
NICHOLAS M. PANZARINO, CHP*Senior Health Physicist***Dade Moeller & Associates, Inc.****One Acton Place, Suite 201****Acton, Massachusetts 01720****(978) 929-9133 x112- Fax 929-9134**

Specializing in Occupational and Environmental Health Sciences

EDUCATION/QUALIFICATIONS

M.B.A., Business Administration, Babson College, 1981

M.S., Environmental Health, Harvard University School of Public Health, 1974

B.S., Nuclear Engineering, New York University School of Engineering and Science, 1972

Certificate, Environmental Health and Safety, Quinsigamond Community College, 1997

Comprehensive Certification, American Board of Health Physics, June 1982; recertified in 1986, 1990, 1994, 1998, 2002 and 2006

PRESENT POSITION

Senior Health Physicist, Dade Moeller & Associates, Inc.

PROFESSIONAL SUMMARY

Mr. Panzarino has more than 30 years of experience in the performance and management of radiological, safety, and environmental protection programs. He has worked in radiological protection programs at Harvard University, the University's affiliated teaching hospitals, nuclear power reactors, and an environmental radiological laboratory. As a U.S. Atomic Energy Commission (AEC)/U.S. Nuclear Regulatory Commission (NRC) inspector, Mr. Panzarino audited byproduct material and nuclear power reactor Radiation Protection Programs. His inspections encompassed in-plant area radiation monitoring systems, plant effluent monitoring and sampling systems, and radiological waste and effluent treatment systems.

Mr. Panzarino has developed procedures, manuals, and audits for Radiological Protection Programs, air sampling, respiratory protection, bioassay, and radioactive material receipt and shipment. He has developed radiological data for ingestion pathway scenarios and provided training to state and plant personnel on ingestion pathway planning. He was responsible for radiological specifications, testing, and calibration of the digital Radiation Monitoring System for a nuclear power reactor.

From 2002 to 2004, Mr. Panzarino worked for a consortium of utility clients that was submitting an NRC license application for a uranium enrichment plant in New Mexico. He wrote the facility Radiation Protection Program for the Safety Analysis Report. He contributed to chapters of the Environmental Report that included the facility Environmental Monitoring Program. He responded to NRC requests for additional information and provided expert testimony.

EXPERIENCE AND ACCOMPLISHMENTS2005 – Present *Dade Moeller & Associates, Inc.*

Mr. Panzarino is a member of the Oak Ridge Associated Universities Team on the National Institute for Occupational Safety and Health Dose Reconstruction Project.

1988 – 2005 *Environmental Laboratory*

Yankee Atomic Electric Company built the Environmental Laboratory in Westborough, Massachusetts, and operated it until 1997, when Duke Engineering and Services purchased it. In 2002, the laboratory was acquired by the present owner, Framatome ANP. Mr. Panzarino held the following positions:

- Supervisor of the Dosimetry and Nuclear Instrumentation Groups – The Dosimetry Group provided National Voluntary Laboratory Accredited Program (NVLAP)-accredited whole-body and extremity dosimeter processing services to NRC licensees as well as radiological environmental monitoring dosimeters. The Nuclear Instrumentation Group performed analyses of environmental, bioassay, and Part 50/61 samples.

Mr. Panzarino managed group operations, including maintenance of National Institute of Standards and Technology accreditation and traceability, personnel training, and budgeting. He oversaw technical operations, quality assurance, and quality control and implemented the use of statistical process control principles. He prepared employee performance appraisals, provided business development input, and prepared proposals to major nuclear power reactor operating companies. In addition, Mr. Panzarino served as a member of the Laboratory's Radiation Safety, Laboratory Safety, and Quality Assurance Committees.

After his appointment as manager of the Dosimetry Group, Mr. Panzarino investigated and successfully removed the cause of the high bias on the new (at that time) Panasonic thermoluminescent dosimeter system. He was responsible for the development of dose algorithm revisions to improve performance on NVLAP proficiency tests.

- In addition, Mr. Panzarino managed the work of the chief chemist and a group of bench chemists who provided radioanalytical sample processing services to nuclear power plants (radiological environmental, bioassay, and Part 50/61) and sites that were undergoing remediation.

1975 – 1988 *Yankee Atomic Electric Company*

As a Senior Titled Engineer in the Analytical Services Group at the Environmental Laboratory, Mr. Panzarino provided technical support for radiation protection measurement programs at four nuclear power stations. He was responsible for evaluation and optimization of instrumentation used for personnel monitoring and for dose reconstruction after exposure incidents. He provided guidance on regulatory issues to plant radiation protection management.

Previously, as Senior Titled Engineer in the Radiation Protection Group of the Environmental Engineering Department, Mr. Panzarino provided technical and licensing support for nuclear power reactor Radiation Protection Programs during construction, operation, and refueling activities. He oversaw the performance of particulate sample line-loss studies and prepared the specifications for a nuclear power plant digital Radiation Monitoring System. He performed regulatory design basis reviews and calibration studies. He prepared the radiation protection sections of safety analysis reports for reactor licensing. Mr. Panzarino assisted the Yankee plants in their responses to changes in plant radiation protection programs required by the NRC after the Three Mile Island accident.

1977 *Yankee Nuclear Power Station*

As Health Physics Supervisor, Mr. Panzarino supervised the operation of the Health Physics Program during routine operations and a major refueling outage.

1974 – 1975 *U. S. Nuclear Regulatory Commission*

Mr. Panzarino was a Radiation Specialist in NRC Region I. He performed inspections of the health physics programs at boiling-water and pressurized-water reactors, including their associated radiological waste and effluent monitoring systems. He evaluated Radiation Protection Program effectiveness and made recommendations to NRC management on enforcement actions.

1973 *Harvard University*

For the Division of Environmental Health and Safety, Mr. Panzarino performed surveys in an AEC-sponsored study of radiation levels in passenger compartments of jets carrying radiopharmaceuticals. He also performed monthly surveys and evaluations of radiological conditions in 100 laboratories in the University and its affiliated teaching hospitals. He reported to the Harvard University Radiation Safety Officer.

FUNDED AND SPECIAL RESEARCH PROJECTS

In 1979, Mr. Panzarino worked with the staff of the U.S. Army Natick Research and Development Command and its cesium irradiator to design and conduct an experiment to measure the amount of chloride released from an epoxy after exposure to high doses of gamma radiation.

AWARDS AND PROFESSIONAL AFFILIATIONS

In 1971, Mr. Panzarino received a National Science Foundation Grant to study the production and release of argon-41 from the proposed New York University TRIGA reactor.

PUBLICATIONS

“Computerized Radiation Data Acquisition and Management System at Seabrook Station,” coauthors G. Zdzieborski and R. Neustadter, *Power Engineering*

Yankee Atomic Electric Company reports