

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)	
)	Docket Nos. 52-025-COL
)	and 52-026-COL
Southern Nuclear Operating Company)	
)	
(Vogtle Electric Generating Plant, Units 3)	September 20, 2011
and 4))	

**SOUTHERN NUCLEAR OPERATING COMPANY'S
SUPPLEMENTED WITNESS LIST FOR THE VOGTLE UNITS 3 & 4 COL
MANDATORY HEARING**

Southern Nuclear Operating Company ("SNC") herein provides its supplemented list of witnesses for whom written testimony is being submitted or who may appear in the above captioned matter at the September 27, 2011 Mandatory Hearing.¹

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C.V., Attachment 5

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Rockville, Maryland, 20852

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NuStart Energy Development
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Rockville, Maryland, 20852
C.V., Attachment 1

Neil Haggerty
EXCEL Services Corporation
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Rockville, Maryland, 20852
C.V., Attachment 2

¹ The curricula vitae for those witnesses sponsoring pre-filed written testimony are attached to their pre-filed written testimony. For other witnesses, their curricula vitae are attached hereto, as noted.

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Donald P. Moore

Southern Nuclear Operating Company
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C.V., Attachment 3

Jerry G. Sims

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C.V., Attachment 4

For convenience, SNC has included all original attachments to this Supplemented Witness List, as well as the new *Attachment 5*.

Respectfully submitted,

(Original signed by M. Stanford Blanton)

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CO-COUNSEL FOR SOUTHERN NUCLEAR
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Attachment 1



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256-308-1771 fax**

Current Position: NuStart Energy Development
AP1000 COL Project Manager

Education

B.S. Mechanical Engineering
Concordia University
Montreal, Canada

- Manager for the AP1000 R-COLA (Reference combined Construction and Operating License Application) since project kick off in December 2005. In this capacity Mr. Grumbir is responsible for cost, schedule, and quality regarding the development of the COLA, including contractor oversight, NuStart oversight, and Westinghouse support. These responsibilities continue through the NRC's review and ultimately to receipt of the COL.
- Vice President - New Plants at Excel Services where Mr. Grumbir was responsible for licensing activities associated with new plant activities in the U.S.
- Various management positions at D.C. Cook where Mr. Grumbir managed several projects including license renewal, improved technical specifications & 24 month surveillance cycle extension, Final Safety Analysis Report validation, and condition report backlog reduction.
- Mr. Grumbir spent 10 years at Crystal River in Simulation and in Systems Engineering.



**Neil Haggerty
EXCEL Services Corporation
11921 Rockville Pike
Suite 100
Rockville, Maryland, 20852**

Current Position: EXCEL Services Corporation
Senior Consulting Associate

Education

B.E., Mechanical Engineering
State University of New York at Stony Brook
Stony Brook, NY, 1985

M.S., Environmental Engineering and Management
Catholic University of America
Washington, D.C., 1996

2007 – present

EXCEL Services Corporation Senior Licensing Engineer, AP1000

2005 - 2007

U.S. Nuclear Regulatory Commission Senior Project Manager

1999 - 2005

American Electric Power Company Senior Licensing Engineer

1991 - 1999

Baltimore Gas & Electric Company Senior Licensing Engineer

1990 - 1991

Becon Services Corporation Quality Control Engineer

1985 - 1989

Stone & Webster Engineering Corporation Mechanical Engineer

Mr. Haggerty is an experienced mechanical and environmental engineer with over 25 years of experience in United States commercial nuclear reactor facilities. He has significant experience in new reactor licensing process and the associated environmental reviews, review of nuclear fuel cycle licensing actions, nuclear power plant regulatory affairs, licensing renewal and project and contract management. He has written and reviewed sections of a combined license application (COLA) for the initial AP1000 reference plant, and lead the applicant's defense of the Applicant's Environmental Report associated with their COLA. He also has experience in developing, reviewing, and supporting review of Operating License Renewal Applications, including the associated Environmental Reports, and the operating programs required to satisfy

the license renewal aging management program requirements. His experience includes projects at Babcock and Wilcox, Combustion Engineering, and Westinghouse Pressurized Water Reactors, and commercial uranium fuel cycle facilities.

NuStart Energy Development

Senior Licensing Engineer responsible for the environmental, security, and licensing activities for the Combined Operating License Application for the Westinghouse AP1000 units proposed for several plant sites, including the Southern Nuclear Operating Company (SNC) Vogtle Electric Generating Plant (VEGP), Units 3 and 4.

U.S. Nuclear Regulatory Commission

Senior Project Manager responsible for environmental reviews of licensing actions associated with nuclear fuel cycle licensees and other fuel cycle regulatory actions. Also, provided technical support for the development of infrastructure and guidance for the NRC's new Office of New Reactors.

Donald C. Cook Nuclear Power Plant

Senior Licensing Engineer responsible for licensing activities for the Operating License Renewal Application, measurement uncertainty recapture power uprate, and implementing regulatory strategies for resolution of significant design basis issues that had resulted in the forced shutdown of the units in September 1997 for Licensing Basis and Design Basis deficiencies.

Calvert Cliffs Nuclear Power Plant

Senior Licensing Engineer responsible for licensing activities associated with preparation and review of the nation's first Operating License Renewal Application. Also performed licensing activities required for implementation of major projects, as well as support of continued plant operation.

Davis-Besse Nuclear Power Station

Mechanical Engineer responsible for resolution of design and licensing issues that were identified prior to and during the plant's forced shutdown in 1986 for operating and programmatic deficiencies.

Comanche Peak Steam Electric Station

Mechanical Engineer responsible for developing and assembling inspection packages required to demonstrate construction adequacy prior to issuance of the plant's Operating Licenses.



DONALD P. MOORE, P.E.
Consulting Engineer

B.S., Civil Engineering, University of Alabama, 1969
M.S., Engineering, University of Alabama at
Birmingham, 1977

EXPERIENCE SUMMARY

Mr. Moore has over 40 years of experience in specialized technical positions and supervisory positions in the field of structural engineering with specific emphasis on seismic analysis and design and seismic qualification of equipment and subsystems. He provides the lead technical expertise for Southern Company on seismic issues and evaluations including seismic hazard and demand, seismic analysis and design, seismic soil-structure analysis, equipment seismic qualification, seismic walk-downs, and seismic margin assessments (SMA).

RELATED EXPERIENCE

From 1980 to the present, Mr. Moore *supervised the structural dynamics* groups at Southern Company including SCS Engineering and Southern Nuclear Operating Company. Since 1992, Mr. Moore has served as Southern Company's *consulting engineer* in the area of seismic issues and evaluations. During this time, he personally managed the development and implementation of a structural dynamic test program at SCS Engineering. He also had the lead responsibility for equipment qualification walkdown to support an U. S. Nuclear Regulatory Commission (NRC) Seismic Qualification Review Team Audit at Georgia Power's Plant Vogtle Unit 1.

Mr. Moore had technical responsibility for the trial Seismic Margin Assessment of a BWR nuclear plant (Georgia Power's Edwin I. Hatch Nuclear Plant) for the Electric Power Research Institute (EPRI). He was the technical director for the seismic evaluation of nuclear power plant equipment and structures at all three Southern Company nuclear power plants (Farley, Hatch, and Vogtle) to address seismic safety concerns. He serves as a Steering Group member of the Seismic Qualification Utility Group (SQUG) which utilized the use of past earthquake experience to verify seismic adequacy of equipment in existing nuclear power plants. Mr. Moore participated in the seismic walkdown of piping (seismic and non-seismic) to verify seismic integrity of existing piping for a BWR main steam isolation valve leakage issue and participated in NRC meetings providing technical basis for allowing increased allowable leakage rates. He has published several technical papers on structural vibration problems, the application of seismic margins and SQUG methodologies, and seismic analyses of dry cask storage installations.

Donald P. Moore, P.E.

Mr. Moore's design responsibilities included such work as the dynamic analysis of large induced draft fan foundations. It also included the structural analysis and design of a two story reinforced concrete flat slab industrial building and other miscellaneous reinforced concrete and steel structures. Mr. Moore had the lead responsibility for investigating vibration problems of existing structures and for performing dynamic analysis and design of special structures to support machines that produce dynamic loads. He performed structural evaluations of existing structures to determine their ability to withstand dynamic and static loads. He developed modifications to existing nuclear power plant Category I cable tray supports to increase their load capacity. He also reviewed seismic qualification test reports on Class 1E equipment for nuclear power plants and evaluated modifications to existing Category I Structures and Class 1E equipment with regard to their seismic qualifications.

During this time, Mr. Moore was an active member of the ASCE Dynamic Analysis Committee (which was an ASCE Seismic Task Group) of the Nuclear Structures and Material Committee. He was also a member of the joint ACI/ASME Committee on Concrete Pressure Components for Nuclear Service (ACI/ASME Committee 359) and the Subgroup on materials, construction and examination. In addition, he was the Leader of the Working Group for Analysis and Design of Electrical Cable Support Systems under the ASCE Committee on Materials and Structural Design. He was a member of ASCE Electric Power and Communication Lifelines of the Technical Council on Lifeline Earthquake Engineering. He is also a member of ASME QME Subgroup on Dynamic Qualification and the IEEE 344 Special Writing Group on Application of Experience Based Approaches.

Mr. Moore's *structural design experience* from 1969 to 1980 included being the lead engineer on design of an auxiliary building for a nuclear plant. This work included the structural layout, preliminary sizing of structural elements, and scheduling of the construction effort. He wrote a portion of Preliminary Safety Analysis Report to meet requirements of the NRC and served as a member of the Seismic Task Group of the ASCE Committee on Nuclear Structures and Materials.

Also during 1969 to 1980, Mr. Moore analyzed and designed large concrete structures for Georgia Power's Hatch Nuclear Power Plant. His work included the seismic analysis of reinforced concrete and structural steel buildings, tornado depressurization analysis, and also the supervision of others performing the analysis, design, and drawing/drafting of concrete slabs. He analyzed and designed structural steel cable tray supports for seismic and static loads. In addition he was responsible for structural review of seismic test and/or analysis of seismic Category I equipment and supports.

RELATED PROJECTS

Mr. Moore provided the technical management of the Plant Hatch Unit 1 SMA project which was a pilot study for the Electric Power Research Institute (EPRI) as documented in EPRI NP-7217. He served as the technical director for the Farley, Hatch, and Vogtle USI A-46 and IPEEE programs using the Seismic Qualification Utility Group (SQUG) and EPRI SMA methodologies. He has actively participated in SQUG since 1986 and as a member of the SQUG Steering Group since 1993. Mr. Moore was asked to perform a Peer review of the SQUG walkdown training course and the SQUG course on the seismic adequacy of new and replacement equipment (NARE) as well as many of the SQUG technical documents. He participated as a trained Seismic Capability Engineer (SCE) on SQUG and IPEEE walk-downs for all six Southern Company nuclear units and the trial SQUG walkdown at Nine

Donald P. Moore, P.E.

Mile Point Nuclear Plant Unit 1. Mr. Moore was a principal author for EPRI SMA methodology document EPRI NP-6041. He was a co-author of numerous technical papers concerning seismic margin assessment and SQUG resolution to USI A-46. In addition, he was also responsible for the design of structures for nuclear and fossil power plants and analysis and design of foundations for rotating equipment such as fans and pumps. He had the lead responsibility for developing structural dynamic testing capabilities for SCS Engineering. He had lead responsibility for the seismic analysis of independent spent fuel storage installations at Hatch and Farley Nuclear Power Plants, and participated on the panel for the NRC sponsored project on seismic behavior of spent fuel storage cask systems. He is currently responsible for all seismic issues related to the Vogtle Early Site Permit and Vogtle Units 3 & 4 Combined Construction & Operating License Application. In addition he is currently a member of the Participatory Peer Review Panel of the Central and Eastern United States Seismic Source Characterization Program being sponsored by the NRC, USGS, and EPRI, and also a member of the Nuclear Energy Institute Seismic Issues Task Force addressing generic seismic issues for new nuclear power plants and siting for these new designs.

CERTIFICATIONS AND AFFILIATIONS

Mr. Moore participates as an active member on many industry committees that relate to seismic, structures, and structural dynamics, including:

- Seismic Qualification Utilities Group Steering Group
- EPRI Seismic Design and Qualification Committee, now EPRI Structural Reliability and Integrity Committee
- ASME QME Subgroup on Dynamic Qualification
- Advanced Reactor Corporation First-of a-Kind-Engineering Project to Develop Guidelines for Experience-Based Seismic Qualification, industry advisory member
- IEEE 344 Special Writing Group on Application of Experience Based Approaches
- ASCE Dynamic Analysis Committee
- ASCE Seismic Analysis Standards Committee
- ASCE 4 standard for Seismic Analysis of Nuclear Structures
- ASCE 43 standard for Seismic Design of Nuclear Facilities
- Joint ACI/ASME Committee on Concrete Pressure Components for Nuclear Service (ACI/ASME Committee 359)

Donald P. Moore, P.E.

- ASCE Electric Power and Communication Lifelines of the Technical Council on Lifeline Earthquake Engineering
- Nuclear Management and Resources Council (NUMARC) Seismic Issues Working Group.
- NEI Seismic Issues Task Force
- American Society of Civil Engineers
- American Concrete Institute
- Chi Epsilon
- Tau Beta Pi

AWARDS AND HONORS

In 1992, Mr. Moore received Southern Company's Ruble Thomas Award of Excellence. The award was established to recognize engineering excellence in the field of nuclear power in memory of Ruble Thomas, the former SCS vice president who spearheaded Southern Company's involvement in nuclear energy. Mr. Moore was specifically recognized for his initiative and leadership in the field of seismic and dynamic analysis. Mr. Moore also received the Electric Power Research Institute 1990 Technology Transfer Award for leadership in demonstration of EPRI Seismic Margin Assessment Methodology.

PUBLICATIONS AND PRESENTATIONS

Moore, Donald P., et al., "Seismic Analysis of Plant Hatch ISFSI Pad and Stability Assessment of Dry Cask," (ICONE-8499), presented at the 8th International Conference on Nuclear Engineering, Baltimore MD, April 2-8, 2000.

Hsu, P., Jones, G. V., Moore, D. P., Springfield, T. H., and Walden, S. D., "Design of Plant Hatch Independent Spent Fuel Storage Installation Pads," (ICONE-8498), presented at the 8th International Conference on Nuclear Engineering, Baltimore MD, April 2-8, 2000.

Moore, Donald P., et al., "Seismic IPEEE and USI A-46: Representative Results," *Proceedings of the Fifth Symposium on Current Issues Related to Nuclear Power Plant Structures, Equipment and Piping*, Orlando, Florida, December 1994.

Moore, Donald P., et al., "Application of Seismic Margin Assessment Methodology for the IPEEE/USIA-46 at the Hatch Plant," *Proceedings of the Fourth Symposium on Current Issues Related to Nuclear Power Plant Structures, Equipment and Piping*, Orlando, Florida, December 1992.

Donald P. Moore, P.E.

Moore, Donald P., et al., “Results of the Seismic Margin Assessment of Hatch Nuclear Power Plant,” *Proceedings of the Third Symposium on Current Issues Related to Nuclear Power Plant Structures, Equipment and Piping*, Orlando, Florida, December 1990.

Moore, Donald P., et al., “Seismic Margin Assessment of Hatch Nuclear Plant”, presented at the 10th International Conference on Structural Mechanics in Reactor Technology, Anaheim, California, August 14-18, 1989.

Moore, Donald P., et al., “Seismic Evaluation of Relays for the Plant Hatch Seismic Margin Assessment,” presented at the 10th International Conference on Structural Mechanics in Reactor Technology, Anaheim, California, August 14-18, 1989.

Moore, Donald P., et al., *ASCE Standard: Seismic Analysis of Safety-Related Nuclear Structures and Commentary on Standard for Seismic Analysis of Safety Related Nuclear Structures*, American Society of Civil Engineers, New York, New York, 1986.

Moore, Donald P., and Garrett, Phillip W., “Dynamic Testing of a Large Timber Cooling Tower”, presented at the American Society of Civil Engineers Structural Conference, Atlanta, Georgia, 1984.

Moore, Donald P., et al., *Structural Analysis and Design of Nuclear Plant Facilities*, American Society of Civil Engineers, New York, New York, 1980.



Jerry G. Sims
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256.348.0467

jerrypawpaw@bellsouth.net

Current Position: Southern Nuclear Operating Company (retired)
Nuclear Fleet Security - Project Coordinator, now performing security consulting for several clients.

Security Related Experience

7/72 – 9/80 Senior Engineer II

Worked on the security portions of the PSAR and later the FSAR for Farley Nuclear Plant. Worked on the review of the original 10 CFR 73.55 regulation. Coordinated the Security System design for Farley Nuclear Plant and developed the security policies for initial operation. Wrote the Security Plan for Farley Nuclear Plant.

9/80 – 3/90 Superintendent Planning and Resource Management

Worked on security policies, staffing, clearance, background investigations, and coordinated the design to retrofit the original security system. Worked with the industry on developing security standards and establishing a Fitness For Duty program for nuclear plants. Developed the Guard Training and Qualification Plan and the Security Contingency Plan for Farley Nuclear Plant. Developed several security procedures to comply with the promulgated security regulations.

3/90 – 11/-01 Project Engineer - Nuclear Engineering and Licensing

Handled the design development for a complete upgrade of the CCTV system, intrusion detection system, and access control system at Farley Nuclear Plant. Represented Southern Nuclear Company and the Nuclear Industry on the NUMARC Security Working Group. Reviewed and assisted in developing the specifications for the conceptual security design for one of the ALWR reactor designs (AP 600).

11/01-10/07 Nuclear Fleet Security – Project coordinator

Responsible for the nuclear fleet security at three Southern Company nuclear plants. Involved in security issues through Nuclear Energy Institute, NuStart, DHS Nuclear Sector Coordinating Council, and management interactions with the Nuclear Regulatory Commission. Chairman of the NuStart Security Review Committee working on security for the three new standard plant designs.

Previously a member of the Nuclear Energy Institute Security Working Group, the Design Basis Task Force, Sec/EP Task Force, and New Plant Security Task Force.

Worked on all the new security orders issued or being considered by the Nuclear Regulatory Commission. Worked with EPRI on the Aircraft Impact Study and the Consequence Analysis Study. Member of the Nuclear Sector Coordination Council interfacing through Department of Homeland Security with the Government Coordinating Council. Active in industry security issues for over 25 years and considered an active contributor to nuclear security policy development.

- 10/05/07 Retired from Southern Nuclear Operating Company with 38 years of nuclear security experience.
- 01/08 - 12/09 Performing consulting on nuclear security aspects for several nuclear utility company clients. A member of the NEI New Plant Security Task Force.
- 10/21/09 Formed Nuclear Power Plant Security Consulting, LLC to provide a Limited Liability Corporation for consulting services.
- 10/09 – Present Providing nuclear power plant security consulting services to several clients.



Theodore E. Amundson
1450 Ridgewood Ct.
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Current Position: EP Consulting, LLC

Education

Minnesota Management Institute - University of Minnesota
MS Mechanical Engineering - North Dakota State University
BS Mechanical Engineering (Aeronautical Option) - North Dakota State University

Key Skills and Experience

EP Consulting, LLC 2005 – Present

- **Consultant:** Provide emergency planning, licensing engineer, training program development and project management services to nuclear power industry.

Nuclear Management Company/Xcel Energy Company 1976-2003

Prairie Island Nuclear Generating Plant (PINGP) 1997-2003

- **Business Support Manager:** Responsible for site finance, business and strategic planning, emergency planning, information technology (IT), security, supply chain, administration, and procedure development groups.
- **General Superintendent, Engineering:** Led eleven system and program engineering groups at the Prairie Island Nuclear Generating Plant. Also led instrument and control maintenance group and technical training group.

Northern States Power Company (NSP) - Generation Business Unit 1994-1997

- **Director, Generation Quality Services:** Directed four separate quality assessment and quality program management groups. Assessment groups included audit, surveillance and quality control functions at Prairie Island Nuclear Generating Plant and Monticello Nuclear Generating Plant, and corporate supplier assessment.

Northern States Power Company - Prairie Island Nuclear Generating Plant 1976-1994

- **Manager, Prairie Island Training Center:** Managed 40,000 square foot training facility, supervised five separate training groups with an overall staff of 48 instructors, engineers, supervisors, and administrative staff.
- **Technical Support Training Supervisor:** Responsible for the development and testing of the PINGP full scope simulator.
- **Senior Production Engineer:** Acted as a member of simulator procurement team, including six months at Singer Link factory.
- **Production Engineer:** Acted as system engineer for a variety of plant systems. Assigned as assistant project coordinator for condensate polishing system addition and assigned as project coordinator for containment chiller system addition.

Licenses and Certifications

- Senior Reactor Operators License – PINGP (1981 - 1987)
- Nuclear Certification – PINGP (1987 - 1994)
- Minnesota Quality Award Evaluator – 2003 - 2009
- Minnesota Quality Award Team Leader – 2004 - 2009

Affiliations

- American Society for Quality
- Minnesota Council for Quality

BEFORE THE COMMISSION

September 20, 2011

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