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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)

CAROLINA POWER & LIGHT COMPANY)
AND NORTH CAROLINA EASTERN)
MUNICIPAL POWER AGENCY)

Docket No. 50-400 OL

(Shearon Harris Nuclear Power Plant))
)

AFFIDAVIT OF BRIAN D. MCFEATERS ON EPJ-1

County of Wake)

) SS.

State of North Carolina)

BRIAN D. MCFEATERS, being duly sworn deposes and says as follows:

1. I am a Project Scientist - Meteorological Supervisor employed by Applicant Carolina Power & Light Company. My business address is 7C3 Center Plaza Building, 411 Fayetteville Street Mall, Raleigh, North Carolina 27602. A summary of my professional qualifications and experience is attached hereto as Attachment 1. I have personal knowledge of the matters stated herein and believe them to be true and correct. I make this affidavit in support of Applicants' Motion for Summary Disposition of EPJ Contention 1 in this proceeding.

2. The function of the Physical Sciences Sub-unit, Meteorological Operations at Carolina Power & Light Company is to provide the Company with professional expertise in all matters associated with meteorological data collection, analysis and assessment as they affect Carolina Power & Light Company. This function includes operation of on-site meteorological monitoring stations at nuclear plant sites, emergency preparedness

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support through operational synoptic forecasting assistance, atmospheric analysis of diffusion and transport for potential accident and routine nuclear plant operation and professional consultation services as related to meteorological concerns affecting the Company. As a member of the Operational Training & Technical Services Department, I have direct supervisory responsibility for all meteorological studies, monitoring, and assessment activities, and have analyzed historical data on annual incidents of frozen precipitation in the Shearon Harris Nuclear Power Plant Emergency Planning Zone.

3. The Intervenors have defined "severe snow and ice conditions" as "more than 1/2 inch of snow in a 24-hour period." "Responses to 'Applicants' Emergency Planning Interrogatories and Request for Production of Documents to Sponsors of EPJ-1 and EPJ-2 (First Set)," dated September 17, 1984.

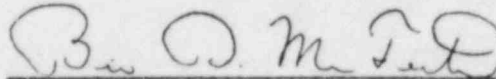
4. The historical data collected from the onsite meteorological monitoring station and the record of information available from nearby weather observation stations indicate that snow and ice conditions which meet even this very general definition in the vicinity of the Shearon Harris Nuclear Power Plant are not a common occurrence.

5. Historically, the maximum monthly snowfall which occurred in the Raleigh, North Carolina area was during January of 1893 when 20.0 inches of snow were received. The maximum 24 hour snowfall to be received in the Raleigh area was 17.8 inches in March 1927. Long-term historical data from the publication Local Climatological Data, Annual Summary with Comparative Data, 1983 for Raleigh-Durham, indicates that on the average the region receives only 7.5 inches of total snow accumulation for an average year, with the month of January averaging only 2.5 inches and February averaging 2.4 inches. These two months account for the majority of the total average annual snowfall. Large accumulations of snowfall in the area around the Shearon Harris Plant site are rare, as evident from the data which shows the average monthly accumulations to be less than 2.5 inches. Thus an average single snowfall of 2.5 inches or less would be expected.

6. Information on ice storms (freezing rain or glaze) has been previously presented in the Shearon Harris Final Safety Analysis Report (FSAR) at section 2.3.1.2.5. According to the best available data on an average annual basis, only four freezing precipitation days per year are experienced in the Raleigh area with such days most likely to occur during January. Ice storms are not categorized as to intensity, thus the data reported were for all observations made of freezing precipitation. It therefore can reasonably be assumed that a severe ice storm would be a rare occurrence within the area based upon the small number of days when any frozen precipitation occurs.

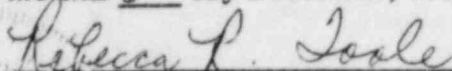
7. Based on the above data, it is a reasonable conclusion that snow and ice storms will occur within the Harris Plant EPZ annually, but these would most likely be slight in accumulation and that a heavy snowfall or ice storm requiring the use of snow removal equipment for extended periods of time is an unlikely event.

This 6 day of December, 1984.



Brian D. McFeaters

Sworn to and subscribed before
me this 6th day December, 1984.



Rebecca L. Soole
Notary Public

My commission expires: _____

My Commission Expires 6-2-85

BRIAN D. MC FEATERS
 PROJECT SCIENTIST - METEOROLOGICAL SUPERVISOR
 OPERATIONAL TRAINING & TECHNICAL SERVICES DEPARTMENT
 CAROLINA POWER & LIGHT COMPANY

EDUCATION:

The Pennsylvania State University - B. S.
 Meteorology - June 1972

Member American Meteorological Society

Member American Nuclear Society

Member Eastern North Carolina Nuclear Society

PROFESSIONAL EXPERIENCE:

Present to
 August 1981

Project Scientist - Meteorological Supervisor -
Operational Training & Technical Services
 Department. Presently supervising the Physical
 Sciences sub-unit which is responsible for all
 meteorological and seismological concerns of the
 company. The sub-unit supports nuclear power plants
 with operation of onsite meteorological monitoring
 stations and diffusion analysis, with emergency
 preparedness support through operational synoptic
 forecasting, with analysis and assessments of
 atmospheric transport and dispersion and through
 general professional consultations on all
 meteorological and seismological activities as they
 relate to the company.

August 1981 to
 September 1976

Senior Scientist - Meteorologist - Technical Services
 Department, Licensing & Permits Section. Responsible
 for the meteorological program and operation of the
 meteorological monitoring stations, assuring that all
 regulatory requirements had been fulfilled.
 Additionally responsible for the preparation of the
 FSAR and ER sections pertaining to meteorology and
 atmospheric dispersion.

September 1976 to
 May 1973

Scientist - Meteorologist - Westinghouse Electric
 Corporation, Environmental Services Division,
 Pittsburgh, PA. As a staff scientist, responsible for
 conducting and assisting in the preparation of
 environmental impact statements for both fossil and
 nuclear power plants. Conducted and wrote
 meteorological analysis for both the FSAR and ER at
 the Clinch River Breeder Reactor as well as other
 nuclear power and fuel fabrication facilities.
 Developed computer models to assess dispersion from
 fossil, nuclear and cooling tower facilities.

May 1973 to
January 1976

Forecast Meteorologist - DeNardo & McFarland Weather Services, Inc., Pittsburgh, PA. A staff forecaster responsible for the preparation of public weather forecasts for radio and television and for the briefing of private corporate clients. Assisted in the environmental assessment of fossil facility impact upon local air quality regulations. Performed field measurements of meteorological and air quality parameters using state-of-the-art instrumentation.