



**JAEA-IAEA Workshop  
on Advanced Safeguards  
Technology for the  
Future Nuclear Fuel Cycle**

**13—16 November 2007  
Techno Community Square Ricotti  
Tokai-mura Ibaraki Japan**

**WORKSHOP AGENDA**

<b>Tuesday, 13 November Main Room</b>	
0930-1100	<b>Participant Registration</b>
1100-1130	<b>Opening Remarks</b> Mr. S Okada (JAEA) Mr. N Khlebnikov (IAEA),
	<b>Session 1– Introduction to the Nuclear Fuel Cycle</b> Chair, Mr. Senzaki (JAEA)
1130-1150	<b>FaCT Project</b> Mr. Y Sagayama (JAEA), presented by Mr. R Nakai (JAEA)
1150-1210	<b>Safeguards Research and Technology Development for the Global Nuclear Energy Partnership (GNEP)</b> Mr. M Miller (USA)
1210-1230	<b>French Study on transference from LWR to GenIV</b> Mr. B Boullis (CEA, France)
1230-1330	<b>LUNCH BREAK</b>
	<b>Session 2– Challenges for Safeguards in the Near Future</b> Chair, Mr Kuno (JAEA), Co-Chair, Mr Zendel (IAEA)
1330-1355	<b>Proliferation Resistance and International Safeguards</b> Mr. E Haas (IAEA)
1355-1420	<b>Advanced Safeguards Approaches for New Reprocessing Facilities</b> Mr. P Durst (PNNL, USA)
1420-1445	<b>European Commission Safeguards in Modern MOX Fabrication Plants</b> Mr. W Koehne (DG TREN, EC)
1445-1510	<b>Integrated Safeguards for MOX Fuel Facilities - Development of Approach and Applications</b> Mr. T Asano (JAEA, Japan)
1510-1535	<b>BREAK</b>
1535-1600	<b>Improving Safeguards Approaches for the Future Aqueous Processing Process</b> Ms. N Inoue (University of Tokyo, Japan)
1600-1625	<b>Current Status of Safeguards R&amp;D for Advanced Fuel Cycle at KAERI</b> Mr. Ho-Dong Kim (KAERI, Korea)
1625-1650	<b>Results from US Sponsored - IAEA Workshop on Advanced Sensors for Safeguards</b> Ms. S Pepper (BNL, USA)
1800-2000	<b>Reception</b>

<b>Wednesday, 14 November 0900-1330 Main Room</b>	
	<b>Session 3 : Advanced Safeguards Concepts and Safeguards by Design for the Future Nuclear Fuel Cycle</b> Chair, Mr. M Hori (JAEA) , Co-Chair, Mr. A Hamilton (IAEA)
0900-0925	<b>Nuclear Safeguards Challenges at Reactor Types that Defy Traditional Item Counting</b> Mr. D Beddingfield (USA)
0925-0950	<b>GEN IV Safeguards Instrumentation</b> Mr. M Stein (Canberra Albuquerque , USA)
0950-1020	<b>The Role of Advanced Safeguards Technology in Meeting Tomorrow's Challenges</b> Mr. J Pilat (LANL, USA)
1015-1045	<b>BREAK</b>
1045-1110	<b>Advanced Safeguards Design Using Proliferation Resistance and Physical Protection (PR&amp;PP) Methodology</b> Mr. R Bari (BNL, USA)
1110-1135	<b>An Idea for Assessment of Proliferation Resistance Effects under the Integrated Safeguards</b> Mr. M Kikuchi (NMCC, Japan)
1135-1200	<b>Incorporation of a Risk Analysis Approach for Advanced Safeguards Analysis</b> Mr. G Rochau (SNL, USA)
1200-1225	<b>Beyond Advanced Safeguards: What's Next?</b> Mr. J McClelland-Kerr (DOE,USA)
1225-1230	<b>Introduction to Session 4 and Working Groups</b>
1230-1330	<b>LUNCH BREAK</b>
	<b>Afternoon agenda continues on next page</b>

**Wednesday, 14 November  
1330-1800**

Session 4: New and Novel Safeguards Technologies 3rd Floor, Room 1 & Room 2 Chair Mr. M Suzuki (JAEA), Co-Chair Mr. M Aparo (IAEA) Chair Mr. J Whichello (IAEA), Co-Chair Mr. Y Naoi (JAEA)		
1330-1355	<b>A Trial of Neutrino Detection from Joyo Fast Research Reactor</b> Mr. F Suekane (Tohoku University, Japan)	<b>Novel Technologies for IAEA Safeguards</b> Mr. J Whichello (IAEA)
1355-1420	<b>New and Novel Non-destructive Neutron and Gamma-Ray Technologies Applied to Safeguards</b> Ms. A Dougan (LLNL, USA)	<b>Evaluation of RF-Based Tracking for UF6 Cylinders at Centrifuge Enrichment Plants</b> Mr. C Pickett (ORNL, USA)
1420-1445	<b>The Plutonium Inventory Measurement System (PIMS): Validation and Performance Tests at the Rokkasho Reprocessing Plant (RRP)</b> Mr. D Parvin (British Nuclear Group, Project Services, UK)	<b>Status on Two Novel IAEA Canadian Support Programme Technologies</b> Mr. R Kosierb (CNSC, Canada)
1445-1510	<b>IAEA Safeguards Equipment</b> Mr. M Zendel (IAEA)	<b>Laser Based Applications: Existing and Future Solutions</b> Ms. S Poirier (IAEA)
1510-1535	<b>BREAK</b>	<b>BREAK</b>
1535-1600	<b>High Precision Non-destructive Assay to Complement Destructive Analysis</b> Mr. H Menlove (LANL, USA)	<b>Large Scale Geospatial Image Indexing and Retrieval for Safeguards</b> Mr. K Tobin (ORNL, USA)
1600-1625	<b>The Role of Large Dried Spikes in Safeguarding Nuclear Reprocessing Plants</b> Mr. R Wellum (JRC-IRMM, EC)	<b>Development of Analytical Techniques for Safeguards Environmental Samples at JAEA as an IAEA Network Analytical Laboratory</b> Mr. M Magara (JAEA, Japan)
1625-1650	<b>The Development of an Integrated Site System for the Detection of Illicit Trafficking of Radioactive and Nuclear Materials</b> Mr. K Whitehouse (British Nuclear Group, UK) presented by Mr. D. Parvin (British Nuclear Group, Project Services, UK)	<b>Advances in Nuclear and Environmental Analysis for Safeguards Purposes</b> Mr. M Hedberg (JRC-ITU, EC)
1650-1705	<b>BREAK</b>	<b>BREAK</b>
1705-1800	<b>Introduction of working groups—Mr. Whichello to introduce chairs and outline procedure.</b>	

**Thursday, 15 November**

	<b>Working Group 1: Main Room</b> Chair: Mr. J McClelland-Kerr (DOE, USA) Co-Chair: Mr. Y Kuno (JAEA) Secretary: Mr. E Haas (IAEA)	<b>Working Group 2: Room1 &amp; Room 2</b> Chair: Mr. R Bari (BNL, USA) Co-Chair: Mr. K Hori (JAEA) Secretary: Ms. S Poirier (IAEA)
0900-1130	<b>Challenges for Safeguards in the Near Future</b>	<b>Advanced Safeguards Concepts and “Safeguards by Design” for the Future Nuclear Fuel Cycle</b>
1130-1230	<b>Main Room: Combined Session for WG1 and WG2 to report on findings prior to WG3 (all participants)</b>	
1230-1330	<b>LUNCH BREAK</b>	
1330-1500	<b>Main Room: Working Group 3 New and Novel Safeguards Technologies for the Future Nuclear Fuel Cycle (all participants):</b> Chair: Mr. R Kosierb (CNSC) Co-Chair: Mr. M Suzuki (JAEA) Secretary: Mr. J Whichello (IAEA)	
1500-1530	<b>BREAK</b>	
1530-1630	<b>Final Session: Reports and Discussion</b> IAEA Moderator- Mr. A Hamilton, JAEA Moderator- Mr. Y Kuno Chair and Co-Chairs as panel members	
1630-17:00	<b>Closing Session</b> Official Closing & Wrap up, Announcements	

**Friday, 16 November**

0915-0930	<b>Gather for bus transportation</b> <b>Meeting point outside Tokai railway station</b>
0930-1000	<b>Travel to Tour location</b>
1000-1130	<b>Tour of J-PARC or CLEAR</b>
1130-1200	<b>Return to Tokai railway station by bus</b>
1200-1300	<b>LUNCH BREAK</b>
1300-	<b>Afternoon reserved for participant organized meetings</b>

