

**Discussion Summary of Working Group III**  
**Nuclear Science, Technology, Security, and Safeguards**  
 TECRO-AIT Meeting of the Joint Standing Committee on Civil Nuclear Cooperation  
 December 12-13, 2017

Number of items discussed	24
Closed items	1
New items	2
Moved items	1
Merged items	1
Number of working items after the meeting	21

1. Closed items:
  - **TU-DE-Y1, “Generation IV Nuclear Reactors.”**
2. New items:
  - **RM-DE-EE8, “Information Exchange of Megaports Initiative Implement”**
  - **RM-AIT-III1, “Rapid analysis of radioactive Cesium level in sea water”**
  - **RM-DE-II2, “Radioactive Krypton and Xenon analysis technology”**
3. Moved items:
  - **(new item) AE-DE-EE8, “Information Exchange of Megaports Initiative Implement.”**
4. Merged items:
  - **AE-IN-NR-D66, “Administrative Regulation of the Naturally Occurring Radioactive Material (NORM)” will be merged into AE-IN-NR-D64, “Radiation Protection Technical and Regulatory Information Exchange”**
5. Highlights:
  - **AE-NR-D59, “Radiation Protection Training Program”**  
 If the U.S. side hold any training program related to radiation protection aspects of decommissioning, please notify AEC in advance. AEC would send staff to attend it if budget allowed.
  - **AE-IN-NR-D64, “Radiation Protection Technical and Regulatory Information Exchange”**  
 AIT and TECRO will seek future opportunities in 2018.
  - **AE-IN-NR-D66, “Administrative Regulation of the Naturally Occurring Radioactive Material (NORM)”**  
 Propose to merge into D64 and keep ongoing
  - **IN-OR-I7, “Production and Evaluation of Isotopes and New Radiopharmaceuticals.”**  
 INER will cooperate with Xenobiotic Lab on technology related to C-14 studies. In the future INER will propose opportunities to engage with DOE on new isotopes.
  - **IN-DE-I14, “Information Exchange of Certification, Quality Control and Licensing Procedure of Radiopharmaceutical.”**  
 AIT and TECRO will work together to find contacts.
  - **IN-DE-I19, “Cooperative Programs on the Development of Nuclear Imaging Instrumentation.”**  
 AIT and TECRO will work together to find contacts.
  - **TU-DE-Y1, “Generation IV Nuclear Reactors.”**  
 Due to the policy changes in Taiwan, we decide to close the item.
  - **TU-DE-Y3, “Explore opportunities related to DOE Engineering Innovation Hub for Modeling and Simulation Program.”**  
 NTHU welcomes DOE&NRC continue to provide course/workshop information related to modeling and simulation of nuclear safety and waste management.

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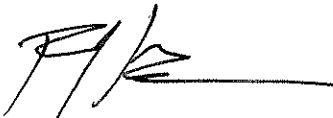
- **TU-DE-Y4, "Formation of New Partnership INL/NTHU/INER/NBL for Education and Training in Nuclear Science and Technology."**  
FRAPCON/FRAPTRAN is still in use at NTHU and the license renewal request will be submitted.
- **AE-NR-Z9, "Response and Management of Radioactive Material Events"**  
AIT and TECRO will seek future opportunities in 2018.
- **TU-AN-CC1, "Neutron Research at Research Reactors."**  
NTHU and other Taiwanese scientists will continue to pursue/submit proposals (approximately 10 individuals for several trips) for beam time at SNS and research reactors in US, doing neutron scattering experiments.
- **AE-DE-EE2, "International Training Course on Physical Protection."**  
TECRO will send two representatives to attend ITC-27 in 2018 at SNL.
- **AE-DE-EE3, "Nuclear Export Control Training."**  
AIT and TECRO will seek future opportunities.
- **AE-DE-EE5, "Radioactive source security cooperation."**  
AEC and NNSA agree to hold a workshop on "Risk Reduction Strategies for the Security of Radioactive Cesium-137" in May or June, 2018 in Taipei Metropolitan.
- **AE-DE-EE6, "Physical Protection of Nuclear Material."**  
AIT and TECRO will seek future opportunities.
- **AE-DE-EE7, "Training in Implementation of New PP Standards and Guidance."**  
AEC proposes DOE/NNSA to provide a workshop related to Nuclear Security Table-top Exercise in 2018.
- **(new item) AE-DE-EE8, "Information Exchange of Megaports Initiative Implement."**  
Propose to move to Group IV.(1)AEC and NNSA agree to add the new working item of "Information exchange of Megaports Initiative implement".(2)AIT will send the invitation to AEC and custom to "Exercise Development Workshop" around June in 2018.
- **AE-AIT-FF1, "State Systems of Accounting and Control (SSAC)."**  
TECRO will work with AIT on the TECRO proposal to host the SSAC training course in Taiwan in 2018.
- **AE-AIT-FF2, "Cooperation in Safeguards Technology."**  
(1) INER plans to complete the collection and stabilization of TRR spent fuel debris. (2)To develop and establish the required measurement method before the declaration of nuclear material of TRR spent fuel debris.
- **AE-AIT-FF3, "Exchange of Information on Implementation of IAEA Safeguards and Additional Protocol."**  
TECRO provided an update to AIT at JSCCNC 2018. AIT will provide an update to TECRO following the JSCCNC. Information on implementing safeguards will continue to be exchanged at JSCCNC 2018.
- **AE-AIT-FF4, "Inventory of U.S. obligated nuclear material in Taiwan."**  
TECRO will submit annual inventory report of all materials in 2018.
- **TU-OR-HH1, "Design of Medical Therapy Facility for THOR."**  
BNCT activities at NTHU is active in these years, including continued clinical trials at THOR and pursuing an accelerator-based neutron source for future development. NTHU will host the 18th International Congress on Neutron Capture Therapy (ICNCT-18) in Taiwan in 2018. NTHU welcomes information exchange and possible collaborations with researchers in US.

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- (new item) RM-AIT-II 1, “Rapid analysis of radioactive Cesium level in sea water”  
Both sides agree to add the new working item of “Rapid analysis of radioactive Cesium level in sea water”.
- (new item) RM-DE-II 2, “Radioactive Krypton and Xenon analysis technology”  
(1) Both sides agree to add the new working item of “Radioactive Krypton and Xenon analysis technology” (2) AIT will work to find contacts for future opportunities in 2018.

Approved:



Robert Rudich, DOE/NNSA  
AIT Representative

Date: 13 DEC 2017



Chien-Liang Shih, INER  
TECRO Representative

Date: Dec. 13, 2017