



M. H. Chew & Associates, Inc.
Environmental, Safety and Health
Engineering, Radiation Protection and Nuclear Safety

Radiation Protection & Health Physics

The needs and requirements of modern nuclear operations demand sophisticated capabilities in the areas of radiological protection and health physics, industrial hygiene and toxicology, occupational safety, nuclear criticality, and dose & effects assessment and mitigation. M.H. Chew & Associates, Inc. (CAI) is a professional consulting firm specializing in these and other scientific and technical services. Since our founding in 1988, CAI has grown from a small, localized firm to a national organization that can support a large number of concurrent projects using highly qualified personnel with specialized capabilities and credentials. Our staff includes two (2) former presidents of the Health Physics Society, Certified Health Physicists, Certified Industrial Hygienists, Nuclear and other disciplined engineers. Many of our HPs were pioneer operational HPs who worked in the Atomic Energy Commission (AEC) (predecessor to the DOE weapon complex facilities), and the Department of Energy (DOE) during the era of nuclear weapon testing and development. Most have direct experience with special nuclear materials. Many of our staff maintain active DOE "Q" clearances.

We have established a reputation for credibility and integrity through our work in environmental, safety and health (ESH). Some of our unique capabilities in these areas include: Long-term professional experience (starting in the early 1950s) at the working levels in all areas of the nuclear industry;

Operational field experience, including expertise with instrumentation and measurement technology;

- Widespread knowledge in all aspects of nuclear safety including, the development and application of Monte Carlo radiation transport computer codes (ATTILA, MCNP, MORSE, KENO) for nuclear safety analysis, radiation shielding and criticality analyses in source term characterization of commercial spent nuclear fuel and high-level waste; and in worker dose assessment and consequence analysis;
- On-site assessments of radiation protection programs and practices for Nuclear Regulatory Commission materials licensees, U.S. Department of Defense and DOE facilities and operations;
- Decades of dosimetry-related health physics experience, including work in external & internal dosimetry, laboratory assessment of radio-bioassay programs (DOELAP), environmental radioactivity and dose reconstruction;
- Extensive experience in incident/accident training, health physics, radiation sciences, radiation protection, emergency preparedness planning and response, detailed hazards analyses and public relations, and addressing public and political concerns on radiation safety and related impacts; and
- Experience in key aspects of the packaging and shipment of radioactive materials. Including, transportation regulations contained in 49 CFR parts 100 to 177 as well as NRC and DOE requirements, packaging, package testing, special and fissile materials, placards and labeling, modes of transportation and storage; and
- Ongoing support of the Radiation Emergency Assistance Center and Training Site (REAC/TS) in responding to radiological incidents world-wide, performing dose assessments for accident victims, and lecturing in courses on the medical management of radiological incidents.

Technical Expertise

<ul style="list-style-type: none">• Radiation exposure, dose & effects assessments• Historical dose evaluation and reconstruction• Radiological release, transport and pathways analysis• Radiation emergency response• Radiological environmental assessments and human health effects analysis	<ul style="list-style-type: none">• Ecological effects of low dose radiation exposure• Naturally occurring radioactive material (NORM)• Technically enhanced NORM (TENORM)• Medical radiological exposure• Neutron, alpha and gamma exposure analysis• Radiation safety and criticality analysis
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