

**2012 TECRO-AIT Joint Standing Committee on Civil Nuclear Cooperation Meeting
Lawrence Livermore National Laboratory
November 6-8, 2012**

**Discussion Summary of Working Group II
Matters Pertaining to Waste Management and Environmental Restoration**

1. Number of working items discussed in Group II: **18**
2. Number of ongoing working items: **15**
3. Items proposed to close: **1**
 - **AE-DE-DD26:** Calibration methods or measurement-comparison (proficiency testing) methods (or criteria) for clearance measurement systems.
4. Reopen items: None
5. Merged items: **1**
 - **IN-INL-U3** to be merged with **TU-DE-Y4** (Formation of new partnership INL/NTHU/INER/SNL for education and training in nuclear science and technology) under Working Group 3.
6. New items: **1**
 - “**UF6 Stabilization and Disposition**”
7. Number of working items in Group 2 after group discussion: **17**
8. Highlights:
 - a) TECRO appreciates the assistance of AIT. Many of the cooperative items have been successfully pursued, and two items have been completed. Following detailed discussion, both sides agree to close the following items:
 - **FC-NR-G34:** Peer review of national report of Taiwan for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
 - **AE-DE-DD-26:** Clearance measurement systems
 - b) **IN-INL-U3** will be merged with merged with **TU-DE-Y4** (Formation of new partnership INL/NTHU/INER/SNL for education and training in nuclear science and technology) under Working Group 3.
 - c) The Taiwan Authorities have announced a new energy policy that will eventually see Taiwan become nuclear-free. The Chinshan, Kuosheng and Maanshan nuclear power

plants will not operate beyond their planned 40-year lives and the plant at Lungmen will not begin operations until all safety requirements have been met. Spent fuel dry storage and nuclear power plant decommissioning will therefore continue to be essential. Both TECRO and AIT recognize the importance of cooperation on the following items in the near future:

- **FC-IN-NR-G23:** Licensing of independent spent fuel storage installations
- **AE-NR-J2:** Management of decommissioning waste
- **IN-ANL-J4:** Information transfer on decontamination and dismantling of research nuclear facilities
- **TP-EM-DD22:** Planning for decommissioning
- **AE-DE-DD29:** Used nuclear fuel extended storage

d) As part of the reforms by the Taiwan Authorities, INER will leave the authorization of AEC and be moved under the authorization of the Ministry of Economic Affairs, MOEC. It will also be renamed as the Institute of Energy Research (IER). INER's remaining supply of UF_6 is currently stored in tanks and will not be used in the future. Taiwan seeks to send this UF_6 to a conversion facility to enable reuse. TECRO raises this topic as a potential new collaboration item, "UF6 Stabilization." (*New Item*)

e) Specific comments on Group II working items and actions for the next year:

G23: Licensing of independent spent fuel storage installations

Action: INER and NRC will develop a workshop on spent fuel storage, potentially to be conducted in 2013. Other specific actions are listed in the updated Active Working Items document.

G33: PCC for material declaration of TRR spent fuel

LANL will continue reviewing measurements for TECRO and will send information for evaluation. This working item will be extended to 2015. No specific activities identified for the coming year.

G34: Peer review of national report of Taiwan for the Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management

This item was considered for closure, but after discussion it was decided to keep it open because of future need. Both parties expect no activity in the next year, but look forward to the reviews of future reports.

G35: Information and data management system for SNF interim dry storage facility

This item was proposed for closure because Sandia completed the Phase I report but didn't receive funding for follow-up activities. However, we propose to keep this

item open for another year without action items, pending potential future funding at Sandia National Laboratory.

Change the AIT Coordinator from Robert Finch to Kevin McMahon of Sandia National Laboratory.

J2: Management of decommissioning waste

Suggest changing the AIT representative to Lydia Chang or Bruce Watson of FSME/NRC instead of having DOE-NE personnel for AIT, as NE is not involved.

Actions: NRC workshop will be conducted in AEC in 3rd week of November, 2012.

Also, FCMA hopes that NRC could arrange an on-the-job training course in "Inspection of Nuclear Power Plant Decommissioning" for 2014; FCMA will identify its needs before development of such a course, and NRC will consider it. NRC may be able to facilitate "shadowing" of NRC inspectors.

J4: Information transfer on decontamination and dismantling of research nuclear facilities

Action: This coming year, information will be exchanged regarding spent fuel pool decommissioning. INL has done work in this area and we want to include Rick Demmer of INL as the AIT Coordinator rather than ANL, which has not been involved.

U2: Irradiated fuels and materials research program from 2011 to 2014

Continue with the existing plans. In the next year, TECRO hopes to finish all fuel stabilization work and start uranium sludge stabilization work.

U3: Hot laboratory management and post-irradiation examination technology

Merge this item with TU-DY-Y4 (Formation of new partnership INL/NTHU/INER/SNL for education and training in nuclear science and technology) under Working Group 3.

X1: Transport and disposal practices of irregular waste forms

Change TECRO representative to Jiann Lin Liu

Action: Charley Yu of ANL has been contacted to hold a RESRAD training workshop at end of 2012 or early 2013.

Z9: Response and management of radioactive material events

No action items other than continued discussion.

DD12: Public participation

No specific activity the past few years because of difficulties in waste siting process and changes in U.S. program. Keep this item open without action items; EM can assist in the future.

DD19: Geological repository sciences

U.S. will have more options for repository in the future, so it is advisable to keep this item open. Change AIT Personnel representative to Kevin McMahon (Sandia National Laboratory).

DD22: Planning for decommissioning

TPC rejoined EPRI Decommissioning Technology Program as a cofounder and will involve more activities. TPC has applied for funding to send project managers abroad for learning about D&D management. Action: In December 2012, approximately 9 TPC staff will visit two plants being commissioned in the U.S.

DD23: Technology transfer for radioactive waste disposal

Change AIT Personnel to Karen Skubal (DOE-EM) and Kevin McMahon (Sandia National Laboratory).

Action: EM will assist TECRO in obtaining information on environmental remediation as requested.

DD26: Clearance measurement systems

Propose to close.

DD27: TRU waste management

Change AIT Personnel to David Mercer (LANL). Action: Continued sharing of information.

DD28: Contaminated soil remediation

Change Personnel to add Karen Skubal (DOE-EM) and to change LANL to AIT under this designation. Action: Continued information sharing.

DD29: Used nuclear fuel extended storage

Change TECRO Personnel to add the English name of the second representative, Hsan-Lan Chiou. Add John Kessler (EPRI) to the AIT personnel, along with Jeffrey Williams (DOE). Keep this item open. This project is affiliated with NRC and EPRI. Actions: In 2013, Taipower will initiate a study to address extended storage issues after the Chinshan ISFSI is commissioned. Also, INER will send experts to the next ESCP meeting.

New Item: UF6 Stabilization and Disposition.

Presentation given to TECRO-AIT Working Group 2 on this topic by Kwang-Fu Tsai (INER).

Add new Reference Number: IN-DE-DD-30

TECRO Coordinator: Tai-Ming Chiu (INER)


TECRO Personnel: Kwang-Fu Tsai (INER)

AIT Coordinator: Ana Han (DOE-EM)

AIT Personnel: Chuan-Fu Wu, ATL

Benefits: To assist TECRO with the stabilization and the safe storage/disposal of depleted UF6 and the enriched UF6 in INER.
Action items to be added by TECRO.

Approved:


Karen L. Skubal

AIT Representative

Date: Nov. 7, 2012


Wuu-Kune Cheng

TECRO Representative

Date: Nov. 7, 2012