

Inter-Office
Correspondence

prc

Planning Research Corporation

Int. EP-23

50-413/414 02

To John Lee, Duke Power Co.

Date February 4, 1983

DOCKETED

I-EP-23

From Walter Kulash and Jerry Lutes, PRC Voorhees

Ref.: '84 MAY 24 719.000 A11:59

5/7/84

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Subject Results of Evacuation Time Studies for Catawba EPZ

The attached exhibit summarizes the results of our Catawba evacuation studies to date. We looked at two cases -- one in which people try to leave the area as quickly as they can, and another in which they try to drive to their designated reception center.

In both cases we assume that traffic is controlled in accordance with measures suggested on January 18 by representatives of the South Carolina Highway Patrol and the York County Sheriff's Department. The routes used to the reception center were those recommended on January 18 by Bill McSwain, plus a route from Sectors B-1 and B-2 to Lancaster via I-77.

We found that if people try to get out of the EPZ as quickly as possible (which means some South Carolinians crossing into North Carolina), the EPZ can be cleared in about four hours. All parts except the Rock Hill area will be evacuated in three hours or less. In this scenario, the Rock Hill area is the only part of the EPZ in which traffic congestion significantly affects evacuation time.

If all South Carolina residents travel directly to their reception centers, the time to evacuate the entire EPZ increases by half an hour, a 12 percent increase. Congestion is much more widespread in this case than in the first case, so the number of person-hours of potential exposure is considerably greater. For the western half of the EPZ, evacuation time increases by about an hour and a half due to the small number of lanes leading toward the reception centers. The most congestion in the western part of the EPZ occurs in downtown Clover, where over 4,000 cars crowd onto SC 55, a single-lane road leading to Bethany. Comparable congestion occurs in the eastern half of the EPZ on all four routes leading from Rock Hill to Lewisville; but since congestion occurs on those routes in any event, assuming all evacuees travel directly to their evacuation centers adds only half an hour to the evacuation time from Rock Hill.

NUCLEAR REGULATORY COMMISSION

JL:hc

Attachment

Docket No. 50-413/414 Official Exp. No. EP-23
In the matter of Duke, Catawba 193

Staff _____ IDENTIFIED
Applicant _____ RECEIVED
Intervenor _____ REJECTED _____
Cont'g Off'r _____
Contractor _____ DATE 5/7/84
Other _____ WITNESS _____
Reporter M. Metzger

8406220341 840507
PDR ADOCK 05000413
G PDR

EFFECT OF ASSUMING THAT EACH YORK COUNTY RESIDENT
TRAVELS STRAIGHT TO HIS ASSIGNED RECEPTION CENTER

<u>Sector</u>	<u>Time to Complete Evacuation (Hours)</u>		<u>Percentage Increase</u>
	<u>If Take Fastest Route</u>	<u>If Go Straight To Center</u>	
A	2.75	*	-
B	3.25	3.25	0
C	4.0	4.5	12
D	3.0	3.75	25
E	2.75	4.5	64
F (except Gaston Co.)	2.75	4.5	64
F (Gaston Co.)	2.75	*	-
Entire EPZ	4.0	4.5	12

*Case not examined; people assumed to leave area as quickly as possible

Lutes

prc

Planning Research Corporation

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March 4, 1983

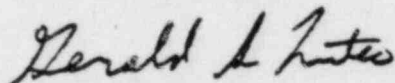
Ref.: #719

Mr. John Lee, Jr.
Duke Power Company
P. O. Box 33189
Charlotte, NC 28242

Dear Mr. Lee:

Attached are the evacuation times for individual sectors and groups of sectors, as requested by the South Carolina Emergency Preparedness Division. Times are given for both normal and adverse weather.

Very truly yours,



Gerald S. Lutes
Senior Associate

GSL:hc

Enclosures

SECTOR COMBINATIONS FOR EVACUATION IN SOUTH CAROLINA

	<u>Normal Weather</u>	<u>Severe Weather</u>
1. AO by itself	3:25	3:25
AO plus B1	3:25	3:25
AO plus C1	3:25	3:25
AO plus D1	3:25	3:25
AO plus E1	3:25	3:25
AO plus F1	3:25	3:25
2. B2	3:25	4:00
C2	4:00	6:15
D2	3:25	3:25
E2	3:25	3:25
F2	3:25	3:25
3. B2 and C2	4:00	6:15
C2 and D2	4:00	6:15
D2 and E2	3:25	3:25
E2 and F2	3:25	3:25
4. AO plus B1 and C1	3:25	3:25
AO plus C1 and D1	3:25	3:25
AO plus D1 and E1	3:25	3:25
AO plus E1 and F1	3:25	3:25
5. AO plus B1, B2, C1 and C2	4:00	6:15
AO plus C1, C2, D1 and D2	4:00	6:15
AO plus D1, D2, E1 and E2	3:25	3:25
AO plus E1, E2, F1 and F2	3:25	3:25

* NOTE: These times will be needed for normal and adverse weathers.