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THOMAS N. PHAM

Office address: U.S. Nuclear Regulatory Commission
6003 Executive Boulevard Building – Mail stop: EBB2-C40M
Washington, DC 20555

Office phone: 301-492-3125

EDUCATION

University of Pittsburgh, Pittsburgh, Pennsylvania April 1985
Master of Science degree in Chemistry

University of South Carolina, Columbia, South Carolina April 1989
Master of Business Administration program - 12 credits

University of Dalat, Dalat, Vietnam July 1974
Bachelor of Science degree in Chemistry

WORK EXPERIENCE

U.S. Nuclear Regulatory Commission, August 1990 - Present

Headquarters, Rockville, Maryland 20852
Senior Safeguards Technical Analyst
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards

Duties and Accomplishments:

Currently, serve as Senior Safeguards Technical Analyst and Material Control and Accounting (MC&A) lead review staff in the MC&A Branch, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards (NMSS). From 2002 to 2006, served as MC&A Team Leader in the Fuel Cycle Safeguards and Security Branch, Division of Security Policy, Office of Nuclear Security and Incident Response (NSIR). Since 1996 until present, serve as principal Safeguards Licensing Reviewer in both NMSS and NSIR Offices.

Act as technical project manager for MC&A rulemaking activities. Participate in a lead role in the development of licensing policies and procedures to implement safeguards regulations. Act as principal project manager for safeguards license amendments for MC&A, specifying the conditions to be incorporated in licenses with respect to safeguarding special nuclear materials at fuel cycle facilities and power reactors. Perform the review, evaluation, and determination of the adequacy of applicants' and licensees' safeguards programs for special nuclear materials,

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including material accountability, measurement and measurement control systems, inventory practices, internal material control systems, information flow and data evaluation systems, and management control and assessment programs. Conduct in-depth safeguards studies to provide technical bases for the evaluation of new processes and operations, and for the determination of the effectiveness of existing MC&A regulations and license conditions. Make authoritative recommendations relative to difficult and complex concerns for approval and disapproval, and prepare additional conditions or requirements to be incorporated in licenses and the approval of the facility's MC&A Plans and modifications thereto.

Served as Senior MC&A Inspector during 1990 - 1996 in the Inspection Section, Operations and Domestic Safeguards Branch, Division of Fuel Cycle Safety and Safeguards, NMSS. Conducted MC&A inspections at all NRC-licensed fuel cycle facilities. Served as Lead Inspector and primary safeguards spokesperson for assigned facilities and special safeguards tasks. Coordinated with licensing reviewers pertaining to licensing actions. Participated in the development of policies and regulations relative to the safeguarding of nuclear materials.

Current NRC Representative of the U.S. Delegation for the International Atomic Energy Agency's MC&A consultancy on guidance on material control and accountancy for nuclear security at facilities.

Current Task Lead for Part 74 MC&A rulemaking (SECY-08-0059) and the Yucca Mountain Geologic Repository Operations Area MC&A rulemaking (SECY-07-0126). Member of the reprocessing/recycling rulemaking Working Group (SECY-09-0082).

Current Technical Task Lead for the revision and development of Regulatory Guides, Series 5 Materials, MC&A applications.

Project Manager of the NRC's comprehensive MC&A Program Review, including proposed changes to regulations and inspection programs. This included managing Oak Ridge National Laboratory contractor efforts to undertake an independent review of NRC's MC&A programs and provide recommendations, August 2004 - October 2005.

Task Lead for the MC&A review of new fuel cycle facilities and enrichment applications: Duke Cogema & Stone Webster Mixed Oxide (MOX) Fuel Fabrication Facility Construction Authorization Request, 2001 - 2003; Louisiana Energy Services National Enrichment Facility, 2004; USEC Inc. Centrifuge Pilot Plant, 2004; USEC Inc. American Centrifuge Plant, 2004 - 2005, MOX Services Fuel Fabrication Facility Operations License, 2005 - present, AREVA Enrichment Services, Eagle Rock Enrichment Facility, 2008 - present, and General Electric - Hitachi, Global Laser Enrichment Facility, 2009 - present.

Task Lead of the safeguards rulemaking for Category II Fuel Cycle Facilities: MC&A Regulations for Special Nuclear Material of Moderate Strategic Significance - Subpart D of 10 CFR Part 74, December 2002 - September 2000.

Team Leader of the DOE External Regulation Pilot Program at REDC, Oak Ridge National

Laboratory, April 1998.

Team Leader of the MC&A review for the certification of Paducah & Portsmouth Gaseous Diffusion Plants, 1995 - 1996.

Team Leader for Special Safeguards Inspections (safeguards reported events) at AREVA (formerly Framatome-Cogema) Lynchburg, VA, November 1996; Westinghouse Commercial Nuclear Fuel Division, Columbia, SC, May 1997; and Nuclear Fuel Services, Erwin, TN, August 2000.

Westinghouse Commercial Nuclear Fuel Division, May 1985- July 1990

Columbia Fuel Manufacturing Plant, Columbia, South Carolina 29250

Supervisor Senior Chemist, Analytical Services Laboratory

Duties and Accomplishments:

Served as Supervisor Senior Chemist in the Analytical Services Laboratory, Product Assurance Department. Developed analytical analysis procedures, measurement techniques, and instrument modifications in support to the facility's full range of nuclear material measurements. Provided technical direction and training to laboratory technicians and other professionals in analysis methods, instrumentation, and technical problems.

Modernized mass spectrometry isotopic analyses and wet chemical element analyses, including quality improvement and cost savings of more than \$200,000 during employment (1985 -1990). Designed computer applications for analysis calculations, database management, statistical process control, and measurement controls.

Attended Westinghouse management development program, and completed 12 credits of the MBA degree program at the University of South Carolina.

Westinghouse Research & Development (R&D) Center, September 1979 - February 1985

Pittsburgh, Pennsylvania 15235

Research Technician, Chemical Sciences Division

Duties and Accomplishments:

Served as Research Technician in the Insulation Section, Polymer Science Department, Chemical Sciences Division. Prepared polymeric high solids and UV-curable resins. Assisted in formulating organic resins for the application of electrical insulating varnishes and protective coatings. Conducted properties testing on insulating materials and supervised the operation of UV and thermal coating tower instruments.

Published two joint U.S. patents in high solids and UV-curable polymeric resins used for wire insulation.

Earned a Master's degree in Chemistry through the university evening program.

OTHER QUALIFICATIONS

NRC High Quality Increase Awards in 1992 and 1995
NRC Performance Awards in 2000, 2003, 2005, 2006, 2009, and 2010.
NRC Special Act Awards in 1997, 1999, 2005, and 2009
NRC Team Special Act Awards in 2009 (3 Awards)
NRC NMSS Employee of the Month, August 2010

Certified NRC MC&A Inspector in 1991
Certified NRC MC&A Licensing Reviewer in 1996

Senior Member of the Institute of Nuclear Materials Management (INMM), 1990 – present

Ballot voting member of ANSI N-15 Standard Committee on Methods of Nuclear Material Control, 2008 – present

INMM 5.1 Committee on Analytical Laboratory Measurement Control, 1990 – present

Presented technical papers in 1994, 1995, 1997, 1998, 2001, 2003, 2009, and 2010 INMM Annual Meetings

Past member of the American Chemical Society and Mass Spectrometry Society