

**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
October 6 –17. 2014**

Monday October 6	Tuesday October 7	Wednesday October 8	Thursday October 9	Friday October 10
9:00 – 10:00 Welcome and Introductions including Safety Lecture	8:30 – 10:15 Principles of Ecological Risk Assessment (I. Hlohowskyj)	8:30 – 10:15 Case Study 1 — Hanford 300 Area (J.-J. Cheng)	8:30 – 10:30 RESRAD (onsite) Overview (C. Yu)	8:30 – 10:15 Sensitivity Analysis (D. LePoire)
10:00 – 10:45 Course Overview & Objectives (C. Yu and M. Phaneuf)				
BREAK	BREAK	BREAK	BREAK	BREAK
11:00 – 11:45 Participants' presentations (All participants)	10:30 – 11:45 Graded Approach for Biota Dose Assessment (S. Kamboj)	10:30 – 11:45 Data Import/Export Feature (D. LePoire)	10:45 – 11:45 RESRAD Pathway Analysis Methodology (D. LePoire)	10:30 – 11:45 Probabilistic Analysis (C. Yu and D. LePoire)
	Concentration Ratios and Transfer Factors (S. Kamboj)			
LUNCH	Hands-on Exercise	Hands-on Exercise	LUNCH	LUNCH
1:00 – 2:30 Participants' Presentations, cont.	1:00 – 3:00 Derivation of Dose Coefficients for Animals and Plants (S. Kamboj)	1:00 – 3:00 Case Study 2 – China Lake (J.-J. Cheng and I. Hlohowskyj)	1:00 – 2:45 RESRAD Methodology, cont. (D. LePoire)	1:00 – 3:00 Dose Coefficients (C. Yu)
2:30 – 3:00 Introduction to Dose Assessment and RESRAD Family of Codes (C. Yu)	ICRP RAPs and DCs (S. Kamboj)			
	IAEA Model Comparison Studies (S. Kamboj)	Hands-on Exercise		Problem Solving – Using Elza Gate Site as an Example (D. LePoire and W.A. Williams)
	Hands-on Exercise			Verification and Validation of RESRAD Codes (C. Yu)
BREAK	BREAK	BREAK	BREAK	Hands-on Exercise
3:15 – 5:00 RESRAD-BIOTA Overview (C. Yu)	3:15 – 5:00 Sensitivity Analysis (D. LePoire)	3:15 – 5:00 Probabilistic Analysis (D. LePoire)	3:00 – 5:00 Distribution Coefficients (W. A. Williams)	3:15 – 5:00 Tour of Advanced Photon Source and Nuclear Engineering Exhibit (D. LePoire)
	Organism wizard (D. LePoire)			
Demo of RESRAD-BIOTA (D. LePoire)	Hands-on Exercise	Review of RESRAD-BIOTA	Hands-on Exercise	
Hands-on Exercise				

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Monday October 13	Tuesday October 14	Wednesday October 15	Thursday October 16	Friday October 17
<p>8:30 – 10:30 Overview of RESRAD-OFFSITE code (C. Yu)</p> <p>Differences of RESRAD (onsite) and RESRAD-OFFSITE (C. Yu)</p> <p>RESRAD-OFFSITE Demo (D. LePoire)</p> <p>Hands-on Exercise</p>	<p>8:30 – 10:30 Groundwater Model (E. Gnanapragasam)</p> <p>Hands-on Exercise</p>	<p>8:30 – 10:30 Overview of RESRAD-BUILD (C. Yu)</p> <p>RESRAD-BUILD Input and Output Demo (D. LePoire)</p> <p>Hands-on Exercise</p>	<p>8:30 – 10:30 Regulatory Framework for Radiation Protection of the Environment—DOE's Perspective (C. Corredor)</p> <p>Overview of Protective Action Guides and Operational Guidelines for Response to Radiological Incidence (C. Corredor)</p> <p>RESRAD-RDD Overview (C. Yu)</p>	<p>8:30 – 10:30 Group D, Temporary Access for Essential Activities (J.-J. Cheng)</p> <p>Group E, Transportation and Access Routes (S. Kamboj)</p> <p>Hands-on Exercise</p>
BREAK	BREAK	BREAK	BREAK	BREAK
<p>10:45 – 11:45 RESRAD-OFFSITE Release Model (E. Gnanapragasam)</p> <p>Hands-on Exercise</p>	<p>10:45 – 11:45 Offsite Accumulation Model (E. Gnanapragasam)</p> <p>Hands-on Exercise</p>	<p>10:45 – 11:45 RESRAD-BUILD Methodology (D. LePoire)</p> <p>Hands-on Exercise</p>	<p>10:45 – 11:45 Demo of RESRAD-RDD (D. LePoire)</p> <p>Hands-on Exercise</p>	<p>10:30 – 11:45 Group F, Release of Property from Radiologically Controlled Areas (C. Yu)</p> <p>Additional Scenarios: Street Flushing, Vehicle Cleaning, and Vehicle Release (S. Kamboj)</p> <p>Hands-on Exercise</p>
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
<p>1:00 – 3:00 RESRAD-OFFSITE Release Model, cont. (E. Gnanapragasam)</p> <p>Hands-on Exercise</p>	<p>1:00 – 3:00 Exposure Assessment (D. LePoire)</p> <p>Offsite Scenario (D. LePoire)</p> <p>Hands-on Exercise</p>	<p>1:00 – 3:00 Advanced Features (D. LePoire)</p> <p>Data Requirements (D. LePoire)</p> <p>Hands-on Exercise</p>	<p>1:00 – 3:00 Operational Guidelines Methodology (S. Kamboj)</p> <p>Group A, Access Control (S. Kamboj)</p> <p>Hands-on Exercise</p>	<p>1:00 – 2:30 Group G, Food Consumption (J.-J. Cheng)</p> <p>Hands-on Exercise</p> <p>Review of RESRAD-RDD and future plan for RESRAD-RDD&IND (C. Yu and C. Corredor)</p>
BREAK	BREAK	BREAK	BREAK	BREAK
<p>3:15 – 5:00 Air Dispersion Model (B. Biwer)</p> <p>Met File Preprocessor (B. Biwer)</p> <p>Hands-on Exercise</p>	<p>3:15 – 5:00 Probabilistic Analysis (E. Gnanapragasam)</p> <p>Additional Analysis Capabilities and the New Source Term Model (J.-J. Cheng)</p> <p>Review of RESRAD-OFFSITE (C. Yu)</p>	<p>3:15 – 5:00 Problem Solving Techniques (D. LePoire)</p> <p>Surface Contamination Limits (S. Kamboj)</p> <p>Review of RESRAD-BUILD (C. Yu)</p>	<p>3:15 – 5:00 Group B, Early Phase Protective Action (J.-J. Cheng)</p> <p>Group C, Relocation (S. Kamboj)</p> <p>Hands-on Exercise</p>	<p>2:45 – 3:30 Group Discussion</p> <p>Adjourn</p>