

**IAEA / Argonne Training Course on the Theory and Practical Application of RESRAD-BIOTA and Other Codes in the RESRAD Family
for the Determination of Dose, Risk and Authorized Limits at Radioactively Contaminated Sites
June 22 – July 2, 2015**

Monday June 22	Tuesday June 23	Wednesday June 24	Thursday June 25	Friday June 26
9:00 – 10:00 Welcome, Introduction, and course overview (M. Phaneuf and C. Yu)	8:30 – 10:15 Principles of Ecological Risk Assessment (J.-J. Cheng)	8:30 – 10:15 Case Study 1 — Hanford 300 Area (J.-J. Cheng)	8:30 – 10:15 RESRAD (onsite) Overview (C. Yu)	8:30 – 10:15 Sensitivity Analysis (D. LePoire)
10:00 – 10:30 Safety Lecture		Hands-on Exercise	Demo of RESRAD (onsite) input and output (D. LePoire)	Hands-on Exercise
BREAK	BREAK	BREAK	BREAK	BREAK
10:45 – 11:45 Participants' presentations (All participants)	10:30 – 11:45 Graded Approach for Biota Dose Assessment (S. Kamboj) Concentration Ratios and Transfer Factors (S. Kamboj) Hands-on Exercise	10:30 – 11:45 Data Import / Export Feature (D. LePoire) Graphics and Reports (D. LePoire) Hands-on Exercise	10:30 – 11:45 RESRAD Pathway Analysis Methodology (D. LePoire)	10:30 – 11:45 Probabilistic Analysis (C. Yu and D. LePoire) Demo probabilistic code (D. LePoire)
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1:00 – 2:30 Participants' Presentations, cont.	1:00 – 3:00 Derivation of Dose Coefficients for Animals and Plants (S. Kamboj) ICRP RAPs and DCs (S. Kamboj) IAEA Model Comparison Studies (S. Kamboj) Hands-on Exercise	1:00 – 3:00 Case Study 2 – China Lake (J.-J. Cheng) Food Chain Model (J.-J. Cheng) Hands-on Exercise	1:00 – 2:45 RESRAD Methodology, cont. (D. LePoire) Hands-on Exercise	1:00 – 3:00 Dose Coefficients (C. Yu) DCF Editor (D. LePoire) Problem Solving – Using Elza Gate Site as an Example (D. LePoire and W.A. Williams) Verification and Validation of RESRAD Codes (C. Yu) Hands-on Exercise
2:30 – 3:00 Introduction to Dose Assessment and RESRAD Family of Codes (C. Yu)				
BREAK	BREAK	BREAK	BREAK	BREAK
3:15 – 5:00 RESRAD-BIOTA Overview (C. Yu) Demo of RESRAD-BIOTA (D. LePoire) Hands-on Exercise	3:15 – 5:00 Sensitivity Analysis (D. LePoire) Organism wizard (D. LePoire) Hands-on Exercise	3:15 – 5:00 Probabilistic Analysis (D. LePoire) Fukushima Wildlife Dose Reconstruction and Hands-on Exercise (C. Yu) Review of RESRAD-BIOTA	3:00 – 5:00 Distribution Coefficients (W. A. Williams) Data Requirement (D. LePoire) Hands-on Exercise	3:15 – 5:00 Tour of Advanced Photon Source and Nuclear Engineering Exhibit (D. LePoire)
	6:30 Welcome Dinner at Longhorn Steak House			

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Monday June 29	Tuesday June 30	Wednesday July 1	Thursday July 2	Friday July 3
8:30 – 10:30 Overview of RESRAD-OFFSITE code (C. Yu) Differences of RESRAD (onsite) and RESRAD-OFFSITE (C. Yu) RESRAD-OFFSITE Demo (D. LePoire)	8:30 – 10:30 Groundwater Model Overview and Hands on work through exercises to illustrate the theory (E. Gnanapragasam)	8:30 – 10:30 Overview of RESRAD-BUILD (C. Yu) RESRAD-BUILD Input and Output Demo (D. LePoire) Hands-on Exercise	8:30 – 10:30 Operational Guidelines Methodology (S. Kamboj) Hands-on Exercise Group A, Access Control (S. Kamboj) Hands-on Exercise	I N D E P E N D E N C E D A Y O B S E R V E D
BREAK	BREAK	BREAK	BREAK	
10:45 – 11:45 RESRAD-OFFSITE Demo, cont'd (D. LePoire) Hands-on Exercise	10:45 – 11:45 Offsite Accumulation Model And Exposure Assessment (E. Gnanapragasam) Hands-on Exercise	10:45 – 11:45 RESRAD-BUILD Methodology (D. LePoire) Hands-on Exercise	10:45 – 11:45 Group B, Early Phase Protective Action (J.-J. Cheng) Group C, Relocation (S. Kamboj) Hands-on Exercise	
LUNCH	LUNCH	LUNCH	LUNCH	
1:00 – 3:00 RESRAD-OFFSITE Release Model, Hands-on work through to illustrate the theory and features (E. Gnanapragasam) Hands-on Exercise	1:00 – 3:00 Deterministic Offsite Scenario Hands-on work through Prolem 6 (D. LePoire) Hands-on work through Exercise	1:00 – 3:00 Advanced Features, Data Requirements, and Problem Solving Techniques (D. LePoire) Hands-on Exercise Surface Contamination Limits (S. Kamboj) Review of RESRAD-BUILD	1:00 – 3:00 Group D, Temporary Access for Essential Activities (J.-J. Cheng) Group E, Transportation and Access Routes (S. Kamboj) Group F, Release of Property (C. Yu) Additional Scenarios: Street Flushing, Vehicle Cleaning, and Vehicle Release (S. Kamboj) Group G, Food Consumption (J.-J. Cheng) Hands-on Exercise	
BREAK	BREAK	BREAK	BREAK	
3:15 – 3:45 RESRAD-OFFSITE Release Model, Hands-on work through, Cont'd. (E. Gnanapragasam)	3:15 – 4:00 Probabilistic Offsite Scenario Hands-on work through Problem 7 (E. Gnanapragasam)	3:15 – 5:00 Overview of Protective Action Guides and Operational Guidelines for Response to Radiological Incidence (C. Yu)	3:15 – 4:00 Group Discussion Adjourn	
3:45 – 5:00 Air Dispersion Model (B. Biver) Hands-on Exercise	4:00 – 5:00 Additional Analysis Capabilities and the New Source Term Model (J.-J. Cheng) Review of RESRAD-OFFSITE (C. Yu)	RESRAD-RDD Overview (C. Yu) Demo of RESRAD-RDD (D. LePoire)		