

May 20, 1983

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
 )  
UNION ELECTRIC COMPANY ) Docket No. STN 50-483 OL  
 )  
(Callaway Plant, Unit 1) )

APPLICANT'S MOTION FOR SUMMARY DISPOSITION  
OF REED CONTENTION 19  
(IMPEDIMENTS TO THE USE OF EVACUATION ROUTES)

Pursuant to 10 C.F.R. § 2.749, Union Electric Company ("Applicant") moves the Atomic Safety and Licensing Board for summary disposition of Contention 19 advanced by intervenor John G. Reed. As shown below, summary disposition is appropriate because there is no genuine issue of material fact to be heard with respect to Contention 19. Accordingly, Applicant is entitled to a decision in its favor on Contention 19 as a matter of law.

This Motion is supported by Applicant's Statement of Material Facts On Reed Contention 19 As To Which There Is No Genuine Issue To Be Heard (Impediments to the Use of Evacuation

Routes), Applicant's Memorandum of Law In Support Of Motions for Summary Disposition On Emergency Planning Issues ("Memorandum of Law"), the Callaway Plant Radiological Emergency Response Plan ("RERP"), the Missouri Nuclear Accident Plan - Callaway ("State Plan"), the Callaway County/Fulton Radiological Emergency Response Plan ("Callaway/Fulton Plan"), the Montgomery County Radiological Emergency Response Plan ("Montgomery Plan"), the Osage County Radiological Emergency Response Plan ("Osage Plan"), the Gasconade County Radiological Emergency Response Plan ("Gasconade Plan"), the Affidavit of Robert G. Wright on Reed Contention 19 (Impediments to the Use of Evacuation Routes) ("Wright"), the Affidavit of Glennon Epple on Reed Contention 19 (Impediments to the Use of Evacuation Routes) ("Epple"), the Affidavit of Harold Matthews on Reed Contention 19 (Impediments to the Use of Evacuation Routes) ("Matthews"), and the Affidavit of Vincent B. Eldringhoff on Reed Contention 19 (Impediments to the Use of Evacuation Routes) ("Eldringhoff"), all filed simultaneously herewith, as well as the pleadings and other papers filed by the parties in the proceeding.

#### I. Procedural Background

Reed Contention 19 states:

Methods of identification of means of dealing with potential impediments (e.g., seasonal impassibility of roads) to use of evacuation routes, and contingency measures for resolving such problems as required by NUREG 0654, II, J.k. are not included in the Offsite Plan or the SOPs.

Final Particularization of Reed's Amended Contentions 1, 2 and 3, filed October 1, 1982. Neither Applicant nor the NRC Staff posed an objection to Contention 19, which was admitted to the proceeding by Board Memorandum and Order dated February 25, 1983.

In his deposition, Mr. Reed identified the following impediments with which he is concerned: flooding in the spring on southern routes; snow and ice in the winter on all routes; and automobile wrecks. Deposition of John G. Reed (Aug. 18, 1982) at 295. The only means of identifying impediments which Mr. Reed considers practical is aerial surveillance. Id. at 295-96. In Mr. Reed's view, "it's [the] only way that I can see that you are going to be able to cover the complete vehicular evacuation of this area, and it can be done at sufficiently high altitude, assuming any visibility at all." Id. at 296. Mr. Reed also stated, however, that "[i]f it gets cloudy and foggy, we are in deep trouble, because then you can't tell anything. You just have to live with it." Id. at 296.

## II. Governing Legal Standards

Subsection (b)(10) of 10 C.F.R. § 50.47, NRC's emergency planning regulation, requires, inter alia, that "A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public," and that "Guidelines for the choice of protective actions during an

emergency, consistent with Federal guidance, are developed and in place." One of the evaluation criteria recommended in 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," (Nov. 1980) ("NUREG-0654") as a means of satisfying this planning standard is that off-site plans identify and state the means for dealing with potential impediments (e.g., seasonal impassibility of roads) to the use of evacuation routes, and contingency measures. NUREG-0654, Section II.J.10.k.1/

The issue of impediments to evacuation was addressed by the Licensing Board in the TMI-1 restart proceeding in several different contexts. Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1), LBP-81-59, 14 N.R.C. 1211 at 1581, 1587-91 and 1622-24 (1981). The Board recognized that

It would be possible to postulate combinations of conditions that would make evacuation impossible for extended periods of time although the likelihood of such events may be remote.

Id. at 1581. Addressing, in particular, the contentions challenging the TMI-1 time evacuation study, the Board observed that, notwithstanding the above possibility, "the objective is

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1/ NUREG-0654 is a regulatory guidance document; it is not binding on the Commission. Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit 1), LBP-81-59, 14 N.R.C. 1211, 1460 (1981), aff'd, ALAB-698, 16 N.R.C. \_\_\_\_\_, slip op. at 13-15 (Oct. 22, 1982).



to postulate and analyze an adverse weather scenario that has some reasonable possibility of occurrence." Id.; see also Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-82-\_\_\_\_, 16 N.R.C. \_\_\_\_, slip op. at 57-58 (Aug. 31, 1982). Thus, planners need not consider highly unlikely but, nevertheless, possible impediment scenarios.

### III. Argument

The standards governing summary disposition motions in an NRC proceeding are set forth in Applicant's Memorandum of Law. In summary, where, as here, a properly supported motion for summary disposition is made, the party opposing the motion must come forward with substantial facts establishing that a genuine issue of fact remains to be heard. In the absence of such a showing, the movant is entitled to a decision in its favor on that contention as a matter of law.

Applying the foregoing standards to this case, it is clear that Applicant's motion for summary disposition on Reed Contention 19 should be granted. Applicant does not contest the need for contingency planning for impediments to evacuation. However, it is clear that the necessary planning has been done.

Planning for contingencies is by definition a somewhat uncertain process. Moreover, it constitutes an added level of assurance beyond fundamental emergency planning because it

requires one not only to assume the occurrence of an abnormal event at the nuclear facility, but also requires one to assume that, contemporaneous with such an event, another abnormal event will occur, e.g., a heavy snowstorm, where there had been no previous efforts made to remove the impediment. Recognizing these facts and limitations, there are a number of different aspects to planning for contingencies, all of which have been considered and accounted for in the emergency plans for the Callaway Plant.

Specific provisions for dealing with impediments to evacuation are contained in the State and county plans. These provisions are directed at ensuring to the fullest extent possible that the plans will be capable of being implemented notwithstanding serious impediments to evacuation.

Annex A of the State Plan includes a description of the role of the State of Missouri Highway and Transportation Division ("MHTD"). Specifically, Section E.5 of MHTD's procedures during a radiological emergency provides:

5. Impediment Removal on Evacuation Routes

The MHTD will be responsible for removal of impediments from all state highways which are designated evacuation routes. MHTD will remove snow, ice, objects such as fallen trees or rocks which impede traffic flow, disabled vehicles, and any other impediment to traffic flow on state highway evacuation routes. Personnel and equipment will be dispatched by the cognizant MHTD district office from the nearest highway maintenance facility. The need for impediment removal will be communicated to the

MHTD representative in the State EOC who will communicate the nature of the impediment and location to the MHTD district office by telephone or radio. The district office will dispatch appropriate equipment and personnel to the location from the nearest maintenance facility. Other MHTD maintenance facilities in the area will be available to support. MHTD will also assist the affected counties/cities with impediment removal from county/city roads and streets on request. The affected county/city will communicate the nature and location of the impediment and the request for assistance to SEMA at the State EOC. SEMA will request assistance from the MHTD representative in the State EOC.

State Plan, Annex A, MHTD Section E.5 (emphasis added). The locations of MHTD maintenance buildings in the Callaway Plant area are designated on a map included in the State Plan. Id. at page HD 6. Furthermore, the MHTD procedures recognize the potential need for barrier equipment, construction-type equipment such as motorgraders and fuel assistance in the event of an emergency. Id. at Sections E.1, E.4 and E.6. The State Plan specifies the MHTD personnel who would be notified in the event of a radiological emergency at the Callaway Plant, the phone numbers of these personnel, the interface between MHTD and the State Emergency Management Agency, the dispatching of MHTD personnel to the State EOC, and the availability of communications equipment to support the MHTD effort. Id. at Section C.

In addition to the role played by the MHTD in responding to impediments, the Civil Air Patrol has agreed to provide

aerial reconnaissance in support of evacuation. See State Plan, Appendix 7 (Agreements) at page 7.11; see also Wright, ¶ 8; Eldringhoff, ¶ 7; Epple, ¶ 6; Matthews, ¶ 5. This provision corresponds with the only suggestion made by Mr. Reed as to how to plan for impediments to evacuation. The National Guard has agreed to evacuate isolated residents, e.g., those individuals unable to evacuate on their own because of flooding. Wright at attached Exhibit "A".

The role of the State of Missouri in responding to impediments to evacuation supplements the county response to such contingencies. In the Callaway/Fulton Plan, the County Road and Bridge Department has the responsibility, consistent with its routine functions, of providing equipment for and removing impediments in the county. Callaway/Fulton Plan, Annex I, Tab 2, Section I.B and Annex A, Section II.B.6. The City Engineering Department fulfills this function in Fulton. Id. at Annex I, Tab 2, Section I.B and Annex A, Section II.B.12. These local agencies will coordinate with MHTD for assistance. Id. at Annex I, Tab 2, Section I.B.2. Comparable provisions for impediment removal exist in each of the other four county plans. See, Osage, Gasconade and Montgomery County Plans at Annex I, Tab 2, Section I.B and Annex A, Section II.B.6. Potential impediments are identified in the county plans, as are the kinds of removal procedures necessary to remove impediments. County Plans at Annex I, Tab 2, Section IV. An



Impediment Removal procedure for each of the county plans will provide further details on the removal of impediments. See County plans at Appendix 3. In this procedure, the equipment available for impediment removal will be specified. This information need not be included in the plans. Three Mile Island, Unit 1, supra, 14 N.R.C. at 1624.

The sufficiency of planning for the identification and removal of impediments is confirmed by the affidavits of Messrs. Wright, Eldringhoff, Eppler and Matthews, county court administrative judges in each of the four counties in the EPZ. As a member of the County Court, each of these individuals, along with his colleagues on the Court, is responsible for road and bridge maintenance throughout the county. The county road supervisor reports to the Court. Wright, ¶ 1; Eldringhoff, ¶ 1; Eppler, ¶ 1; Matthews, ¶ 1.

Judge Wright is the Associate Judge of the Administrative Court serving the Eastern District of Callaway County in the State of Missouri. Judge Wright's District encompasses virtually all of the Callaway Plant EPZ within Callaway County. Judge Wright is a life-long resident of Callaway County, other than his four years of duty in the United States Navy. Wright, ¶ 1.

Within the Callaway County portion of the EPZ are roads which are the responsibility of the State of Missouri, Callaway County, the City of Fulton or the Fulton Special Road District.

(The Fulton Special Road District is a small area covering about nine sections of the northwest quadrant of the EPZ, approximately eight miles from the Callaway Plant.) All of these roads have been taken into consideration in the following assessment of evacuation impediments. Id., ¶ 3.

Based on a review of the roads in the County Road District, Judge Wright has concluded that there are eleven residences located within the EPZ which could potentially be isolated, preventing normal evacuation during the course of extensive rainfall, with subsequent localized flooding. This conclusion takes into account areas of the County where the County roads could potentially be blocked in excess of four hours. The following table identifies these homes by section number and radial distance from the Callaway Plant site, consistent with the U.S. Geographic Survey Map.

TABLE OF POSSIBLE ISOLATED RESIDENCES

	MAP LOCATION <u>TOWNSHIP/RANGE</u>	<u>SECTION</u>	RADIAL MILES AND DIRECTION <u>FROM PLANT</u>	LOCATION <u>GENERAL DESCRIPTION</u>
1.	T46N, R7w	19	2.4, SE	Logan Creek Road
2.	T46N, R8W	25	2.8, SSE	Logan Creek Road
3.	T46N, R8W	27	3.0, SSW	Farley Valley
4.	T46N, R8W	35	3.4, SSW	Farley Valley
5.	T46N, RBW	34	3.4, SSW	Farley Valley
6.	T46N, R8W	17	3.3, WSW	Zimmerman Place
7.	T47N, R7W	24	8.8, NE	Ruga Property

<u>MAP LOCATION</u> <u>TOWNSHIP/RANGE</u>	<u>SECTION</u>	<u>RADIAL MILES</u> <u>AND DIRECTION</u> <u>FROM PLANT</u>	<u>LOCATION</u> <u>GENERAL DESCRIPTION</u>
8. T47N, R7W	3	9.4, NE	Koupal Property
9-11. T48N, R7W	30 (3homes)	10.5, NW	Young and Bellamy Properties

Id., ¶ 4.

In the event of excessive rainfall coincidental with an accident at the nuclear plant that would require evacuation, the Missouri State National Guard, which has helicopters available for its use, would be called upon and has agreed to evacuate these isolated residents. Id. at attached Exhibit "A" (National Guard letter). None of the residences are located within two miles of the Callaway Plant. There are six residences located in the radius of two to five miles, and five residences located in excess of eight but less than eleven miles from the plant. Id., ¶ 5.

A second natural impediment which has been considered by Judge Wright is that of an unusually heavy snowfall occurring coincidental with an emergency at the nuclear plant requiring evacuation. Experience has shown that in the event of a heavy snowfall, the County resources alone, which consist of eight graders and five trucks, can adequately clear all of the County roads in approximately 24 hours. Evacuation can begin as soon as major roads are cleared, which takes about 8 hours, with the final road being cleared in 24 hours. If the effort is

concentrated to the areas identified for evacuation, such as the two mile radius in all directions from the plant as well as a ninety degree sector for two to five miles from the plant, Judge Wright concludes that adequate clearance for evacuation can be provided within two to four hours. Id., ¶ 6.

The above estimate does not take into account the resources available from the State in the event of a radiological emergency at the Callaway Plant. In such circumstances, it is Judge Wright's conservative estimate that the entire County and State road system within the EPZ, including the Fulton Special Road District, can be completely cleared within eight hours, in the event of an unusually heavy snowfall. The State equipment which would become available for such an emergency would be an additional 24 units of snow removal equipment. Again, if the effort is concentrated to the areas identified for evacuation, i.e., the two mile radius in all directions from the plant as well as a ninety degree sector for two to five miles from the Plant, Judge Wright concludes that adequate clearance can be provided within two hours. Id., ¶ 7. If only select roads required clearance, the clearance time would be reduced proportionally.

Finally, Judge Wright notes that man-made impediments to traffic flow will be noted by, or reported to, traffic control personnel who in turn will report such conditions to the Callaway County/Fulton EOC. Additional monitoring for



impediments will be provided by State Civil Air Patrol. See State Plan, Appendix 7 (letter of agreement). Removal of such impediments will be accomplished by State or County Highway personnel or through normal equipment resources available to the Sheriff/Chief of Police. Id., ¶ 8.

In summary, Judge Wright concludes that, contrary to Mr. Reed's allegation in Contention 19, there has been adequate planning for the contingency of impediments to evacuation during a radiological emergency at the Callaway Plant. Id., ¶¶ 2, 9.

Judges Eldringhoff, Epple and Matthews agree with Judge Wright about the adequacy of planning for the removal of impediments.

Judge Eldringhoff is Associate Judge of the Administrative Court, serving the Second District of Montgomery County. His District encompasses all of the Callaway Plant EPZ within Montgomery County. Judge Eldringhoff is a life-long resident of Montgomery County. Eldringhoff, ¶ 1. Judge Epple is Associate Judge of the Administrative Court, serving the Northern District of Gasconade County. His District encompasses all of the Callaway Plant EPZ within Gasconade County. Judge Epple is a life-long resident of Gasconade County. Epple, ¶ 1. Judge Matthews is Associate Judge of the Administrative Court, serving the First District of Osage County. Judge Matthews is a life-long resident of Osage County. Matthews, ¶ 1.

Within the Montgomery County portion of the EPZ are roads which are the responsibility of the State of Missouri and Montgomery County. All of these roads have been taken into consideration in Judge Eldringhoff's assessment of evacuation impediments. Eldringhoff, ¶ 3. Within the Gasconade portion of the EPZ are roads which are the responsibility of the State of Missouri, the Morrison Special Road District, and the City of Morrison. The total area is approximately 2 square miles, with a population of about 200 persons. All of these roads have been taken into consideration in Judge Epple's assessment of evacuation impediments. Epple, ¶ 3. Similarly, Judge Matthews has reviewed all county roads located within the Osage County portion of the EPZ. Matthews, ¶ 3.

Based on a review of all of the roads in the EPZ within the County, Judge Eldringhoff concludes that there are approximately 38 residences located within the EPZ which could potentially be isolated, preventing normal evacuation during the course of very extensive rainfall, with subsequent localized flooding. All of these residences are located more than ten miles from the Callaway Plant. This conclusion takes into account all areas of the County within the EPZ where the roads could potentially be blocked in excess of four hours. The Missouri National Guard, which has helicopters available for its use, would be called upon and has agreed to evacuate isolated residents. It is Judge Eldringhoff's view that the

resources of the Missouri National Guard are adequate to provide for the timely evacuation of these people, should normal evacuation be unavailable. Eldringhoff, ¶¶ 4, 5 and attached Exhibit "A" (National Guard letter).

The following table identifies the possible isolated homes by section number and radial distance from the Callaway Plant site, consistent with the U.S. Geographic Survey Map.

TABLE OF POSSIBLE ISOLATED RESIDENCES

<u>MAP LOCATION TOWNSHIP/RANGE</u>	<u>SECTION AND NO. OF RESIDENCES</u>	<u>RADIAL MILES AND DIRECTION FROM PLANT</u>
T48N, R6W	33, 1	13.5, NE
T47N, R6W	4, 5	12.8, NE
T47N, R6W	7, 1	10.8, NE
T47N, R6W	8, 4	11.3, NE
T47N, R6W	9, 3	12.0, NE
T47N, R6W	17, 2	11.0, NE
T47N, R6W	16, 1	11.6, NE
T47N, R6W	20, 1	10.2, ENE
T47N, R6W	33, 1	10.4, ENE
T46N, R6W	10, 1	11.0, E
T46N, R5W	31, 2	15.2, ESE
T45N, R5W	6, 2	15.0, ESE
T46N, R6W	36, 4	14.0, ESE
T45N, R6W	1, 1	14.2, ESE
T46N, R6W	35, 4	13.0, ESE

<u>MAP LOCATION</u> <u>TOWNSHIP/RANGE</u>	<u>SECTION AND</u> <u>NO. OF RESIDENCES</u>	<u>RADIAL MILES</u> <u>AND DIRECTION</u> <u>FROM PLANT</u>
T46N, R6W	34, 1	12.0, ESE
T46N, R6W	33, 1	11.0, ESE
T46N, R6W	32, 3	10.0, ESE
	TOTAL: 38	

Based on a review of all county roads located within the EPZ, Judges Epple and Matthews have concluded that in Gasconade and Osage Counties, respectively, there are no residences located within the EPZ that potentially could be isolated during the course of extensive rainfall with subsequent localized flooding. Epple, ¶ 4; Matthews, ¶ 3. This conclusion by Judges Epple and Matthews takes into account all areas where the roads could potentially be blocked in excess of four hours. Epple, ¶ 4; Matthews, ¶ 3.

A second natural impediment which Judges Eldringhoff, Epple and Matthews have considered is that of an unusually heavy snowfall occurring coincident with an emergency at the nuclear plant. In Montgomery County, in the event of a heavy snowfall, under most conditions, the County resources, which consist of 2 graders and 1 truck, and the State resources, which consist of 3 graders and 10 trucks, can adequately clear the affected County and State roads in a maximum of 12 hours. Evacuation can begin as soon as major roads are cleared, with the final road being cleared in 12 hours. Eldringhoff, ¶ 6.



Of course, partial clearance of roads needed for evacuation can occur much more rapidly.

In Gasconade County, in addressing this situation consideration must be given to the fact that the 10 mile radius from the plant passes through the town of Morrison. For clarity in defining the EPZ boundary, the entire city was included. One road leads from the town. It needs to be cleared to assure proper evacuation. In Judge Epple's opinion, using State resources, this can be accomplished in less than three hours. The citizens then would only have to travel a matter of up to a few blocks to reach the EPZ boundary, then continue on the State-maintained highway. Hence, Judge Epple does not consider a heavy snowfall to be a serious impediment to evacuation. Epple, ¶ 5.

Within the Osage County portion of the EPZ, which is minimally in excess of five miles from the Callaway Plant, roads are the responsibility of the State of Missouri, the County of Osage, or the Shawnee Creek Special Road District. In the event of a heavy snowfall, under most conditions the County resources, which consist of 4 graders and 1 truck, and readily available State resources located in the County, which consist of 2 graders and 4 trucks, can adequately clear the State and County roads within the EPZ in approximately 6 hours. Evacuation can begin as soon as major roads are cleared, with the final road being cleared in 6 hours. If the effort is

concentrated to isolated areas where plowing is necessary in order for certain families to evacuate, the time required will be proportionally reduced. Matthews, ¶ 4.

Finally, all three judges note that man-made impediments to traffic flow will be noted by, or reported to, traffic control personnel who in turn will report such conditions to the County EOC. Additional monitoring for impediments will be provided by State Civil Air Patrol. See State Plan, Appendix 7 (Letters of Agreement). Removal of such impediments will be accomplished by State or County Highway personnel or through normal equipment resources available to the Sheriff. Eldringhoff, ¶ 7; Epple, ¶ 6; Matthews, ¶ 5.

In conclusion, it is the view of Judges Eldringhoff, Epple and Matthews of the County Court's of Montgomery, Gasconade and Osage Counties that the significant evacuation impediments have been identified, and the resources and planning effort necessary to overcome such impediments are available. Eldringhoff, ¶ 8; Epple, ¶ 7; Matthews, ¶ 6.

Finally an additional measure taken of the ability of the Callaway Plant EPZ area to evacuate in the event of a serious weather impediment is the time evacuation study conducted by PRC Voorhees for Union Electric Company, which is included in the RERP as Appendix I. The time evacuation study is one indicia used by government officials to assess the best protective action to recommend to the public. Diablo Canyon, supra,

slip op. at 58; Southern California Edison Company, et al. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-39, 15 N.R.C. 1163, 1231 (1982), aff'd, ALAB-717, 17 N.R.C. \_\_\_\_ (March 4, 1983). The decision to recommend a particular protective action is based in part on the feasibility of evacuation. State Plan, Annex B at Section A and Table 4-V; see Three Mile Island, Unit 1, supra, 14 N.R.C. at 1589. Weather conditions also are considered by the counties in determining whether to order an evacuation. County plans, Annex I, Section IV.E.

Using several computer models, PRC Voorhees assessed traffic flow and estimated evacuation times from the Callaway Plant EPZ. Among the estimates included in the Voorhees study are estimates for adverse conditions, defined as "(1) severe winter weather conditions, with accumulations of snow or ice on the roadways within the EPZ and (2) flooding conditions severe enough to close Route 94," which is the primary highway across the southern portion of the EPZ, the area pointed to by Mr. Reed as the likely area to flood. See RERP, Appendix I at 73 and 3. The Voorhees study observed,

The impact of weather conditions on the evacuation process is reflected in reduced road capacities, due to reduced vehicle speeds and a reduction in vehicular capacity at intersections. Typically, under adverse winter weather conditions, an intersection functions at only 60 percent of its normal capacity. The impact of flooding resulting in closure of Route 94 is greater, requiring rerouting of traffic, and additional volumes on Route 54.

Id. at 73. The computer analysis performed by PRC Voorhees of the conditions specified above resulted in the following findings: The winter conditions scenario results in an evacuation time of 3 hours and 30 minutes, while in the event of closure of Route 94, i.e., severe flooding, the time for the evacuation of the entire EPZ becomes 3 hours and 45 minutes. Id. at 73-74. These times are only very slightly higher than the evacuation time estimated during normal conditions. Id. at 75. This is because the study reflects the fact that the area is rural (i.e., uncongested) and very small in population, and that most people will exit the EPZ much faster than the "normal" time. The normal time is the maximum time -- i.e., when everyone can be estimated to have evacuated. Insofar as early evacuees are delayed because of weather, most will still exit the EPZ within the "normal" time. Consequently, it is only those few individuals who would be exiting last during normal conditions that affect the time evacuation estimate for adverse conditions.

Thus, weather impediments will be considered by the State in its initial determination of whether to recommend evacuation. Similarly, the counties will consider weather conditions in deciding whether to order an evacuation. One factor in these determinations will be the time required to effect evacuation if that protective action is chosen. The time evacuation study as well as a subjective judgment about the impact



of local weather conditions on traffic flow will provide the State and counties with a basis for making such determinations.

In summary, all avenues of planning for impediment removal have been pursued in the development of the off-site plans. Substantial consideration has been given by county governments to the issue of conducting an emergency evacuation of residents coincident with the occurrence of a serious impediment to evacuation. In order to be prepared for such contingencies, available resources have been assessed, significant impediments have been identified and evaluated, and the county and State plans contain detailed provisions which are responsive to the issue of impediments to evacuation in the Callaway Plant EPZ. Mr. Reed's Contention 19 has not only been fully satisfied, but the local governments and off-site planners have gone far beyond the resolution of this issue posed by Mr. Reed, namely, aerial surveillance.

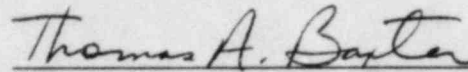
#### IV. Conclusion

Because there is no genuine issue of material fact to be heard on the issue of impediments to evacuation, Applicant's

Motion for Summary Disposition of Reed Contention 19  
(Impediments to Evacuation) should be granted.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE



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