

**Regional Training Course on
Safety Assessment to Assist Decision Making
ANL, Argonne, IL, USA (October 17-28, 2011)
Tentative Calendar and Lectures- Week 1**

Time	Monday		Tuesday		Wednesday		Thursday		Friday	
	17 October 2011		18 October 2011		19 October 2011		20 October 2011		21 October 2011	
	Lecture Topic	Lecturer	Lecture Topic	Lecturer	Lecture Topic	Lecturer	Lecture Topic	Lecturer	Lecture Topic	Lecturer
8:30 AM	Welcome to ANL's NE Division Hussein Khalil, Director; Tom Ewing, Associate Director; Sunaree Hamilton, Course Director; Remarks: Joe Braun (ANL), Misho Dusic (IAEA);	Jeff Ulliam	Safety Assessment of General Design Aspects- Implementation of Defense- In Depth, Proven Practices and Experience, incl. Conservative Approach and Safety Margins	Ivan Toth	Safety Assessment of General Design Aspects- Single Failure Assessment, Redundancy/ Independence/Diversity, System Interactions and Dependencies	Ivan Toth	Introduction to Small and Medium Reactors (SMRs)	Totju Totev	Event Classification	Chuck Kling
9:30 AM	BREAK		BREAK		BREAK		BREAK		BREAK	
10:00 AM	The IAEA Safety Standard Status in 2011	M. Dusic	Option 4 from the Safety Guide SSG-2 on Deterministic Safety Analyses for NPPs	M. Dusic	User Effects	N. Cavlina	Westinghouse SMRs	Chuck Kling	Overview of DSA in New U.S. Plants	Chuck Kling
11:00 AM	Effect of the Fukushima Accident on the IAEA Safety Standards	M. Dusic	NS-G-2.15 Safety Guide on Severe Accident Management Programs at NPPS	M. Dusic	Updating Safety Analyses Report	N. Cavlina	Generation 3 + Reactors	Totju Totev	(Cont.)	Chuck Kling
12:00 PM	LUNCH		LUNCH		LUNCH		LUNCH		LUNCH	
1:00 PM	Use and Conduct of the Safety Assessment	Ivan Toth	Safety Culture in Nuclear Facility Operations	J. Braun	Deterministic Safety Analysis for DBA and BDBA: Conservative vs. Best Estimate Approach- Sensitivity and Uncertainty Analysis	Ivan Toth	DSA & PSA in Decision Making Process	Chuck Kling	Risk Informed Decision Making in Nuclear Industry	Vera Moiseytseva
2:00PM	Computer Models in Licensing	N. Cavlina	Safety Culture Exercise	J. Braun	(Cont.)	Ivan Toth	(Cont.)	Chuck Kling	Shutdown Risk Issues	Chuck Kling
3:00PM	BREAK		BREAK		BREAK		BREAK		BREAK	
3:30 PM	CP-1 The World's First Man-Made Nuclear Reactor- Lecture	J. Braun	Exercise: Safety Culture	J. Braun	What Happened at Fukushima?	J. Braun	Additional SMR Descriptions	Chuck Kling	(Cont.)	Chuck Kling
4:00 PM	(cont.)	J. Braun	Group Reports	J. Braun	Exercise: Lessons Learned from Fukushima	J. Braun	(Cont.)	Chuck Kling	Brief Comparison of US Nuclear Safety and European Regulations	Totju Totev
4:30 PM	CP-1 The World's First Man-Made Nuclear Reactor- Musuem Visit	J. Braun	(cont'd)		Group Reports on Exercise		Q & A	All		
5:00 PM	ADJOURN		ADJOURN		ADJOURN		ADJOURN		ADJOURN	

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Tentative Calendar and Lectures- Week 2**

Time	Monday		Tuesday		Wednesday		Thursday		Friday	
	24 October 2011		25 October 2011		26 October 2011		27 October 2011		28 October 2011	
	Lecture Topic	Lecturer	Lecture Topic	Lecturer	Lecture Topic	Lecturer	Lecture Topic	Lecturer	Lecture Topic	Lecturer
8:30 AM	L.3.1 Introduction to PSA	Zoltan, Kovacs, IAEA Expert, Relko Ltd., Slovakia	L.3.2.3 Data Analyses	IAEA-- John Preston	L.3.2.9 External Hazards PSA	George Klopp	L.3.3. C Level 2 PSA: Overview of Severe Accident Codes	George Klopp	L.3.8 PSA at US NPPs Living PSA: Applications to On- line Maintenance	Roy Linthicum, Exelon
9:30AM	<i>BREAK</i>		<i>BREAK</i>		<i>BREAK</i>		<i>BREAK</i>		<i>BREAK</i>	
10:00AM	(Cont.)	Zoltan, Kovacs, IAEA Expert, Relko Ltd., Slovakia	L.3.2.4 Analyses of Dependencies including CCF's	IAEA-- John Preston	(Cont.)	George Klopp	L 3.4 Overview of Level 3 PSA	George Klopp	(Cont.)	Roy Linthicum, Exelon
11:00 AM	L.3.2 Overview of Level 1 PSA	John Preston, IAEA Expert, UK	L 3.2.5 Human Reliability Analysis	IAEA- Zoltan Kovacs	L 3.2.10 Low Power and Shutdown PSA	IAEA-John Preston	L3.5 Integrated IRIDM	IAEA-John Preston	Feedback Session- Course	All
12:00 PM	<i>LUNCH</i>		<i>LUNCH</i>		<i>LUNCH</i>		<i>LUNCH</i>		Closing Ceremony- Certificate Presentation	Artur, Joe, Participants
1:00PM	3.2.1 Init. Events Analysis	IAEA-John Preston	L.3.2.6 Analysis of Level 1 PSA Results	IAEA- Zoltan Kovacs	L 3.2.11 PSA Software Overview/Demo	Artur Lyubarskiy, IAEA	L.3.6 Applications of PSA in Regulation	USNRC Mark Cunningham	<i>ADJOURN</i>	
2:00PM	L.3.2.2. System Analysis	IAEA- Zoltan Kovacs	L 3.2.7-8 Internal Fires and Flood PSA	George Klopp, USA	L.3.3. A Level-2 PSA: Interface with Level 1- PSA	George Klopp	Cont.	USNRC Mark Cunningham		
3:00 PM	<i>BREAK</i>		<i>BREAK</i>		<i>BREAK</i>		<i>BREAK</i>			
3:30 PM	L.3.2.2. System Analysis (Cont.)	IAEA- Zoltan Kovacs	L 3.2.7-8 Internal Fires and Flood PSA (Cont.)	George Klopp, USA	L.3.3. B Level-2 PSA: Tasks Overview	George Klopp	L 3.7 PSA in the IAEA Safety Publications	Artur Lyubarskiy		
4:00 PM	Q & A Session	ALL	Q & A Session; Short Exercise	Participants ' teams, Instructors	Q & A Session Exercise on Level-1 and Level-2 PSA	Participants' Teams, Instructors	Q & A Session Exercise on PSA and IRIDM: 3 Teams	Participants' Teams, Instructors		
5:00 PM	<i>ADJOURN</i>		<i>ADJOURN</i>		<i>ADJOURN</i>		<i>ADJOURN</i>			