

Conference President: P. Jamet
Commissioner, Autorité de Sureté
Nucleaire
France

IAEA Secretariat:

Scientific Secretaries: P. Hughes
H. Khartabil

Administrative Support: M. Garcia Montes
J. Roch-Braeuer

Conference Coordination: J. Zellinger
M. Neuhold

Location of the Conference:

International Atomic Energy Agency
Vienna International Centre (VIC)
M Building
Board Room A
1400 Vienna, Austria
Tel.: (+43 1) 2600 21324
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Working Language: English

Resolutions: No resolutions may be submitted for
consideration on any subject; no
votes will be taken

TIMETABLE

Monday, 21 October 2013

08:00–10:00	Registration and Distribution of Conference Material – M Building, Ground Floor
10:00–10:30	Opening Session
10:30–11:00	Keynote Presentations
11:00–11:30	Coffee Break
11:30–12:30	Keynote Presentations (cont.)
12:30–14:00	Lunch and Poster Viewing Session
14:00–18:30	Topical Session 1 Advances and Challenges in the Implementation of Defence in Depth in Siting, Design and Construction
14:00–15:40	Presentations
15:40–16:10	Coffee Break
16:10–17:25	Presentations (cont.)
17:25–18:30	Panel Discussion
18:30	Welcome Reception

Tuesday, 22 October 2013

09:00–15:00	Topical Session 2: Advances and Challenges in the Implementation of Defence in Depth in Commissioning and Operation
09:00–10:20	Presentations
10:20–10:50	Coffee Break
10:50–12:30	Presentations (cont.)
12:30–14:00	Lunch and Poster Viewing Session
14:00–15:00	Panel Discussion
15:00–18:30	Topical Session 3 Advances and Challenges in the Implementation of Defence in Depth in Accident Management and Emergency Preparedness and Response
15:00–15:50	Presentations
15:50–16:15	Coffee Break

16:15–17:30 Presentations (cont.)

17:30–18:30 Panel Discussion

Wednesday, 23 October 2013

09:00–12:30	Topical Session 4A: Cross-Cutting Issues in the Implementation of Defence in Depth
09:00–10:15	Presentations
10:15–10:45	Coffee Break
10:45–11:35	Presentations (cont.)
11:35 –12:30	Panel Discussion
12:30–14:00	Lunch and Poster Viewing Session
14:00–18:00	Topical Session 4B: Cross-Cutting Issues in Implementation of Defence in Depth
14:00 –15:15	Presentations
15:15 –15:45	Coffee Break
15:45 –17:00	Presentations (cont.)
17:00 –18:00	Panel Discussion
18:00	Preparation of Session Summaries (Session Co-Chairs)

Thursday, 24 October 2013

09:00–12:30	Closing Session
09:00–10:30	Session Summaries
10:30–11:00	Coffee Break
11:00–12:00	President's Conclusions Discussion
12:00–12:30	Closing

MONDAY, 21 OCTOBER 2013

08:00–10:00 Registration and Distribution of Conference
Material – M Building, Ground Floor

10:00–10:30 **OPENING SESSION**

Peter Hughes, IAEA
Safety Assessment Section Head
Division of Nuclear Installation Safety

Opening Addresses and Introduction of Conference President

Denis Flory, IAEA
Deputy Director General, Head of
Department of Nuclear Safety and Security

James Lyons, IAEA
Director, Division of Nuclear Installation
Safety

Philippe Jamet, France
Commissioner, Autorité de Sureté Nucleaire

10:30–12:30 **Keynote Presentations**

10:30–11:00 **Kazuo Shimomura**
OECD, Nuclear Energy Agency

NEA and its Role in Enhancing the Implementation of Defence
in Depth (DID) in Light of the Fukushima Dai-ichi Accident

11:00–11:30 Coffee Break

Keynote Presentations (cont.)

11:30–12:00 **André Lacoste**
France

CNS Orientations, Safety Objectives and Implementation of
the Defence in Depth Concept

12:00–12:30 **Won-Pil Baek**
Republic of Korea

Nuclear Safety R&D for the Knowledge-Based Implementation
of Defence in Depth

12:30–14:00 Lunch and Poster Viewing Session

**14:00–18:30 TOPICAL SESSION 1:
Advances and Challenges in the
Implementation of Defence in Depth in
Siting, Design, and Construction**

Co-Chairs: E. Leeds, United States of America

P. Hughes, IAEA

	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:25	H. Yamagata	Japan	The Defence in Depth Concept Applied to the New Regulatory Requirements in Japan
14:25–14:50	G.L. Fiorini N. Hakimi B. Tombuyses C. Dams A. Wertelaers et al.	Belgium	The Design Options and Provision File and the Role of Defence in Depth within the Pre-licensing of the MYRRHA Project
14:50–15:15	Y. Wang H. Tang Q. Mao	China	Reinforcement of Defence in Depth: Modification Practice after the Fukushima Nuclear Accident
15:15–15:40	B. Poulat	IAEA	Successive Evolutions of the Defence in Depth Concept
15:40–16:10	Coffee Break		
16:10–16:35	G.L. Fiorini L. Ammirabile V. Ranguelova	European Commission	The ISAM Tool “Objective Provision Tree (OPT)” for the Identification of the Design Basis and the Construction of the Safety Architecture
16:35–17:00	C. Lavarenne K. Herviou P. Dupuy	France	How to Reinforce the Defence in Depth by Taking into Account Natural Hazards?
17:00–17:25	Yu. V. Shvyryaev V. B. Morozov A. Yu. Kuchumov	Russian Federation	Application of the Defence in Depth Concept in the Projects of New-Generation NPPs Equipped with VVER Reactors
17:25–18:30	Panel Discussion		
18:30	Reception		

TUESDAY, 22 OCTOBER 2013

**09:00–12:30 TOPICAL SESSION 2:
Advances and Challenges in the
Implementation of Defence in Depth in
Commissioning and Operation**

Co-Chairs: **S. Persson**, Sweden
M. Lipar, IAEA

	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:30	K. Ellis	WANO	A Discussion on Risk in Operational Settings
09:30–09:55	N. Langerman	United States of America	Lessons Learned from Process Safety Management: a Practical Guide to Defence in Depth
09:55–10:20	A. Moskalenko	Russian Federation	Lessons Learned after Nuclear Power Plants and Hydro-Power Plants Accidents
10:20–10:50	Coffee Break		
10:50–11:15	S. Fabbri A. Diluch G. Vega	Argentina	Life Management and Safety of Nuclear Facilities
11:15–11:40	F. Dermarkar J. Marczak M. O'Neill	Canada	Guidance on the Implementation of Modifications to Mitigate Beyond Design Basis Accidents
11:40–12:05	G. Vieru	Romania	Enhancing NPP Safety through an Effective Dependability Management
12:05–12:30	P.T.B. Lindahl	Sweden	Safety Analysis in Design and Assessment of the Physical Protection of the OKG NPP
12:30–14:00	Lunch and Poster Viewing Session		
14:00–15:00	Panel Discussion		

**15:00–18:30 TOPICAL SESSION 3:
Advances and Challenges in the
Implementation of Defence in Depth in
Accident Management and Emergency
Preparedness and Response**

Co-Chairs: **D. Drabova**, Czech Republic
E. Buglova, IAEA

	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
15:00–15:25	H. Aaltonen	Finland	Emergency Preparedness and Response: a Safety Net
15:25–15:50	E. Buglova F. Baciu	IAEA	The Role of the International Atomic Energy Agency in a Response to Nuclear and Radiological Incidents and Emergencies
15:50–16:15	Coffee Break and Poster Viewing Session		
16:15–16:40	M. Kuznetsov	Russian Federation	Beyond Design Basis Severe Accident Management as an Element of Defence in Depth Concept Strengthening
16:40–17:05	J. Barbaud X. Pouget-Abadie	France	Improvements in Defence in Depth on French Nuclear Power Plants following Fukushima Accidents
17:05–17:30	T. McKenna P. Vilar Welter J. Callen E. Buglova	IAEA	Strengthening Defence in Depth in Emergency Preparedness and Response by Pre-establishing Tools and Criteria for the Effective Protection of the Public During a Severe Reactor Emergency
17:30–18:30	Panel Discussion		

WEDNESDAY, 23 OCTOBER 2013

09:00–12:30 TOPICAL SESSION 4A:
Cross-Cutting Issues in the
Implementation of Defence in Depth

Co-Chairs: **M. Weightman**, United Kingdom
A. Nacic, IAEA

	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
09:00–09:25	J. Misak	Czech Republic	Defence in Depth: Assessment of Comprehensiveness and Further Strengthening of the Concept
09:25–09:50	E. Leeds	United States of America	Defence in Depth: Consideration of External Events
09:50–10:15	G. Shi W. Zhan Q. Mei D. Sun	China	Technical Insight of the High Level Safety Goal for NPPs Built in China's Thirteenth Five-Year Period (2016-2020)
10:15–10:45	Coffee Break		
10:45–11:10	B. de L'Épinois F. Bouteille N. Nicaise	France	Some Lessons Learnt From the Fukushima Daiichi Accident, as Regards Defence in Depth and its Implementation in New or Existing Designs – an Industry Example
11:10–11:35	L. Reiman T. Routamo F. Féron	WENRA	Western European Nuclear Regulators' Association (WENRA) Views on Defence in Depth for New Reactors
11:35–12:30	Panel Discussion		
12:30–14:00	Lunch and Poster Viewing Session		

**14:00–18:00 Topical Session 4B:
Cross-Cutting Issues in the
Implementation of Defence in Depth**

Co-Chairs: **W-P. Baek**, Republic of Korea
A. Shokr, IAEA

	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
14:00–14:25	M. Weightman	United Kingdom	Defence in Depth - Applied to the Nuclear System
14:25–14:50	J. Regaldo	WANO	WANO Actions to Reinforce the Operators Safety Culture Worldwide
14:50–15:15	A. Nacic	IAEA	IAEA Assistance in Helping Member States Develop Effectively Independent and Robust Regulators for Nuclear Installation Safety
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15:15–15:45	Coffee Break		
15:45–16:10	N. Blundell	NEA	NEA's Plans for Strengthening International Implementation of the Application of Defence in Depth Philosophies in Nuclear Power Countries
16:10–16:35	H. Hardiyanti B. Herutomo G. K. Suryaman	Indonesia	Safety Culture as a Pillar of Defence in Depth Implementation at the Experimental Fuel Element Installation, Batan Indonesia
16:35–17:00	P. Kenny J. Chaput	IAEA	The IAEA Response and Assistance Network (RANET) and the New Nuclear Installation Assessment and Advice Functional Area
17:00–18:00	Panel Discussion		

THURSDAY, 24 OCTOBER 2013

09:00–12:00 CLOSING SESSION

09:00–09:20	Topical Session 1	Summary	E. Leeds; P. Hughes
09:20–09:40	Topical Session 2	Summary	S. Persson; M. Lipar
09:40–10:10	Topical Session 3	Summary	D. Drabova; E. Buglova
10:10–10:30	Topical Session 4	Summary	M. Weightman; A. Nicic; W-P. Baek; A. Shokr

10:30–11:00 Coffee Break

11:00–12:00 President's Conclusions P. Jamet
Discussion

12:00 Closing

POSTERS

All posters will be displayed on the second floor of M02 coffee lounge area for the entire duration of the Conference

Review Sessions are scheduled during lunch breaks

<i>No. of Paper IAEA-CN-205</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
IAEA-CN-205-T1-06	S. Liu Y. Zhang X. Zhang	China	Defence in Depth by Design for the Advanced GIII NPP in China
IAEA-CN-205-T1-07	W. Salem	Egypt	Basic Safety Considerations for Nuclear Power Plant Dealing With External Human Induced Events
IAEA-CN-205-T1-08	A. Ramli N.A. Basri N.Z.H. Abu Hanifah	Malaysia	Safety Considerations in the Selection of Nuclear Power Plant Candidate Sites in Johor State, Malaysia
IAEA-CN-205-T1-09	M. Lankin	Russian Federation	Defining a List of Accidents to Be Considered as a First Step of Forging Effective Level 4 of Defence in Depth
IAEA-CN-205-T1-10	H.A. Nguyen	Vietnam	Advances and Challenges in the Implementation of Defence in Depth in Siting, Design, and Construction of Nuclear Installations in Vietnam
IAEA-CN-205-T1-11	A.Yu. Kuchumov V.B. Morozov	Russian Federation	Application of PSA in Designing New Third-Generation NPPs Equipped with VVER Reactors
IAEA-CN-205-T2-06	S. Fabbri G. Vega A. Diluch R. Versaci	Argentina	Defence in Depth and Ageing Management
IAEA-CN-205-T2-07	S. Pradhan	India	Commissioning and Operational Experience in Power Reactor Fuel Reprocessing Plant
IAEA-CN-205-T3-05	F. S. Tawfik M.M. Abdel-Aal	Egypt	The Role of Countermeasures in Mitigating the Radiological Consequences of Nuclear Power Plant Accidents
IAEA-CN-205-T3-06	A.J. Gaikwad R. S. Rao A. Gupta K. Obaidurrahaman	India	Insights from Severe Accident Analyses for Verification of VVER SAMG
IAEA-CN-205-T3-07	A.J. Gaikwad R. S. Rao S.P. Lakshmanan A. Gupta	India	Extended Station Blackout Analysis for VVER-1000 MWe Reactor

<i>No. of Paper IAEA-CN-205</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
IAEA-CN-205-T3-08	A. Haghighi Shad	Iran	Calculation of Radiation Exposure due to Radionuclides Released to Environment in Accident of Dropping of Fuel Assemblies into the Typical Spent Fuel Pool of Reactor Building in 1000WWR Typical Reactor During Fuel Handling Transport-Process Operation
IAEA-CN-205-T3-09	L.A. Khan M.A. Qamar M.R. Liaquat	Pakistan	Emergency Preparedness and Response at Nuclear Power Plants in Pakistan
IAEA-CN-205-T4-09	B.M. El-sheikh	Egypt	Role of the Regulatory Body in Implementing Defence in Depth in Nuclear Installations; Regulatory Oversight in Egypt
IAEA-CN-205-T4-10	Dhanesh B. Nagrale M. Prasad R.S. Rao A.J. Gaikwad	India	Methodology for the Assessment of Confidence in Safety Margin for Small Break Loss of Coolant Accident Sequences
IAEA-CN-205-T4-11	S. Syarip	Indonesia	Safety Management and Safety Culture Self-Assessment of Kartini Research Reactor

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Representatives of the press, radio, television or other information media and members of the public, the latter as "observers", may also be authorized to attend, but without the right to take part in the proceedings.

Scientists interested in participating in any of the IAEA meetings should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or national atomic energy authority.

PUBLICATIONS

Proceedings

The proceedings of the conference containing invited presentations and submitted papers, as well as the findings and recommendations, will be published by the IAEA as soon as possible after the conference.

Orders

No registration fee is charged to participants but they are encouraged to order for themselves or on behalf of their supporting organization at least one copy of the proceedings. These can be obtained at a special price representing half the estimated sales price provided that they are ordered and paid for during the meeting at the Registration Desk.

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IAEA PUBLICATIONS RELATED TO THE SUBJECT OF THE CONFERENCE

STI/PUB/1273 92-0-110706-4	IAEA Safety Standards Series No. SF-1: Fundamental Safety Principles
STI/PUB/1465 978-92-0-106410-3	IAEA Standards Series No. GSR Part 1: Governmental, Legal and Regulatory Framework for Safety General Safety Requirements Part 1
STI/PUB/1531 978-92-0-120910-8	IAEA Safety Standards Series No. GSR Part 3 (Interim): International Basic Safety Standards – Interim Edition General Safety Requirements Part 3
STI/PUB/1375 978-92-0-112808-9	IAEA Safety Standards Series No. GSR Part 4: Safety Assessment for Facilities and Activities General Safety Requirements Part 4
STI/PUB/1368 978-92-0-111508-9	IAEA Safety Standards Series No. GSR Part 5: Predisposal Management of Radioactive Waste General Safety Requirements Part 5
STI/PUB/1467 978-92-0-107410-2	IAEA Safety Standards Series No. GSG-2: Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency General Safety Guide
STI/PUB/1177 92-0-112403-1	IAEA Safety Standards Series No. NS-R-3: Site Evaluation for Nuclear Installations Safety Requirements
STI/PUB/1534 978-92-0-121510-0-9	IAEA Safety Standards Series No. SSR-2/1: Safety of Nuclear Power Plants: Design Specific Requirements
STI/PUB/1513 978-92-0-115910-6	IAEA Safety Standards Series No. SSR-2/2: Safety of Nuclear Power Plants: Commissioning and Operation Specific Safety Requirements

STI/PUB/1220 92-0-115804-1	IAEA Safety Standards Series No. NS-R-4: Safety of Research Reactors Safety Requirements
STI/PUB/1336 978-92-0-105108-0	IAEA Safety Standards Series No. NS-R-5: Safety of Nuclear Fuel Cycle Facilities Safety Requirements
STI/PUB/1449 978-92-0-103010-8	IAEA Safety Standards Series No. SSR-5: Disposal of Radioactive Waste Specific Safety Requirements
STI/PUB/1013 92-0-102596-3	INSAG Series No.10: Defence in Depth in Nuclear Safety
STI/PUB/1082 92-0-102699-4	INSAG Series No. 12: Basic Safety Principles for Nuclear Power Plants 75-INSAG-3 Rev.1
STI/PUB/910 92-0-100192-4	INSAG Series No. 5: The Safety of Nuclear Power (A Report by the International Nuclear Safety Advisory Group)
STI/PUB/1218 92-0-114004-5	Safety Reports Series No. 46: Assessment of Defence in Depth for Nuclear Power Plants
IAEA-TECDOC-986	IAEA TECDOC No. 986: Implementation of Defence in Depth for Next Generation Light Water Reactors
STI/PUB/1399 978-92-0-104209-5	IAEA Nuclear Energy Series No. NP-T-2.2: Design Features to Achieve Defence in Depth in Small and Medium Sized Reactors (SMRs)

FORTHCOMING SCIENTIFIC MEETINGS SCHEDULED BY THE IAEA

2013

International Conference on the Safety and Security of Radioactive Sources: Maintaining the Continuous Global Control of Sources throughout their Life Cycle
27-31 October 2013, Abu Dhabi, UAE

2014

International Experts' Meeting on Radiation Protection after the Fukushima Daiichi Nuclear Power Plant Accident Promoting Confidence and Understanding (IEM 6)
17-21 February 2014, Vienna, Austria

International Experts' Meeting on Severe Accident Management in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant (IEM7)
17-21 March 2014, Vienna, Austria

International Conference on Human Resource Development for Introducing and Expanding Nuclear Power Programmes: Building and Sustaining Capacity
12-16 May 2014, Vienna, Austria

International Symposium on Understanding Moderate Malnutrition in Children for Effective Interventions
27-29 May 2014, Vienna, Austria

International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues
23-27 June 2014, Vienna, Austria

International Conference on Advances in Nuclear Forensics: Countering the Evolving Threat of Nuclear and Other Radioactive Material out of Regulatory Control
7-10 July 2014, Vienna, Austria

25th Fusion Energy Conference (FEC2014)
13-18 October 2014, St. Petersburg, Russian Federation

Symposium on International Safeguards
20-24 October 2014, Vienna, Austria

International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSOs) in Enhancing Nuclear Safety and Security
TBD, Beijing, China

International Symposium on Nuclear and Related Techniques for Food Integrity, Traceability, Safety and Quality
10-14 November 2014, Vienna, Austria

International Conference on Occupational Radiation Protection
1-5 December 2014, Vienna, Austria

For information on forthcoming scientific meetings,
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