AIChE-Pittsburgh September Meeting Notice

Wednesday, September 14, 2011

Joint meeting with the American Nuclear Society (ANS) and the ACS-Energy Technology Group (ACS-ETG)

Fukushima Daiichi – Is it Safe Yet?

Dr. Ted S. Andersen, ChemTech Consultants, Inc.

The situation at TEPCO's Fukushima Daiichi nuclear power station is still evolving and dynamic. There are many lessons available now and more to emerge as recovery and clean-up efforts progress.

- Six months will have elapsed by the date of our meeting. Fukushima Daiichi has nearly disappeared from our news headlines. An appropriate question is: "Is It SAFE Yet?"
- A paper published just before the Fukushima event reflected on the anniversary of the Chernobyl event. It suggests that design and risk assessment takes place in the context of cultural and organizational norms of the design organization.
- An April Business Week article suggested that the answer to "… Safe Enough?" is political, not technical.
- Elsewhere in that same article is a suggestion that engineers don't give enough credence to risks they don't understand or can't handle – such as a once in a thousand year tsunami.
- Do you agree with any or all of these?
- These are questions and concerns that are not limited to nuclear power plants but extend to refineries, chemical plants, coal mines, hydro-electric projects, etc. that we all may be involved in.

These are some of the questions to be discussed at the September AIChE meeting in the context of the March 11, 2011 earthquake and tsunami. Dr. Andersen will give an overview of Boiling Water Reactor design features, the sequence of the initiating events and progressive failures, and, some unique aspects of risks associated with nuclear power reactors. Beyond the background, we will hopefully address the magnitude of the global impacts of the event, progress in recovery, and particularly the risks that remain to be mitigated. The presentation will build on information publicly available from the Japan Atomic Industrial Forum and other Japanese and global sources. It will include human interest stories of those displaced by the disaster as well as an appreciation for those earnestly working on site to restore cooling and containment. Technical detail will rise above popular media but will not require a nuclear science back ground to understand and participate. Dr. Andersen invites input on questions or areas of interest before the presentation. Send them to him at TSAndersen@AOL.com.

Dr. Ted S. Andersen, Ph.D., P.E., M.B.A., Chemical Engineer, brings the experiences of a full and varied career to the issue of safety in general and in respect to nuclear power in particular. He earned a B. Ch.E. from the Cooper Union in New York City and M.S., Ph.D. (Ch.E.) and MBA from the University of Pittsburgh. He is a registered PE in PA and has twice served as Chair of the Pittsburgh AIChE section. His career began with thirteen years at the Bettis Atomic Power Lab in engineering and management roles in the design and analysis of fluid systems, radiation shielding, and simulation of corrosion product activation and deposition. Projects included upgrading the safety injection system at the Shipping port Atomic Power Station for the Light Water Breeder Reactor demonstration. He moved on to the

Westinghouse Advanced Energy Systems Division to work on various solar and wind energy projects culminating in the first large wind farm project in Hawaii (fifteen 500 kw turbines). He served several years on the board and as Chair of the American Wind Energy Association in its formative years. Ted then joined the Westinghouse AP600 advanced passive reactor team and was instrumental in winning DOE and EPRI support for an innovative design and early licensing project. That project has since evolved into the Westinghouse AP1000 design being built in China today. For the past fifteen years, Ted has been at ChemTech consultants, now as Chief Engineer. There he provides design and project consulting in more traditional areas of Chemical Engineering but often on non-conventional projects; one current project is on clean conversion of low grade coal to commercially useful and valuable liquids. Ted is an advocate of a balanced approach to energy with a healthy regard for safety and environmental impact.

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Location: Rock Bottom Restaurant and Brewery, 171 East Bridge Street, Homestead, PA 15120
Wednesday, September 14, 2011. Free restaurant parking.
High-Level Room: Social Hour 6:00 pm, Dinner 6:30 pm, Talk 7:30 pm

For reservations, please contact Dr. Todd Gardner, Chair, AIChE-Pittsburgh Section, by September 13th at 304-285-4226 or by Email at Todd.Gardner@NETL.DOE.GOV. Our meetings are open to all.

The cost of the dinner is $30 and includes tax and gratuity. Specify meal preference: Brown Ale Chicken, Brewery Angus Beef Pub Tips, Grilled Salmon or Vegetable Pasta Primavera. Desert: carrot cake or stout chocolate cheesecake. Unlimited soda, coffee or iced tea included.