

683

SERVED APR 7 1986

DOCKETED
USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

'86 APR -7 A11:32

Before Administrative Judges:

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Morton B. Margulies, Chairman
Gustave A. Linenberger, Jr.
Dr. Oscar H. Paris

In the Matter of
GEORGIA POWER COMPANY, et al.
(Vogtle Electric Generating Plant,
Units 1 and 2)

Docket Nos. 50-424 (OL)
50-425 (OL)
(ASLBP 84-499-01-OL)
April 4, 1986

MEMORANDUM AND ORDER
(Ruling on Motion for Summary Disposition of Intervenor's
Contention EP-2/EP-2(c) (Use of Tone Alert Radios))

Introduction and Background

On February 14, 1986, Applicants Georgia Power Company, et al.
(Applicants) filed a "Motion for Summary Disposition of Joint
Intervenors' Contention EP-2/EP-2(c)" (Applicants' Motion).¹ This
Contention questions whether Applicants should be allowed to use NOAA
weather radios to alert persons within the Emergency Planning Zone (EPZ)
of a radiological emergency at Plant Vogtle. (Memorandum and Order

¹ At the outset of the safety hearing for VEGP, on March 11, 1986,
intervenor Campaign for a Prosperous Georgia withdrew from this
proceeding, leaving Georgians Against Nuclear Power (GANE) as the
sole Intervenor.

8604090095 860404
PDR ADOCK 05000424
G PDR

DS02

(Ruling on Joint Intervenors' Proposed Contentions on Emergency Planning), August 12, 1985) (August 12 Order). The NRC Staff (Staff) filed "NRC Staff Response to 'Applicants' Motion for Summary Disposition of Joint Intervenors' Contention EP-2/EP-2(c) (Use of NOAA Tone Alert Radios)" (Staff Response) on March 6, 1986, in which they supported Applicants' Motion. The Intervenor has not responded to Applicants' Motion.

Applicants' Motion was supported by "Applicants' Statement of Material Facts as to Which No Genuine Issue Exists to be Heard Regarding contention EP-2/EP-2(c) (Use of NOAA Tone Alert Radios)" (Applicants' Statement of Facts) and the "Affidavit of David N. Keast on Contention EP-2/EP-2(c)" (Keast Affidavit). The Staff Response was supported by the "Affidavit of FEMA Emergency Management Program Specialist Cheryl L. Stovall in Support of Applicants' Motion for Summary Disposition of Joint Intervenors' Contention EP-2/EP-2(c) (Use of NOAA Tone Alert Radios)" (Stovall Affidavit).

As initially proposed by Joint Intervenors, Contention EP-2 alleged generally:

Applicants fail to show that provisions exist for prompt communications among principal response organizations to emergency personnel and the public as required by 10 CFR 50.47(b)(6).

More specifically, subpart (c) of EP-2 asserts:

The plan provides for notification of the public in the Plume Exposure Pathway by use of tone alert radio receivers installed in each household in the EPZ. This provision ignores the fact that these devices are often shut off permanently by residents who become aggravated by its tendency to go off frequently without reason.

("Joint Intervenors' Revised Contention Relating to Emergency Response" (June 24, 1985), at 3). In admitting the Contention in our August 12 Order it was noted that in an area subject to frequent summer thunderstorms, such as Burke County, NOAA weather radios may sound an alert several times during the passage of a storm front, as severe storm watches and warnings, or marine interest watches and warnings, are broadcast for different locations within the listening area of the NOAA weather radio station. As we pointed out in our August 12 Order, once the storm threat has moved past a listener, the listener is likely to be inclined to shut the radio off to avoid the annoyance of additional warning signals that are no longer relevant.

Discussion

The standards governing summary disposition and relevant NRC case law have been reviewed by us in earlier orders and need not be repeated here (See: Memorandum and Order (Ruling on Motion for Summary Disposition of Contention 8 re: Vogtle Quality Assurance), October 3, 1985).

Applicants argue in their motion that NOAA weather radios provide useful information to members of the public on a daily basis, so that NOAA radios are more likely to be retained and used than other types of radio alert receivers. In addition Applicants state that Georgia Power Company (GPC) is installing a system of fixed sirens throughout the EPZ that will alert any EPZ residents who have turned off their NOAA weather radios.

Affiant Keast attests to the popularity of the NOAA weather radio system and avers that the public support for the program reflects the system's usefulness in providing routine weather forecasts and warnings of severe weather. (Keast Affidavit at 3). He asserts, further, that there is no other radio alerting system for the general public that is as proven in its reliability and effectiveness as the NOAA system. And while there may be isolated cases of spurious activation of the radios as a result of installation testing and system "shakedown", the operating experience with NOAA weather radios demonstrates that they do not "go off frequently without reason" as the Intervenor contends. (Id., at 4).

In addition Keast attests that the NOAA weather radio system will include a new transmitter at the Vogtle site, to be controlled by the National Weather Service station at Bush Field, located about 15 miles from the transmitter. He asserts that automatic activation of the NOAA weather radios within the Vogtle EPZ "will be limited to those storm 'watches' and 'warnings' applicable to the four counties in the EPZ plus the Georgia counties of Screven and Jenkins." (Id., at 5).

Affiant Keast asserts that data for the period January 1, 1980 through September 30, 1985 indicate "an average of approximately 25 storm watches and warnings per year for the area *** to be covered by the Vogtle system." Annually about 85% of these watches and warnings occur between March and July, and on a daily basis, approximately 93% occur between 6:00 a.m. and midnight. (Id., at 6). Affiant Keast believes that between these hours "any disruptive effect of a severe

weather message not applicable to an individual listener would be minimized." (Ibid).

Affiant Keast states that, in addition to the primary alerting system of NOAA weather radios, GPC is installing a system of fixed sirens in the Vogtle EPZ. He asserts that the siren system has been designed to provide a minimum of 60 dBC coverage to all residents within the EPZ, in accordance with the guidance of Appendix 3 of NUREG-0654/FEMA-REP-1 (Rev. 1), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants". Keast also asserts that the siren system can be relied upon to alert any EPZ residents who have disabled their NOAA weather radios. (Id., at 7).

The NRC Staff argues that this contention is now moot by virtue of Applicants' proposal to install a fixed siren system within the Vogtle EPZ. (Staff Response, at 4). Staff Affiant Stovall, who is Emergency Management Program Specialist for the Federal Emergency Management Agency (FEMA), attests that she has reviewed the affidavit of Applicants' Affiant Keast and has "no reason to question [his] statement" that extensive operating experience with NOAA weather radios demonstrates that they do not go off frequently without reason. Affiant Stovall acknowledges, however, that some people may disconnect their NOAA weather radios. (Stovall Affidavit, at 7).

Affiant Stovall states that the planned siren system, if designed to provide a minimum of 60 dBC coverage to all residents within the EPZ, can be considered an additional primary notification system. (Ibid).

She also states that as of the date of her Affidavit FEMA had not received a technical report of the notification system for Plant Vogtle and therefore had not performed an evaluation of it. (Id., at 8).

Affiant Stovall concludes that "there may be an issue of fact between the Intervenor's allegations and the Applicants' experience concerning the percentage of operating NOAA tone alert radios", but she argues "that there is not a material issue of fact because of the redundant notification systems in place to promptly alert and notify the public and because the NUREG-0654/FEMA-REP-10 criteria² do not constitute a guarantee that everyone will hear the initial notification warning." (Id., at 9).

Conclusion

The question presented is whether any genuine issue as to any material fact persists with regard to the allegation that residents in the EPZ may turn off their NOAA tone alert radios, thereby causing the system not to provide an effective initial notification of an emergency at Plant Vogtle. The Board finds that all material facts on the issue have not been resolved.

² We assume that Affiant Stovall intended to cite both NUREG-0654/FEMA-REP-1 (Rev. 1) and FEMA-REP-10.

There is a void in the information furnished to the Board that directly affects meaningful consideration of the Contention. Applicants have expressed from the beginning total confidence in the NOAA tone alert radio system as the primary initial notification system in the EPZ. They continue to express a high level of confidence in that system, as is evidenced by the motion for summary disposition of the Contention. Yet GPC has proceeded to add an additional warning system, consisting of fixed sirens, without providing any explanation as to why it has done so. If the tone alert radios can be depended on to serve effectively for initial notification in an emergency at Plant Vogtle, why is the siren system being installed? In light of this development, the Board does not have adequate information to reach a decision on whether all material issues of fact as to the Contention have been resolved.

FEMA's representative recognizes that some people may turn off their NOAA weather radios. Nothing further is provided that offers a satisfactory resolution of the matter, and we again are left with a void. She acknowledges an issue of fact concerning the possible percentage of operating NOAA tone alert radios, but does not consider it material because of what she states are the redundant systems in place to promptly alert and notify the public and because NUREG-0654/FEMA-REP-1 (Rev. 1) and FEMA-REP-10 do not require a guarantee that everyone will hear the initial warning.

Her conclusion as to why the issue is not material is not adequately supported. In stating that Applicants have "an additional

primary notification system" "[p]rovided the siren system design meets the 60 dBC criteria", she advances an argument that not even the Applicants have proposed. They regard the siren system as a back-up to the NOAA radio system. Finally, Affiant Stovall is premature in indicating the effectiveness of the emergency notification system at Vogtle, since FEMA has yet to evaluate it.

An analysis of siren systems, performed for the NRC in 1982, has shown that their effectiveness can vary markedly, depending on changes in meteorological and other environmental conditions. This study, entitled "Evaluation of the Prompt Alerting Systems at Four Nuclear Power Stations" (NUREG/CR-2655), was co-authored by Mr. Keast. It found that the chance of alerting an individual in the EPZ ranges from 65% to 100% at Trojan (NUREG/CR-2655, at 2-1), from 49% to 90% at Three Mile Island (Id., at 3-1), from 57% to 95% at Indian Point (Id., at 4-1), and from 58% to 97% at Zion (Id., at 5-1). Apparently all of these plants had complied with the 60 dBC criterion of NUREG-0654/FEMA-REP-1 (Rev. 1); but the levels of notification estimated for these four plants do not, in our view, meet the level of notification called for (see below) by NUREG-0654/FEMA-REP-1 (Rev. 1).

Affiant Stovall claims that the matter of turning off of the NOAA tone alert radios is not material, in part because the regulatory guides do not provide for a guarantee that everyone will hear the initial notification. We agree that there is no guarantee, but the standards that are to be satisfied are quite high. 10 CFR Part 50, App. E, D.3. provides that the design objective of the prompt public notification

system shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway within about 15 minutes. Appendix 3 of NUREG-0654/FEMA-REP-1 (Rev. 1) states that "The initial notification system will assure direct coverage of essentially 100% of the population within 5 miles of the site" but provides no specified percentage between 5 and 10 miles. These standards were cited with approval by the Commission in Final Rule on Emergency Planning, CLI-80-40, 12 NRC 636, 638 (1980). Whether the system to be in place at Plant Vogtle will meet these standards is unknown at this time.

Affiant Keast comments at length about the popularity of the NOAA weather radio system and about its effectiveness in providing routine and severe weather forecasts "to government officials and the public involved in agriculture, recreation, transportation, energy conservation, marine travel, and emergency management." (Keast Affidavit, at 3). The emergency management referred to here is, we believe, the warnings and precautionary advice broadcast by NOAA for severe storms and floods. Affiant Keast does not address experience with NOAA tone alert weather radios as a primary notification system at nuclear plants, thereby failing to provide probative facts on the matter at issue.

In attempting to address the concern about NOAA radios being turned off because of aggravation by warnings not relevant to the location of the listener, Affiant Keast misses the point. (Keast Affidavit, at 5). Indeed, it is the repeated activation of NOAA weather radios as severe

storms move through the six counties served by the NOAA weather radio transmitter at Bush Field that give us concern. We are not reassured by the statistic that 93% of storm watches and warnings broadcast by the NOAA weather radio at Bush Field occur between 6:00 a.m. and midnight. (Id., at 6) Affiant Keast fails to tell us what percentage of these occur between 6:00 p.m. and midnight, a statistic that would be of greater relevance because most convective storms develop during the warm daylight hours and tend to be concentrated in the late afternoon and evening hours. It would not be unusual for many residents of the four rural counties in the EPZ to retire for the night in advance of midnight, so that they might be inclined to turn off their NOAA weather radios if NOAA were broadcasting a series of storm watches or warnings for various locations within the six-county area served by the Bush Field NOAA weather radio station.

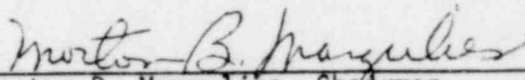
Conclusion

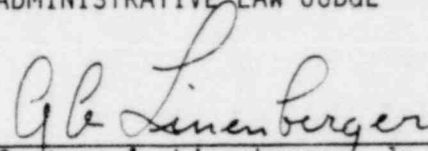
We conclude that Applicants and Staff have not satisfactorily disposed of the material issues of fact in the contention alleging that people may turn off their NOAA weather radios and thus not have an effective initial notification system in case of an emergency at Plant Vogtle.

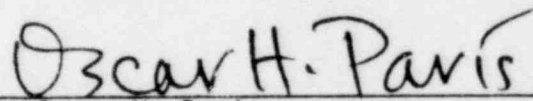
ORDER

Upon consideration of all of the foregoing, it is this 4th day of April 1986, ordered that "Applicants' Motion for Summary Disposition of Joint Intervenors' Contention EP-2/EP-2(c) (Use of NOAA Tone Alert Radios)" is denied.

THE ATOMIC SAFETY AND LICENSING BOARD


Morton B. Margulies, Chairman
ADMINISTRATIVE LAW JUDGE


Gustave A. Linenberger, Jr.
ADMINISTRATIVE JUDGE


Dr. Oscar H. Paris
ADMINISTRATIVE JUDGE

Bethesda, Maryland