United States Nuclear Regulatory Commission Official Hearing Exhibit

 In the Matter of:
 Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3)

 ASLBP #: 07-858-03-LR-BD01 Docket #: 05000247 | 05000286 Exhibit #: ENT000262-00-BD01 Admitted: 10/15/2012 Admitted: 10/15/2012 Rejected:
 Identified: 10/15/2012 Withdrawn: Stricken:

ENT000262 Submitted: March 29, 2012

Michael J. Slobodien Certified Health Physicist Entergy Nuclear Operations, Inc

Profile

Michael Slobodien is an expert in occupation and public radiological health and safety with 40 years of extensive experience in a wide variety of settings including academia, federal regulatory agency, and nuclear power reactors. His areas of expertise include occupational and public radiation safety, environmental radiation protection, industrial hygiene and radiological emergency planning. He holds a Bachelors Degree in Chemistry, a Masters Degree in Health Physics, and is Certified in the comprehensive practice of health physics by the American Board of Health Physics. An acknowledged expert in radiation safety, he has published noteworthy peer reviewed scientific papers and edited and contributed to several technical resource texts. In 1979 while working for the Nuclear Regulatory Commission, Mr. Slobodien was a first responder to the Three Mile Island nuclear power reactor accident and was subsequently in charge of radiation safety and emergency preparedness for the post accident recovery activities at TMI. Mr. Slobodien was technical advisor to the GPU Nuclear / American Nuclear Insurers legal defense team in its successful efforts to defend against health effects claims related to the TMI accident. Mr. Slobodien has been a technical consultant to the National Institutes of Science and Technology in its development of national standards and testing protocols for radiation dosimetry. From 1997-2003 He organized and provided administrative direction for the US Nuclear Power Reactor Cancer Mortality Study in conjunction with The Columbia University School of Public Health and The International Agency for Research on Cancer (IARC). Mr. Slobodien is presently the Director of Emergency Programs for Entergy Nuclear Operations fleet with responsibility for eleven nuclear sites in the United States.

Experience:

2000-present - Director Emergency Programs, Entergy Nuclear Operations, White Plains, NY, Jackson, MS

Provides overall emergency preparedness programmatic governance and oversight, technical and administrative direction, and performance assessment for core base line emergency planning activities performed to meet NRC, FEMA, state, and local requirements for Entergy Nuclear fleet including Pilgrim Nuclear Power Station, Vermont Yankee, Indian Point Energy Center, James A Fitzpatrick Nuclear Station, Palisades Nuclear Station, Waterford-3 Nuclear Station, River Bend Nuclear Station, Arkansas Nuclear One, Grand Gulf Nuclear Power Station, Cooper Nuclear Station, and

Big Rock Point spent fuel storage facility. Major focus areas include integrated fleet program consistency in emergency plans and operating procedures; emergency response equipment; facilities and infrastructure; technology; performance management; personnel training and qualification; integration with security operations and threat response; cyber security for emergency planning. Served as expert witness / consultant for licensee renewal proceedings. Serves as member on Nuclear Energy Institute Emergency Planning Working Group and Cyber Security Task Force. Represents Entergy Nuclear in coordinating response to and implementation of NRC emergency planning rule making.

1982-2000 - Manager Radiological Health and Safety / Director Radiation and Environmental Controls, GPU Nuclear Corporation, Parsippany, NJ

Provided overall technical and administrative management and direction for radiation safety, health physics, environmental controls, industrial hygiene and emergency planning for four facilities in the GPU Nuclear System (Three Mile Island 1, Three Mile Island 2, Oyster Creek, and the Saxton Nuclear Research Center) Served as technical expert to the National Institute of Science and Technology in development and implementation of the National Voluntary Laboratory Accreditation Program for personnel radiation dosimetry. Initiated and led US industry consortium for study on nuclear power industry radiation worker cancer mortality in collaboration with Columbia University School of Public Health and International Agency for Research on Cancer (IARC). Technical council to legal defense team in TMI health effects litigation.

1981-1982 – Independent Consultant, Terra Corporation, King of Prussia, PA

Provided technical health physics expertise to nuclear power reactor clients for radiation dosimetry, emergency planning, outage radiation protection

1975 – 1981 – Radiation Specialist, US Nuclear Regulatory Commission, Region I, King of Prussia, PA

Performed health and safety inspections in accordance with federal regulations for full spectrum of NRC licensees including hospitals, universities, government laboratories, industrial facilities, fuel fabrication facilities, nuclear power reactors. Investigated occupational radiation exposure events including performance of physical measurements, dose reconstruction, transportation accidents. First responder for NRC to Three Mile Island accident in 1979. Designed and directed the NRC's nation-wide environmental nuclear power reactor environmental radiation monitoring program

1971 – 1975 – Associate Health Physicist, The Pennsylvania State University, State College, PA

Served as technical health physics staff for university with large by-product licensees with \sim 350 authorized research laboratories, one megawatt TRIGA research reactor, and the Milton S. Hershey Medical Center

Education

- Carnegie Mellon University, BS Chemistry
- University of Pittsburgh, Graduate School of Public Health, MS Hygiene (Radiation Health)

Professional Certification

- American Board of Health Physics, Comprehensive Practice 1976 present
- Diplomat, American Academy of Health Physics

Publications / Presentations

- M. J. Slobodien, "Radiation Safety at Nuclear Power Plants", <u>Management and</u> <u>Administration of Radiation Safety Programs</u>, C. E. Roessler, ed, Medical Physics Publishing, Madison, WI, 1998
- M. J. Slobodien, "Holistic Health Risk Management", <u>Radiation Protection at Nuclear</u> <u>Reactors, C. Maletskos, ed., Medical Physics Publishing, Madison, WI 1995</u>
- M. J. Slobodien, "Training", <u>Radiation Protection at Nuclear Reactors</u>, C. Maletskos, ed, Medical Physics Publishing, Madison, WI, 1995
- J.E. Hildebrand and M. J. Slobodien, "Radiation Protection Aspects of the TMI-2 Accident and Clean Up", in *Environmental Consequences of Energy Production*, S. K. Majumdar, F. J. Brenner, and E. W. Miller, eds., 1987, The Pennsylvania Academy of Sciences
- R. Carderelli, M. J. Slobodien, K. L. Mossman, A. Brodsky, J. L. Telford, "The Effect of Respiratory Protection on Worker Efficiency – ALARA Considerations", presented at the 31st Annual Health Physics Society meeting, 1986
- R. D. Schauss and M. J. Slobodien, "The use of computerized 3-Dimensional Solids Modeling and Data Base Management to Support Radiation Mapping and ALARA Planning", presentation at the 19th Annual Health Physics Society Midyear Topical Symposium, 1986
- J. Milakovic, G. F. Frank, and M. J. Slobodien, "a Portable Wide Range Instrument for Beta Radiation Monitoring with Minimum Angular Dependence", presented at the 19th Annual Health Physics Society Midyear Topical Symposium, 1986
- M. J. Slobodien, "Radiation Exposures at Three Mile Island Unit 2 Facts", presentation at American Public Health Association, Washington, D.C. 1985

- G. D. Shriner and M. J. Slobodien, "Calibration of Sodium Iodide Detector for Detection of I-131 in Water", presented at the 29th Annual Health Physics society Meeting, 1984
- R. J. LaSalle, M. J. Slobodien, G. M. Lodde, and J. A. Flanagan, "A Comparison of Nuclear Power Reactor Monitoring Results by Finger Ring and Wrist Badges" presented at the 29th Annual Health Physics Society Meeting, June 1984
- M. J. Slobodien, A.A. Bovino, O. R. Perry, and J. E. Hildebrand, "GPU Nuclear Corporation's Radiation Exposure Management System", Proceedings of the 17th Midyear Topical Symposium of the Health Physics Society, "Computer Applications in Health Physics, 1984
- L. K. Cohen and M. J. Slobodien, "NRC TLD Direct radiation Monitoring Network", Volume 1, NUREG 0837, March 1982
- M. J. Slobodien, Allen Brodsky, C. H. Ke and I. Horm, "Removal of Zinc from Humans by DTPA Chelation Therapy" Health Physics <u>24</u>, 1973.
- M. J. Slobodien and R. W. Granlund, Extruded-Expanded Polystyrene, A Smear Material for Use in Liquid Scintillation Counting, Health Physics <u>27</u>, 1974.
- M. J. Slobodien, "Radiation Hazards in the Biological Laboratory", in <u>Handbook of</u> <u>Biohazard Safety</u>, Academic Press, New York, 1980
- NUREG 0600, Investigation into the March 28, 1979 Three Mile Island Accident, Office of Inspection and Enforcement, US Nuclear Regulatory Commission, contributing author, 1979, Washington, DC
- M. J. Slobodien, ed, Decommissioning and Restoration of Nuclear Facilities, Medical Physics Publishing, New York, 1999
- Public Protection from Nuclear, Chemical, and Biological Terrorism, contributing author, Medical Physics Publishing, New York, 2004
- Radiological Emergency Planning, Harvard School of Public Health, Boston, MA. 2006
- Radiological Emergency Planning, Harvard School of Public Health, Boston, MA. 2007
- Radiological Emergency Planning, Harvard School of Public Health, Boston, MA. 2008
- Radiological Emergency Planning, Harvard School of Public Health, Boston, MA. 2009
- Radiological Emergency Planning, Harvard School of Public Health, Boston, MA. 2010
- Emergency Planning for the 21st Century, HSPS, Boston, MA, August 2011

<u>Honors</u>

• Health Physics Society, Elda Anderson Award for Excellence in Research, Teaching, and Practice of Health Physics, 1985