

WM2017 Conference Panel Report

PANEL SESSION 1: Waste Management Symposium 2017 Plenary Session

Co-Chairs: **James Gallagher**, *Gallagher Consulting*
James Fiore, *Fiore Consulting*

Panel Reporter: **Linda Lehman**, *CH2M PRC*

Panelists: **Hirohide Hirai**, *Director-General, (ANRE), Ministry of Economy, Trade and Industry (METI) (Japan)*
Greg Meyer, *Senior Vice President, Environmental and Nuclear Operations, Fluor Corporation*
Sue Cange, *Acting Assistant Secretary for Environmental Management (EM-1)*

The plenary panel focused on government and industry world leaders who spoke on the pressing issues facing radioactive waste management in 2017 and beyond. The session was attended by over 1,000 attendees.

Hirohide Hirai stressed the accomplishments of the many Japanese and international organizations, both governmental and private in the cleanup work that is ongoing at Fukushima.

Fukushima NPP lost its cooling function on March 11, 2011 as a result of the tsunami, resulting in considerable damage to the reactor units as well as contamination of groundwater and surface water. With the partnerships that Japan has formed, considerable expertise has been applied to the problems of reactor stabilization and the cleanup of water resources. Today, the reactors are stabilized and future contamination has been substantially prevented. The reactors now can withstand even stronger earthquakes. “As work moves forward we expect to learn about a great deal of things that no one had occasion to anticipate” **Hirai** stated. Today dose reduction measures have allowed workers to work safely on 90% of the site. Almost all food products grown near Fukushima are safe for consumption on the common market.

Unit 4 NPP still has a high air dose but all spent fuel has been pulled out. Unit 3 has received a new roof which prevents ingress of water from above. Contaminated groundwater has been brought under control through a series of cryogenic walls and dug channels which prevent groundwater from entering the plant. More and more information is being collected by robots in the high radiation environment. Decommissioning has just begun and will require much work in the future that brings together cutting edge technologies from the world over.

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Future plans call for utilization of their Pu stockpile by creating a closed fuel cycle preprocessing capability under the monitoring of the IAEA. Two international workshops are planned:

- International Workshop on Decommissioning of Nuclear Power Plants to be held in Tokyo, Japan on June 30th, 2017
 - International Workshop on Fukushima to be held on July 2nd, 2017, also in Tokyo.
- For more information on these workshops please visit the Japan Pavilion.

Greg Meyer presented his personal observations based on his vast experience in the nuclear industry. Most contractors in the nuclear industry work in a high hazard low probability environment. This type of environment is highly regulated and because of this he stated, “What happens to one happens to all.” Impacts from an adverse occurrence should not be underestimated. He used the closure of WIPP as an example, because it caused large problems to most other DOE sites containing TRU wastes. To combat this, he urged not to short cut training. He claimed the challenge to this group is to be a safety leader, study the data and assess the “whole picture”.

Contractors are usually very good at what they do. The hardest part is achieving up front buy-in by regulators and stakeholders. We need agreement on what the cleanup standard will be, where the waste is going and costs. We must work more openly and in partnership with regulators, stakeholders and community leaders. Successful partnerships are those where all sides walk away happy.

Sue Cange provided an update on the EM program and thanked the contractors for their part of the cleanup effort. **Cange** stated, “We are coming off of a banner year where we have had significant progress across the complex. These are exciting times for EM.”

EM has shifted its focus from HQ centered management to site centered management, where HQ provides support. The DOE cleanup effort is complex and diverse. Each site plays a distinct role and has unique cleanup requirements (laws), agreements as well as differing waste streams and waste characteristics. We are committed to working as safely and efficiently as possible. EM uses the best contractors and national laboratories to help us meet our technology development needs.

EM started in 1989 with 107 sites across the country. EM was in a characterization mode then, understanding what we had and where it was located. Now we are down to just 16 sites and have made considerable progress at those remaining. The cleanup effort will still take decades and is not expected to be completed until 2070 at a cost of \$247 billion.