Time Table (Program Summary)

■ On-site Registration Desk (20th Floor of Hotel Granvia Osaka)

Open between 16:00 to 20:00 on Sunday 26 November 2017 Open from 8:15 Monday 27 November 2017

■ Day 1: Monday 27 November 2017

Time					
Time 08:15-09:00	O Desistration (Legal Space on the 20th floor)				
06.15-09.00	Registration (Local Space on the 20 th floor)				
00 00 00 10	Hall S (Houou)				
09:00-09:10	Opening Remarks				
00.40.00.50	Mitsuo Takeuchi, Chair, The 6 th EAFORM Organizing Committee				
09:10-09:50	Plenary Session 1				
	(1) Katsumoto Yoshimura, Director, Technology Office for RWM and Public Relations				
	Office for RWM, METI, Japan				
	(2) Yaohiro Inagaki, Prof. (Kyushu Univ.) and Director, Division of Nuclear Fuel Cycle and Environment, AESJ, Japan				
	and Environment, AESJ, Japan 2 speeches will be provided (20min. Each)				
09:50-11:10	Plenary Session 2				
09.50-11.10	(1) Ching-Tsuen Huang, Prof. (National Tsing Hua Univ.) and Chairman, Academic				
	Committee on Radwaste Management, CHNS, Taiwan				
	(2) Joo-Wan Park, Vice President of Radioactive Waste Project Division, Korea				
	Radioactive Waste Agency (Korad), Korea				
	(3) Todd R. Zeitler, WIPP Performance Assessment Technical Team Lead, Sandia				
	National Laboratories, USA				
	(4) (TBD from China)				
	4 speeches will be provided (20min. Each)				
11:10-11:30	Coffee Break				
11:30-12:50	Special Session: Toward Revitalization of Fukushima				
	4 speeches will be provided (20min. Each)				
12:50-14:00	, ,	,			
Time	Hall A (Naniwa-C)	Hall B (Kujaku)	Hall C (Kakuju)		
14:00-16:05	Technical Session 1A	Technical Session 1B	Technical Session 1C		
	Radioactive Wastes	Decontamination &	Radioactive Waste		
	Treatment	Decommissioning-1	Management Policies,		
	Chair; Hitoshi Owada	Chair; Shinichi Nakayama	Regulations and Programs-1		
	3 Papers	5 Papers	Chair; Motoi Kawanishi		
	25 min. each including QA	25 min. each including QA	3 Papers		
	for 5min.	for 5min.	25 min. each including QA for		
10.05.10.00	0 " 0 "		5min.		
16:05-16:20					
16:20-18:00	Technical Session 2A	Technical Session 2B	Technical Session 2C		
	SNF/HLW Disposal-1	Decontamination &	Radioactive Waste		
	Chair; Shinzo Ueta	Decommissioning-2	Management Policies,		
	4 Papers 25 min. each including QA	Chair; Satoshi Yanagihara	Regulations and Programs-2		
	for 5min.	3 Papers 25 min. each including QA	Chair; Kenichi Kaku		
	3. 2	for 5min.	3 Papers		
			25 min. each including QA for		
10:20 20:20	Wolcomo Dinnor (Holl No.	l niwa)	5min.		
18:30-20:30	Welcome Dinner (Hall Na	iiwa)			

■ Day 2: Tuesday 28 November 2017

Time	Hall A (Naniwa-C)	Hall B (Kujaku)	Hall C (Kakuju)
08:30-10:10	Technical Session 3A	Technical Session 3B	Technical Session 3C
	SNF/HLW Disposal-2	LLW/ILW Disposal-1	SNF/HLW Disposal-3
	Chair; Morimasa Naito	Chair; Teruyuki Yamada	Chair; Yoichi Yamamoto
	4 Papers 25 min. each including QA	4 Papers	4 Papers
	for 5min.	25 min. each including QA for 5min.	25 min. each including QA for 5min.
10:10-10:30			
10:30-11:45	Technical Session 4A SNF/HLW Disposal-4	Technical Session 4B LLW/ILW Disposal-2	Technical Session 4C SNF/HLW Disposal -5
	Chair; Morimasa Naito	Chair; Minoru Emori	Chair; Hiromitsu Saegusa
	3 Papers	2 Papers	2 Papers
	25 min. each including QA for 5min.	25 min. each including QA for 5min.	25 min. each including QA for 5min.
11:45-13:00	Lunch (Hall S)		
Time	Hall A (Naniwa-C)	Hall B (Kujaku)	Hall C (Kakuju)
13:00-14:40	Technical Session 5A SNF/HLW Disposal-6 Chair; Hiroyuki Tsuchi 4 Papers 25 min. each including QA for 5min.	Technical Session 5B SNF/HLW Disposal-7 Chair; Takamitsu Ishidera 4 Papers 25 min. each including QA for 5min.	Technical Session 5C SNF/HLW Disposal-8 Chair; Tetsuo Fujiyama 3 Papers 25 min. each including QA for 5min.
14:40-14:55	Coffee Break		
14:55-16:35	Technical Session 6A Radioactive Waste Management Policies, Regulations and Programs-3 Chair; Hiroyoshi Ueda 4 Papers 25 min. each including QA for 5min.	Technical Session 6B SNF/HLW Disposal-9 Chair; Masamichi Obata 3 Papers 25 min. each including QA for 5min.	Technical Session 6C SNF/HLW Disposal-10 Chair; Soshi Nishimoto 3 Papers 25 min. each including QA for 5min.
16:35-16:45	Short Break		
16:45-17:00	Closing Session Closing Remarks		

■ Day 3: Wednesday 29 November 2017

One-day technical tour (optional)

- **♦08:40** Gathering & Departure from Hotel Granvia Osaka to;
 - 1) HOKUDAN EARTHQUAKE MEMORIAL PARK (http://www.nojima-danso.co.jp/)
 - 2) The Great Hanshin-Awaji Earthquake memorial museum (http://www.dri.ne.jp/en)
 - 3) Short break at (stop by) KOBE KITANO IJINKAN-GAI (http://www.kobeijinkan.com/)
- ◆17:45 Return back to Hotel Granvia Osaka (expected time)

1st Meeting place at 08:40 is "Meeting place (see following floor map)" on the Grand floor of Hotel Granvia Osaka

[Floor Map of the Grand Floor (1st floor) of Hotel Granvia Osaka]



Program

■ Day 1: Monday 27 November 2017

Plenary Session 1 9:10-9:50 [Hall S] Chair, Reiko Nunome (NUMO)

Status of Radioactive Waste management in Japan Chair, Reiko Nunome (NUMO)

(1) Nationwide Map of Scientific Features for Geological Disposal of High-Level Radioactive Waste in Japan

Katsumoto Yoshimura (Director, Technology Office for RWM and Public Relations Office for RWM, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry, Japan)

(2) How to Integrate Various Research Fields for Reasonable and Reliable Radwaste Management

Yaohiro Inagaki (Prof. (Kyushu Univ.) and Director, Division of Nuclear Fuel Cycle and Environment, AESJ, Japan)

Plenary Session 2 9:50-11:10 [Hall A]

Status of Radioactive Waste management in Taiwan, Korea, China and USA Chair, Reiko Nunome (NUMO)

(1) Current Situation of Radioactive Wastes Management in Taiwan

Ching-Tsuen Huang (Prof. (National Tsing Hua Univ.) and Chairman, Academic Committee on Radwaste Management, CHNS, Taiwan)

(2) Status of High-level Radioactive Waste Management Program in Korea

Joo-Wan Park, Vice President of Radioactive Waste Project Division, Korea Radioactive Waste Agency (Korad), Korea

(3) Recertification of WIPP: From Submittal of the CRA-2014 to an EPA Recertification Decision Todd R. Zeitler (WIPP Performance Assessment Technical Team Lead, Sandia National

Laboratories, USA)

(4) (TBD from China)

Special Session 11:30-12:50 [Hall A]

Toward Revitalization of Fukushima

Chair: Motoi Kawanishi (ASANO TAISEIKISO ENGINEERING Co.)

(1) Technical Strategy for Decommissioning of the Fukushima Daiichi NPS

Kazuyuki Kato (Managing Director, Technological Strategy Group, Nuclear Damage Compensation and Decommissioning Facilitation Corporation)

(2) Study on Post-Accident Waste Management Scenarios for Fukushima Daiichi Nuclear Power Station

Satoshi Yanagihara (Prof. (Univ. of Fukui) and Executive committee member, Review Committee on Decommissioning of the Fukushima Daiichi Nuclear Power Station, AESJ)

- (3) JAEA's R&D for Decommissioning of Fukushima Daiichi Nuclear Power Station Shinichi Nakayama (Director General, Fukushima Research Institute, JAEA)
- (4) **Distribution of Radionuclides Nearby the Fukushima Daiichi Nuclear Power Station**Terumi Dohi (Assistant Principal Engineer, Fukushima Environmental Safety Center,
 Fukushima Research Institute, JAEA)

Technical Session 1A 14:00-16:05 [Hall A]

Radioactive Wastes Treatment: Source Term & Waste Treatment Chair ; Hitoshi Owada (RWMC)

1A-1 High-frequency Melting Technology of Radioactive Metal Waste
Nobutake Horiuchi, Takeshi Nishikawa, Naoto Sasaki and Hirokazu Tanaka

1A-2 C-14 Release Behavior and Thermal Decomposition Characteristics of Crud Particles
Collected from the Coolant Filter of Commercial PWR

Shintaro Tsuji, Toshikazu Waki, Akira Sakashita and Kenichiro Kino

1A-3 Evaluation of Carbon-14 Release from Irradiated Zircaloy Fuel Cladding through a Long-term Static Leaching Test

Hiroyoshi Ueda, Tomofumi Sakuragi, Naoki Fujii and Hitoshi Owada

Technical Session 1B 14:00-16:05 [Hall B]

Decontamination & Decommissioning: Decontamination-1: Decontamination Chair; Shinichi Nakayama (JAEA)

- 1B-1 The Assessments and Comparisons of RASCAL and EPZDose on Atmospheric Dispersion and Dose Consequences in Radioactive Material Release Accidents Shaohsuan Chen, Jongrong Wang, Chunkuan Shih, YuTing Ku, Yu Chiang, ShaoWen Chen and WenSheng Hsu
- 1B-2 Confirmation of Appropriate Operation Condition with Blasting Device Yuuki Tsuhara, Hirotaka Izuka, Shinro Hirano, Yuji Matsunaga, Yasuhiro Sugahara and Yoji Kanamori
- 1B-3 Development of In-situ Radioactivity Inspection System for Radioactive Waste and Decontamination System Using Microalgae

Sujung Min, Dohyung Kim, Woyoung Kim, Sheunghyun Ha, San Chae, Jongman Lee and Unjang Lee

1B-4 Rapid Removal of Cesium-137 from Urban Area After the Fukushima Dai-ichi Nuclear Power Plant Accident

Kazuya Yoshimura

1B-5 A Study on the Performance of Flocculating Agent for Radioactively Contaminated Soil by Soil Washing Process

Jong Soon Song and Sun II Kim

Technical Session 1C 14:00-16:05 [Hall C]

Radioactive Waste Policies, regulations and Programs-1

Chair: Motoi Kawanishi (ASANO TAISEIKISO ENGINEERING Co.)

1C-1 Spent Nuclear Fuel Final Disposal Management in Taiwan

Allan Lee

1C-2 Scientific Basis for Nationwide Screening of Geological Disposal Sites in Japan
 Takehiro Matsumoto, Hiromitsu Saegusa, Hideaki Hyodo, Akira Deguchi and Hiroyuki Umeki

1C-3 Sensitivity of WIPP Performance Assessment Results to Regulator-prescribed Changes Todd R. Zeitler and Brad A. Day

Technical Session 2A 16:20-18:00 [Hall A]

SNF/HLW Disposal-1: Modelling (THMC, etc.)

Chair: Shinzo Ueta (MITSUBISHI MATERIALS Co.)

- **2A-1** Geochemical Modeling of Water-rock Interactions in Granitic Rocks, Eastern Taiwan Yu-Te Chang
- 2A-2 Centrifuge Model Test to Gain Reliability of the Future Prediction in Terms of Long Term THM Processes in Deep Geological Repository

Soshi Nishimoto

2A-3 Thermo-hydro-chemical Processes Influence on Buffer Material Degradation in High Level Radioactive Waste Disposal

Wen-Sheng Lin, Suu-Yan Liang and Chen-Wuing Liu

2A-4 Coupled THMC Processes in Radionuclide Waste Management

Gour-Tsyh (George) Yeh and Chia-Hsing (Peter) Tsai

Technical Session 2B 16:20-18:00 [Hall B]

Decontamination & Decommissioning: Decommissioning-2: Decommissioning

Chair: Satoshi Yanagihara (Univ. of Fukui)

2B-1 Efforts toward Safe, Steady and Efficient Decommissioning

Toyoaki Yamauchi, Satoshi Karigome and Hitoshi Ohata

2B-2 Decommissioning Planning for Unit 1 and 2 at Mihama Nuclear Power Plant Shinya Kato, Koichi Kamahori, Hiromu Isaka and Shinro Hirano

2B-3 Radiation Survey and Waste Inventory Estimation for Decommissioning of Taiwan NPP
Chun-Cheng Lin, Wei-Sin Chen, Jyi-Lan Wuu and Shu-Jun Chang

Technical Session 2C 16:20-18:00 [Hall C]

Radioactive Waste Management Policies, Regulations and Programs-2:

Chair: Kenichi Kaku (NUMO)

- 2C-1 Status of Radioactive Waste and Spent Nuclear Fuel Management in Finland
 Jari Tuunanen
- 2C-2 Communication Activities through Dialogue in Japanese Geological Disposal Project of High-level Radioactive Waste

Ayako Araki, Saki Ikeda, Kumiko Ezaki and Kenichi Kaku

2C-3 Efforts in the Field of Education for Japanese Geological Disposal of High-level Radioactive Waste

Kumiko Ezaki, Kenichi Kaku and Shunsuke Suzuki

■ Day 2: Tuesday 28 November 2017

Technical Session 3A 08:30-10:10 [Hall A]

SNF/HLW Disposal-2 : Safety Case Development-1

Chair: Morimasa Naito (JAEA)

3A-1 Overview of the NUMO Safety Case at Pre-siting Stage
 Tetsuo Fujiyama, Satoru Suzuki, Akira Deguchi and Hiroyuki Umeki

3A-2 Geosynthesis of a State-of-the-art Knowledge Base into SDMS in the NUMO Safety Case

Kunio Ota, Hiromitsu Saegusa, Takanori Kunimaru and Saori Yamada

3A-3 Layout Design of Underground Facilities Tailored to SDM in the NUMO Safety Case
Takahiro Goto, Yoichi Yamamoto, Satoru Suzuki and Shigeru Kubota

3A-4 Preliminary Study of Pre-closure Safety Assessment in the NUMO Safety Case
Kazuhisa Yamashina, Satoru Suzuki and Shigeru Kubota

Technical Session 3B 08:30-10:10 [Hall B]

LLW/ILW Disposal-1

Chair: Teruyuki Yamada (FEPC)

- 3B-1 Conceptual Study on Disposal Facility for Waste from Decommissioning of NPPs
 Norie Kawahata, Ryoichi Hojo, Takayuki Hamanaka and Takashi Kozawa
- 3B-2 The Status of LILW Complex Disposal Facility Construction in Korea Sangsoo Kim
- 3B-3 An Integrated Framework for Simulating Radionuclide Decay Transport of Low-level
 Radioactive Waste with Tunnel Disposal in Nearshore Environment
 Chin-Chang Lu, Ming-Hsu Li and Yu-Ru Chen
- 3B-4 Sensitivity Analysis of Simulating Radionuclide Decay Transport of Low-level
 Radioactive Waste in Nearshore Environment
 Yu-Ru Chen, Chin-Chang Lu and Ming-Hsu Li

Technical Session 3C 08:30-10:10 [Hall C]

SNF/HLW Disposal -3: Barrier Technology (Overpack etc.)

Chair: Yoichi Yamamoto (NUMO)

3C-1 Seismic Response of Canister in Buffer Material Under Water Invasion Condition by Centrifuge Modeling

W.Y. Hung, J.J. Xu, Y.C. Wu and M.H. Hsieh

3C-2 Study on the Applicability of Cast Steel Overpack –Evaluation of Casting Defects and Corrosion Resistance Using Full-scale Prototype–

Yusuke Ogawa, Satoru Suzuki, Kazuhisa Yamashina and Shigeru Kubota

3C-3 Structural Integrity Assessment of Disposal Package for Radioactive Waste Failure Assessments for Overpack Using Finite Element Analysis

Masahiro Kawakubo and Masato Kobayashi

3C-4 Stress Analysis for the Canister Under Earthquake Induced Fracture Shear Displacement considering Long-term Creep Effect of Copper Shell

Yuan-Chieh Wu, Hsi-Ting Lo and Yi-Ren Wang

Technical Session 4A 10:30-11:45 [Hall A]

SNF/HLW Disposal -4 : Safety Case Development-2

Chair: Morimasa Naito (JAEA)

4A-1 Preliminary Study of Post-closure Safety Assessment in the NUMO Safety Case
Keisuke Ishida, Takafumi Hamamoto, Sanae Shibutani, Kiyoshi Fujisaki and Motoyuki Yamada

4A-2 Assessment of Sorption and Diffusion in the Rock Matrix in the NUMO Safety Case

Takafumi Hamamoto, Sanae Shibutani, Keisuke Ishida, Kiyoshi Fujisaki, Motoyuki Yamada
and Yukio Tachi

4A-3 How Will New Knowledge Be Reflected to the Management of Geological Disposal? Influence of an FEP Not Considered So Far to Some Sub-scenarios Koichi Shin

Technical Session 4B 10:30-11:45 [Hall B]

LLW/ILW Disposal-2

Chair: Minoru Emori (RWMC)

- 4B-1 Barrier of Near-surface LILW Disposal Facility in Korea: Hydraulic Model Development
 Mi-Jin Kwon, Ki-Jung Kwon and Jin Beak Park
- 4B-2 Numerical Simulation of the Thermal Performance of a Dry Storage Cask for Spent Nuclear Fuel

Chi-Ming Lai, Ron-Horng Chen, Chu-Tsen Liao, Ting-Yi Wang and Heui-Yung Chang

Technical Session 4C 10:30-11:45 [Hall C]

SNF/HLW Disposal -5: Site Investigation Technology-1

Chair: Hiromitsu Saegusa (NUMO)

4C-1 Influence of inherent and Stress-induced Anisotropy of Hydraulic Conductivity on the Groundwater Flow Around a Rock Tunnel

Huang-Kuei Chu, Po-Sung Lai and Jia-Jyun Dong

4C-2 Data Qualification Methodology in the Literature Survey Stage

Saori Yamada, Takanori Kunimaru, Kunio Ota, Stratis Vomvoris and Niels Giroud

Technical Session 5A 13:00-14:40 [Hall A]

SNF/HLW Disposal -6 : R&D by URL
Chair : Hiroyuki Tsuchi (SHIMIZU Co.)

5A-1 Mizunami Underground Research Laboratory Project - Achievement During Phase I/II and Important Issues for Phase III -

Katsuhiro Hama

5A-2 Virtual Reality Geological Modeling for the Horonobe Underground Research Project Takayuki Motoshima, Makito Nago and Yuji Ijiri

5A-3 Latest Rock Grouting Technologies Under Sea Water in Nordic Countries and Japan Masakuni Tsuji, Mitsunobu Okihara, Hitoshi Nakashima, Toshinori Sato and Kazuhei Aoyagi

5A-4 Strategic and Technical Aspects in RD&D Program Development for HLW Disposal System in Korea

JeongHyoun Yoon, JeongHwan Lee and SeungHyun Kim

Technical Session 5B 13:00-14:40 [Hall B]

SNF/HLW Disposal -7: Barrier Performance (Buffer-1)

Chair: Takamitsu Ishidera (JAEA)

5B-1 Study on Gas Migration Behavior through Bentonite Buffer Material

Tomoyuki Shimura, Shinichi Takahashi, Masanobu Nishimura, Kazumasa Koga and Hitoshi Owada

5B-2 Migration Experiment of Void Air in Buffer Material During Seepage

Naohiko Takamoto, Ichizo Kobayashi, Masahiro Kawakubo, Masataka Imai and Tomoko Ishii

5B-3 Study on Piping and Erosion of Buffer Material During the Re-saturation Period

Takayuki Abe, Ichizo Kobayashi, Masahiro Kawakubo, Masataka Imai and Tomoko Ishii

5B-4 Numerical Analysis of Inflow Control for Quality Management of Buffer Material Using Discrete Fracture Network Model

Kazuhiko Masumoto, Makoto Nakajima, Hayato Nonaka, Tomoko Ishii, Mayumi Jo, Masataka Imai and Hiroyuki Atsumi

Technical Session 5C 13:00-14:40 [Hall C]

SNF/HLW Disposal -8: Nuclear & Disposal Related Technology

Chair: Tetsuo Fujiyama (NUMO)

5C-1 Development of Wireless Monitoring Systems for Geological Disposal

Kazuhiro Tsubono, Masato Kobayashi, Hiromitsu Yamakawa and Akinori Hasui, Kazuhiko Masumoto, Tomoaki Matsushita, Norihisa Sugahara, Tatsuya Tanaka and Chiaki Nagai

5C-2 Feasibility Study of Ventilation Design for Underground Facilities

Naoki Katsumata, Ryoji Yahagi, Hiromi Kurosaki and Shigeru Kubota

5C-3 Establishment and Application of Control Room Habitability Methodology for Maanshan Nuclear Power Plant

Kai-Chun Yang, Jong-Rong Wang, Hsiung-Chih Chen, Shao-Wen Chen, Chunkuan Shih and Wen-Sheng Hsu

Technical Session 6A 14:55-16:35 [Hall A]

Radioactive Waste Management Policies, Regulations and Programs-3:

International Cooperation

Chair: Hiroyoshi Ueda (RWMC)

6A-1 International Cooperation Activities of KORAD Including Mid-term and Long-term Strategy of International Cooperation for Radioactive Waste Management Ou Jeong Yoo and Gyeong Hwan Park

- **6A-2** Metadata in Geological Disposal of Radioactive Waste: The RepMet Libraries Russell C. Camphouse. Massimo Ciambrella and Kevin McMahon
- 6A-3 Metadata in Geological Disposal of Radioactive Waste: The RepMet Initiative Massimo Ciambrella, Kevin McMahon and József I. Fekete
- 6A-4 Spent Nuclear Fuel Final Disposal Knowhow, Methodology and Technology Transfer

 Magnus Holmqvist

Technical Session 6B 14:55-16:35 [Hall B]

SNF/HLW Disposal -9: Barrier Performance (Buffer-2)

Chair: Masamichi Obata (TOSHIBA Co.)

6B-1 Sulfide Corrosion by Sulphate-Reducing Bacteria in MX-80 Bentonites

Szu-wei Lee and Ching-Tu Chang

6B-2 Adsorption of Uranium(VI) on the MX-80 Bentonite

Ying-Chieh Lin

6B-3 Am(III)/Nd(III) Interactions with Borate: Experimental Investigations of

Nd(OH)₃(micro cr) Solubility in NaCl Solutions in Equilibrium with BORAX

Yongliang Xiong, Leslie Kirkes, Cassie Marrs and Jandi Knox

Technical Session 6C 14:55-16:35 [Hall C]

SNF/HLW Disposal -10: Site Investigation Technology-2

Chair: Soshi Nishimoto (CRIEPI)

6C-1 Microbial DNA; A Brand-new Tracer of Groundwater Flow

Ayumi Sugiyama, Kenji Kato, Kazuyo Nagaosa, Tetsuo Ibara, Kazuyoshi Takenobu and Atsunao Marui

6C-2 Seismic Analysis for the Deposition Tunnel in Fractured Rock by 3DEC Meng-Hsiu Hsieh and Yuan-Chieh Wu

6C-3 Groundwater Flow Analysis for Evaluating Factors on Water Inflow to the Facility During the Operation Period

Masataka Imai, Minoru Emori, Tomoko Ishii, Masahiro Kawakubo, Kazuhiro Tsubono, Masayoshi Yamaura, Tsuneyuki Maemura and Eiko Sugimoto