages where the emergency plan has been revised. (P.5)
2. The plan does not provide a detailed listing of supporting plans and their sources. (P.6)
3. The plan does not provide for the updating of telephone numbers in the emergency procedures on a quarterly basis. (P.10)