

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket No. 070-03098
DUKE COGEMA STONE & WEBSTER	)	
	)	
Mixed Oxide (MOX) Fuel Fabrication Facility	)	
(Construction Authorization Request)	)	

NRC STAFF'S SUPPLEMENTAL IDENTIFICATION OF EXPERT WITNESSES

The staff of the United States Nuclear Regulatory Commission (NRC Staff) is supplementing its May 16, 2003 filing made in this proceeding. The NRC Staff is designating two additional expert witnesses on issues pertaining to intervenor Georgians Against Nuclear Energy's contention #3:

1. Herman Graves. Mr. Graves' background and qualifications are set forth in Exhibit A, attached hereto.
2. Rex Wescott. Mr. Wescott's background and qualifications are set forth in Exhibit B, hereto attached.

The NRC Staff reserves the right to identify additional expert witnesses at a later date.

Respectfully submitted,

**/RA/**

John T. Hull  
Counsel for NRC Staff

Dated at Rockville, Maryland  
this 7<sup>th</sup> day of October, 2003

## EXHIBIT A

### Herman L. Graves, III

Engineering Research Applications Branch  
Office of Nuclear Regulatory Research  
US Nuclear Regulatory Commission  
Washington, DC 20555

3024 Beethoven Way  
Silver Spring, MD 20904  
(301) 415-5880 (W)

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PRESENT POSITION: Senior Structural Engineer, GG-15. Responsibilities cover the technical and administrative functions associated with the conduct of major research programs and development of technical positions for national standards, regulatory guides, rules and regulations. Current projects managed include: structural risk-informed assessment of degraded structures; soil-structure interaction for deeply embedded structures; regulatory guide on anchorage to concrete; and structural aging research.

EDUCATION: B.S.C.E., Howard University, 1975  
Master of Engr. (Structural Engineering), Howard University, 1980

REGISTRATION: Professional Engineer (Civil/Structural), Washington, DC

#### PROFESSIONAL EXPERIENCE:

23 years (1980-present) Structural Engineer; Standards and Component Branch; Mechanical/Structural Engineering Branch; Engineering Research Application Branch, USNRC. Responsible for standards development, research project management, and national code endorsements.

4.5 years (1975-1980) Bechtel Power Corporation; Civil/Structural Engineer. Responsible for design and analysis of several nuclear power plants (Standardize Nuclear Unit Power Plant System-SNUPPS, Grand Gulf), buildings (turbine, radwaste) and components (cable trays, piping supports, cranes).

#### AWARDS AND ACCOMPLISHMENTS:

NRC Performance Award, 1999-2002.

NRC High Quality Certificate; January 1988, April 1993.

Office of Personal Management-Executive Potential Program, Certificate March 1992-1993.

NRC Civil Rights Award, February 1993.

Member Toastmasters International (Served as Area Governor 1986).

Member American Concrete Institute (ACI).

Member ACI 349, "Nuclear Safety Related Concrete Structures," and ACI 355, "Anchorage to Concrete" national code committees.

ASME Section XI, Working Group, "Inservice Inspection of Containments."

SELECTED PUBLICATIONS/PRESENTATIONS:

1. Presented paper "Large-Scale Test Program at Hualien, Taiwan," at 21st Water Reactor Safety Information Meeting, Bethesda, MD, October, 1993.
2. Graves, H. L., "Regulatory Considerations in Anchorage to Concrete," American Society of Mechanical Engineers Pressure Vessels & Piping Conference Proceedings, PVP-Vol. 237-2, New Orleans, LA, June, 1992.
3. Presented paper "Model Design for Large-Scale Seismic Test Program at Hualien, Taiwan," at 19th Water Reactor Safety Information Meeting, Bethesda, Maryland, October, 1992.
4. Presented a paper titled "An Integrated Computer Code For Seismic Performance Evaluations of Nuclear Power Plant Facilities," at First U.S. National Congress on Computational Mechanics, Chicago, Illinois, July 21, 1991.
5. Participated as a Panel Member (Use of Arrays) at National Science Foundation/Electric Power Research Institute Workshop on "Dynamic Soil Property and Site Characterization for Earthquake Resistant Design and Analysis" - Palo Alto, California, November, 1989.
6. Co-Authored paper presented at 14th International Conference on Structural Mechanics in Reactor Technology, titled "Dynamic Behavior of Anchors in Cracked and Uncracked Concrete," Lyons, France, August, 1997.
7. Principal editor, NUREG/CP-0054 "Proceedings of the Workshop on Soil-Structure Interaction," Bethesda, Maryland, June 16-18, 1985.
8. American Society of Civil Engineers Committee "Nuclear Structures and Materials" - member of task group that published state of the art report on "Anchorage to Concrete," September, 1984.
9. Graves, H.L., Tang, H.T. and Liao, Y.C., "Large-Scale Seismic Test Program at Hualien Taiwan," Nuclear Engineering and Design, Elsevier, The Netherlands, volume 163, 1996.

## EXHIBIT B

REX G. WESCOTT

### EXPERIENCE RELATED TO RISK ASSESSMENT

#### EDUCATION:

BS Physics -- 1970 Clarkson College  
MS Engineering Science -- 1974 Clarkson College  
24 Graduate credit hours in Ocean Engineering and fluid mechanics-- 1975-1978  
Polytechnic Institute of New York  
BS Fire Protection Engineering -- 1988 University of Maryland

#### EXPERIENCE:

Joined NRC in 1978, Office of Standards Development, Hydrologist  
Responsible for standards and guidance in hydrology. Also reviewed IAEA guides (which often proposed probabilistic methods for design basis flood determination) and provided agency comments. Was NRC representative to ANS working group 2.8 "Design basis Floods for Power reactor Sites."

Transferred to NRR in 3/81. Responsible for safety evaluations of hydrologic engineering sections of Final Safety Analysis Reports for Reactors. Served as NRC representative to Interagency Committee on Dam Safety -- Working Group on Inflow Design Floods and the Interagency working group on "Feasibility of Assigning a Probability to the Probable Maximum Flood" (primary author on joint probability methods). I was also responsible for all PRA related activities in the section.

As a result of the reorganization of NRR in 1985, my job title was changed to plant systems engineer and my review responsibilities included fire protection and hydraulic design reviews.

I was assigned to the Office of Special projects in 1987 as a fire protection engineer. In OSP I was responsible for participating in and leading inspections in Appendix R (fire protection) compliance. I also continued to perform fire protection and water systems reviews.

I joined the Division of Waste Management (NMSS) in 1989 as a Sr. Hydrologist. I was primarily responsible for the Iterative Performance Assessment Program for the High Level Waste repository. This involved planning and coordinating modeling efforts to assess the risk to the public from an HLW repository in a quantitative manner. My position often required presentations to the ACNW, DOE, and the public.

In 1996, I was transferred to FCSS as a Sr. Fire Protection Engineer on the Hanford Tank Waste Remediation Systems (TWRS) Project. I also performed reviews of risk assessment studies performed for the TWRS project. I am presently the Integrated Safety Analysis reviewer for the MOX project. I often make presentations to the ACRS.

## EXHIBIT B

REX G. WESCOTT

### EXPERIENCE RELATED TO RISK ASSESSMENT

In 2003, I had a 4 month rotation to the Probabilistic Risk Assessment Branch in the Office of Research. In this assignment, I provided input to the "Significance Determination Process" for fire protection. This project applied observed fire data and engineering analysis to a methodology for determining the risk significance of reactor inspection findings.

### PUBLICATIONS RELATED TO RISK ASSESSMENT

"Joint Probability Calculation of Storm Depths", ASCE Hydraulics Conference Proceedings, August 1989, New Orleans.

"Very Low Probability Precipitation Frequency Estimates - A Perspective" (co-authored with F. P Richards), Proceedings of the International symposium on Flood Frequency and Risk Analysis, Louisiana State University, May 1985.

### NRC TRAINING RELATED TO RISK ASSESSMENT

"Performance Assessment Techniques For High Level Waste" (5/91)

"Probability and Statistic for PRA" (10/94)

"IRRAS Basic Course" (5/97)

"Hazards Analysis Course" (9/99)

"Quantitative Frequency Analysis Methods -PSI 201" (2/2001)

"Accident Frequency Analysis Methods - PSI 207" (8/2002)

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Mixed Oxide (MOX) Fuel Fabrication Facility	)	
(Construction Authorization Request)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S SUPPLEMENTAL IDENTIFICATION OF EXPERT WITNESSES" and Exhibits A and B referenced therein, have been served upon the following persons this 7<sup>th</sup> day of October, 2003, by electronic mail, and by U.S. mail, first class (or as indicated by an asterisk (\*) through the Nuclear Regulatory Commission's internal distribution system).

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**/RA/**

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John T. Hull  
Counsel for NRC Staff