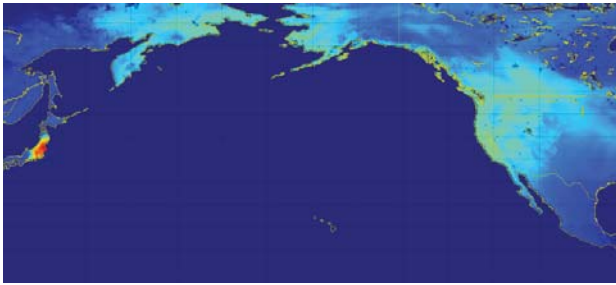


Understanding and Calculating Risk from Radionuclides Discharged to the Environment



This 5-day short course was developed for Health Physicists, Radiological Engineers, Environmental Scientists, RSO's and all other personnel responsible for compliance with environmental standards, dose assessment research, dose reconstruction and risk assessment. This course will concentrate on the latest methods for ra-

diation measurement, data analysis, risk assessment, and compliance with regulatory standards and NCRP/ICRP guidelines. The course consists of lectures, problem solving and group discussions over a 5-day period. Currently available software for dose projection and calculation will also be evaluated.

Course Topics

Introduction

- Sources of radiation and radionuclides in the environment
- Biological basis for limiting radiation exposure
- Radiation protection standards
- Relationship of dose to risk
- Areas of current technical controversy in risk assessment

Environmental Transport of Radionuclides: Basic Mechanisms

- Atmospheric pathways (structure of atmosphere, deposition mechanisms, resuspension)
- Terrestrial pathways (food chain, ground water, surface water)
- Ecosystem considerations, nutrient and mineral cycling

Tools for Modeling Contaminant Transport

- Single media models
- Food chain models
- Multi-media models
- Stochastic and deterministic approaches to modeling
- Strengths and limitations of mathematical modeling
- Linking media concentrations to risk

Environmental Sampling Issues

- Defining extent of contamination: equipment and approaches
- Rapid assessment techniques
- Tools for verification of cleanup

Issues in Cleanup: How Clean is Clean?

- Regulatory considerations
- Recent guidance (NCRP/ICRP/other)

Risk Assessment

- Issues in human health risk assessment
- Issues in radioecological risk assessment
- Risk and the public: communication and policy

[Each session will have a student discussion/problem solving/hands-on participatory component.]

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THE AMERICAN ACADEMY OF HEALTH PHYSICS (AAHP) HAS AWARDED THIS COURSE, CONTINUING EDUCATION CREDITS.

ASSIGNED ID NUMBER:

FOR FURTHER INFORMATION OR ASSISTANCE, PLEASE CONTACT:

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