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Docket Nos.: -413/414

Mr. William O. Parker, Jr.
Vice President - Steam Production
P.O. Box 33189
Charlotte, North Carolina 28242

Dear Mr. Parker:

Subject: Request for Additional Information - Catawba Nuclear Station

In the performance of the Catawba Station licensing review, the NRC staff has identified the need for further information in the Meteorology area as stated in the Enclosure. We request that you provide the information requested no later than April 26, 1982. If you require any clarification of this request, please contact the project manager, Kahtan Jabbour, at (301) 492-7821.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosure:
As stated

cc: See next page

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OFFICE	DL:LB#4	LA:DL:LB#4	DL:LB#4				
SUBNAME	KJabbour:eb	MDuncan	EAdensam				
DATE	3/25/82	3/25/82	3/25/82				

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-960

CATAWBA

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION
Catawba - Docket Nos. 50-413/414
Meteorology

450.22 Revised Table 2.3.2-2 (provided in response to Question 451.08) indicates that the characteristics of the design basis tornado considered for the Catawba plant are "equivalent to NRC Regulatory Guide 1.76 values with respect to resulting stresses." The maximum wind speed (360 mph) and total pressure drop (3 psi) are equivalent, but the rate of pressure drop assumed for the Catawba plant design is one-half the rate of pressure drop recommended in Regulatory Guide 1.76. Provide justification that stresses on safety-related structures, systems, and components resulting from the rate of pressure drop recommended in Regulatory Guide 1.76 (2 psi/sec) are equivalent to the stresses considered in the design of the Catawba plant.

451.23 Provide a description of the analysis performed to determine that more restrictive design conditions for the ultimate heat sink did not occur in the period 1973-1980 compared to the design conditions selected from the period 1951-1972 (see response to Question 451.10b).

451.24 The design of the tower used to provide measurements of wind speed and direction at the 40 m level is unusual with respect to the massiveness of the tower's structural components. The meteorological sensors are mounted between one and two feet above the top of the structure on the northwest corner. Measurements of wind speed and direction at this location could be affected by airflow over and around the structural components, potentially resulting in non-representative data. Provide justification that measurements of wind speed and direction made at the 40 m level are representative of non-obstructed airflow at that height. Justification could be provided by comparison of wind

speed and direction measurements made in a location considered to be uninfluenced by the tower structure (e.g., measurements made at a height of one tower width above the tower) or from wind tunnel tests. If comparative measurements are considered, provide a description of the additional measurements program and a schedule for initiation and completion of the concurrent measurements.

451.25 The location of the 10 m tower with a base elevation about 11 m above plant grade may not be adequately representative of site conditions because of the possibility of low-level gravity airflow from higher terrain elevations to lower elevations. The irregular terrain of the Catawba site, the frequent occurrences of strong surface-based inversions, and the high percentage of low wind speed conditions, are conducive to gravity airflow. Provide justification that the current location of the 10 m tower is representative of low-level airflow characteristics at the Catawba site. An acceptable method to determine if such gravity airflow conditions are present at the Catawba site, is the measurement of wind speed and direction from at least one other 10 m tower located in flat terrain at plant grade made concurrently with the present 10 m measurements. The supplemental tower(s) may be initially installed as a temporary system(s) to determine the representativeness of the current 10 m tower location. If one or more temporary supplemental towers are considered to document the existence or non-existence of gravity airflow, provide a description of the location of the tower(s) and the sensors to be used and a schedule for initiation and completion of the supplemental data collection program.