

3-WEEK DDSC
DECONTAMINATION AND DECOMMISSIONING COURSE

Sponsored by

THE D&D SCIENCE CONSORTIUM (DDSC)

Week 1

<u>DATE</u>	<u>TIME</u>	<u>TOPIC</u>
Monday,	8:00 AM	Welcome and Course Overview (Preliminary Discussions, DDSC Mission, DDSC Web Site)
	9:00 AM	Overview of Decommissioning Projects in the U.S. (DOE, NRC, EPA, USACE, States)
	10:00 PM	D&D Regulations and Guidance (Release Criteria)
	2:00 PM	Risk Assessments (Center for Risk Excellence) (Establishing cleanup criteria, stakeholder involvement)
Tuesday,	8:00 AM	D&D Project Management (D&D alternatives, project stages, cost estimating, QA, procedures, contractors)
	1:00 AM	Historical Site Assessments
	1:30 PM	Overview of D&D Surveys
	2:30 PM	Site Characterization
Wednesday,	8:00 AM	Remediation and Dismantlement Techniques (Buildings and Land Areas)
	1:00 PM	Emerging Characterization and Remediation Technologies
Thursday,	8:00 AM	D&D Integrated Safety Management (ISM)
	9:00 AM	HP Controls During D&D/Environmental Monitoring (RWPs, surveys for external radiation, surface and airborne contamination)
	11:00 AM	ALARA Evaluations
	1:00 PM	Waste Management Issues (Minimization, characterization, shipping manifests, disposal options, waste projections)
Friday,	8:00 AM	Data Quality Objectives (DQO) Process
	1 PM	Case Study: Preparation of a Decommissioning Plan for Soil Remediation Project

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Week 2

Monday,

- 8:00 AM Importance of Dose Modeling to D&D Projects
- 9:00 AM Overview of RESRAD
- 10:00 AM RESRAD Input Demonstration
- 11:00 AM RESRAD Output Demonstration
- 1:00 PM RESRAD Methodology (Pathway Analyses)
- 2:00 PM RESRAD Data Requirements (Site-Specific Parameters)
(Tie-in with site characterization, how to get these site-specific data)

Tuesday,

- 8:00 AM RESRAD Examples: Problem Solving
- 9:30 AM RESRAD-BUILD Overview
- 10:00 AM RESRAD-BUILD Input and Output Demonstration
- 11:00 AM RESRAD-BUILD Methodology (Pathway Analyses)
- 1:00 PM RESRAD-BUILD Data Requirements (Site-Specific Parameters)
- 1:30 PM RESRAD-BUILD Examples: Problem Solving
- 2:30 PM DCGL and Area Factor Development (with examples)
(For both surface activity and soil concentration DCGLs)

Wednesday,

- 8:00 AM Radiological Survey Instrumentation and Procedures
(Selection and use of common survey instruments, calibration)
- 1:00 PM Radiological Survey Instrumentation and Procedures (cont.)
(Scanning and surface activity assessments, includes hands-on exercises)

Thursday,

- 8:00 AM Radiological Survey Instrumentation and Procedures (cont.)
(Soil sampling and media sampling, includes hands-on exercises)
- 1:00 PM Use of Advanced Survey Instrumentation
(*In situ* gamma spectrometry, Shonka SCM, etc.)

Friday,

- 8:00 AM Case Study: Determining DCGLs using RESRAD
and Instrument Selection for D&D Project
- 1 PM Tour of ETP Decommissioning Projects

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Week 3

Monday,

- 8:00 AM MARSSIM Overview (Final Status Surveys)
- 10:00 AM Selection and Application of DCGLs
- 11:00 AM Classification and Survey Unit Identification
- 1:00 PM Detection Sensitivity of Survey Instrumentation
- 2:30 PM Statistical Design of Final Status Surveys (WRS and Sign Tests)

Tuesday,

- 8:00 AM Data Quality Assessment (Final Status Survey Data Reduction)
- 1:00 PM Advanced Statistical Applications for MARSSIM
(Double sampling, Scenario B)

Wednesday

- 8:00 AM COMPASS (MARSSIM Software) Overview
- 8:30 AM MARSSIM Survey Design Examples using COMPASS
(Emphasis on designs with multiple radionuclides)
- 1:00 PM Integrated Final Status Survey (conventional instrumentation, advanced instrumentation in MARSSIM)
- 2:30 PM Decommissioning and Final Status Survey Reports

Thursday,

- 8:00 AM Clearance of Solid Materials—Current Issues
- 10:00 AM Design of Clearance Surveys (draft NUREG-1761)
- 1:00 PM Independent Verification: Application to MARSSIM Surveys
(Decommissioning inspections of final status surveys, NRC SRP, Consolidated D&D Guidance)

Friday,

- 8:00 AM **Comprehensive Exam:** Design of Decommissioning Plan for
Example D&D Project (with final status survey design elements)
- 10:30 AM Q&A on D&D-Related Topics
- 11:30 AM DDSC Web Site - Continuing D&D Support (Ask an Expert)
- 12:00 Noon DDSC Course Completion Certificates/Course Adjournment