UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY	)	Docket Nos. 50-440 50-441
	)	
(Perry Nuclear Power Plant, Units 1 and 2)	)	

AFFIDAVIT OF SCOTT T. McCANDLESS
ON CONTENTION B

County of Middlesex)
) ss.
Commonwealth of Massachusetts)

SCOTT T. McCANDLESS, being duly sworn, deposes and says:

1. I am a co-founder, principal, and Vice President of HMM Associates, Inc. My responsibilities at HMM Associates include the management and supervision of evacuation time estimate studies. I have participated in a number of the more than 20 evacuation time estimate analyses conducted by HMM Associates in connection with emergency planning for nuclear power plants,1/ and have served as Principal-in-Charge of eight, including the evacuation time estimate study prepared by HMM Associates for the Perry Nuclear Power Plant plume exposure

1/ Most of the more than 20 evacuation time estimate analyses prepared by HMM Associates already have been found acceptable by the NRC; the remaining analyses are currently under review.

pathway Emergency Planning Zone ("EPZ"). That study is entitled "Evacuation Time Estimates For Areas Near The Perry Nuclear Power Plant" ("the ETE"). A current statement of my professional qualifications and experience is attached hereto. My business address is 336 Baker Avenue, Concord, Massachusetts 01742. 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 Contention B.

2. The Perry ETE was developed utilizing a state-of-the-art computer simulation that has been used at nuclear sites throughout the country, and that has been previously approved by the NRC. The purpose of this affidavit is to note the consideration of evacuation route impediments and the evacuation of onsite construction workers in the ETE.

I. Evacuation Route Impediments

3. The potential for impediments and route closures was specifically discussed with offsite emergency planning authorities in a series of meetings held in October 1983, in preparation for commencement of work on the ETE. The consensus of meeting participants was that no evacuation routes would be totally obstructed in any credible evacuation scenario. However, system-wide reductions in carrying capacity were deemed appropriate to reflect adverse weather conditions -- specifically,

slippery roads and, in the case of snow, encroachment on the roadways. Accordingly, as explained in my Affidavit on Contention A (filed February 1, 1985), the ETE reflects modeling of two adverse weather scenarios -- capacity and travel speed reductions of 20% (sudden summer thunderstorm conditions), and capacity and travel speed reductions of 30% (winter snowstorm conditions).

4. In addition, the ETE includes an appendix devoted specifically to consideration of impediments -- Appendix 8, "The Effects of Traffic Accidents and Disabled Vehicles on Estimated Evacuation Procedures."

II. Evacuation of Onsite Construction Workers

5. As the ETE itself reflects, HMM considered the Perry onsite work force (including onsite construction workers) in the development of the evacuation time estimates. See, e.g., ETE §§ 2.1 (at 2-1), 2.4 (at 2-8 to 2-10), 3.5 (at 3-8), 6.1 (at 6-1, 6-6). See also ETE at A3-2, A4-4 to A4-6 (Column 15).

6. In summary, evacuation route impediments and the evacuation of Perry construction workers have been thoroughly considered in the development of the Perry ETE.

S T McCandless

Scott T. McCandless

Subscribed and sworn to before me this 31st day of January 1985.

Notary Public

My Commission expires:

SCOTT T. McCANDLESS
Vice President
HMM Associates, Inc.

Education

B.S.	Civil Engineering, Worcester Polytechnic Institute
M.U.A.	Urban Affairs, Boston University
	Environmental Planning, W.P.I., 1975
	Adjunct Assistant Professor

Summary of Experience

Mr. McCandless has extensive experience in environmental planning and management. He has served as project manager or principal investigator for a wide variety of nuclear safety studies, environmental studies and training programs. He has been directly involved in studies for nuclear facilities, urban mixed use developments, transportation projects, and energy development projects. He has appeared as an expert witness on emergency planning before an NRC Atomic Safety and Licensing Board. He has assisted with presentations on the same subject before the Advisory Committee on Reactor Safeguards. He has made technical presentations of the use of the NETVAC model for use in evacuation time estimates before the Transportation Research Board.

Professional Experience

1978 - Present

HMM Associates; co-founder, principal and project manager. He has served as principal-in-charge for comprehensive off-site emergency planning assignments in New Hampshire and Indiana. In each location, the work he supervised included compilation of State and local radiological emergency plans. In New Hampshire the assignment included coordination of drafting procedures for 12 state agencies and for the Governor and his staff. During this effort he coordinated training sessions for the Civil Defense Agency, the Department of Public Health, the State Police, the National Guard and all other emergency response agencies. In addition, he coordinated table-top exercises, prepared the State scenario materials, and served as the observer/controller at the State EOC.

Other recent emergency planning projects have included supervision of the development of evacuation time estimate reports compiled for submission to NRC. In total, he has been principal-in-charge of studies for eight sites; he has participated in evacuation time estimates at several more sites.

Clients have included TVA, Arkansas Power & Light, Florida Power & Light, Boston Edison and others. He has also been involved in the development of HMM's state-of-the-art computer models for simulating evacuations after nuclear accidents.

Other projects have included management of state EIRs and federal EISs for several urban developments in Boston, including the first to be performed under comprehensive new regulations, Massachusetts Environmental Policy Act and the two largest urban commercial developments ever proposed for New England. Mr. McCandless has also directed projects with emphasis on noise, air quality and transportation considerations.

1972-1978 Environmental Research & Technology, Inc. (ERT). In his most recent position he served as manager of the Environmenal Planning Division. In this position, he served as both a senior project manager and as administrative head of a multidisciplinary division of environmental professionals including specialists in acoustics, air quality, archaeology, economics, geology, landscape architecture, planning, socioeconomics and transportation planning. During his tenure at ERT, Mr. McCandless was project manager for more than twenty different environmental studies. Among them were the EIS for the SHERCO coal-fired power plant in Minnesota, the EIA for POD 3 of the New Town at Battery Park City in Manhattan, an Environmental Assessment for the Columbia Green Springs SNG plant feedstock allocation, Air Quality Studies for several Washington METRO System EIS efforts, and an Environmental Reconnaissance for an ethylene plant site for the Mobil Chemical Company.

1971-1972 Needles, Tammen & Bergendoff, Staff Planner. Prepared the Route 2 EIS and the Land Use Plan for the Manchester, NH Airport Master Plan.

1969-1971 Robinson & Fox, Staff Planner. Prepared tenant selection and Management Plans for proposed MHFA funded housing development in Worcester, MA.

Professional Affiliations

Member, American Society of Planning Officials