

10/29/09

MEMORANDUM TO: Michael R. Johnson, Director
Office of New Reactors

FROM: Thomas A. Bergman, Director
Division of Engineering
Office of New Reactors

SUBJECT: COMBINED QUICK LOOK/FOREIGN TRIP REPORT TO
PARTICIPATE IN [redacted] AND CHINA-UNITED
STATES TECHNICAL WORKSHOP IN BEIJING, CHINA,
OCTOBER 14 - 22, 2009

The purpose of this memorandum is to inform you on the subject foreign travel. [redacted]

out of scope

[redacted]

[redacted] On

October 19-20, 2009, I attend the 3rd China-United States (US) Technical Workshop on Application of American Society of Mechanical Engineers/American Society for Testing and Materials (ASME/ASTM) Standards including AP1000 Technology, held in Beijing, China, where I provided a presentation titled, "US Regulatory Environment for New Reactor Applications."

out of scope

[redacted]

[redacted] (b)(4)

Exp 4

[redacted] (b)(4)

On October 21, 2009, I participated in a meeting with Chinese Nuclear Society (CNS) to discuss the role of Codes and Standards in the US regulatory framework. On October 22, 2009, I participated in a meeting with the Institute of Nuclear and New Energy Technology, Tsinghua University for briefings on two new nuclear power plant designs under development in China.

Additional details are provided in the enclosed trip report. Also enclosed are the agendas for the two workshops. Copies of the workshop presentations are available electronically if desired.

[redacted] (b)(4)

Exp 4

Enclosures:

1. NRC Foreign Trip Report
[redacted] *out of scope*
3. Agenda for China-US Technical Workshop

Information in this record was deleted in accordance with the Freedom of Information Act Exemptions 4, out of scope
FOIAPA 2010-0290

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NRC FOREIGN TRIP REPORT

Subject

Outside of Scope

out of scope

2. China-United States (US) Technical Workshop on Application of American Society of Mechanical Engineers/American Society for Testing and Materials (ASME/ASTM) Standards including AP1000 Technology.
3. Ancillary side-trips and meetings generated as a result of the workshops.

Dates of Travel and Countries/Organizations Visited

Outside of Scope

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2. October 19 – 22, 2009, China
 - a. China-US Technical Workshop – organizations included: (1) US organizations – Department of Energy, ASME, ASTM International, NACE International, and Westinghouse; and (2) Chinese organizations – China Machinery Industry Federation (CMIF), State Nuclear Power Technology Corporation of China (SNPTC), National Energy Administration (NEA), and National Nuclear Safety Administration (NNSA).
 - b. Meeting with Chinese Nuclear Society (CNS).
 - c. Meeting with Institute of Nuclear and New Energy Technology (INET) of Tsinghua University.

Author, Title, and Agency Affiliation

Thomas A. Bergman, Director, Division of Engineering, Office of New Reactors

Sensitivity

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Background/Purpose

The trip was arranged at the request of the workshop sponsors to provide an opportunity for the US Nuclear Regulatory Commission (NRC) to express its views regarding the use of consensus Codes and Standards in the licensing and regulation of nuclear power plants, and to provide NRC perspectives on the nuclear renaissance, globalization and standardization, the importance of international collaboration, and the state of licensing reviews in the US. In addition, a number of ancillary meetings and trips were arranged around the workshops.

Abstract: Summary of Pertinent Points/Issues

Outside of Scope

At the China – US Technical Workshop, Mr. Bergman provided NRC perspectives on the current state of new reactor application reviews through a presentation titled, "US Regulatory Environment for New Reactor Applications." Topics in the presentation included a discussion of how consensus Codes and Standards are used in new reactor reviews and their affect on public health and safety; the role of globalization and international cooperation and their importance to safety; the current status on licensing reviews in the US; the importance of standardization in the US and globally, and the potential impact on safety; and an overview of the construction inspection program in the US and our international activities related to construction and vendor inspection.

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This subject also arose during a meeting on the 21st with the Chinese Nuclear Society.

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Discussion

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3rd China-US Technical Workshop – Beijing, China

The purpose of the China-US workshop was to discuss the application of Codes and Standards, with a focus on AP1000 technology. This workshop had more presentations at the

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implementation level. It included discussions on ASME and ASTM Codes and Standards applicable to nuclear power, again with a focus on design and quality assurance throughout the supply chain and during plant construction; discussions on the need for harmonization of Codes and Standards driven by globalization of the supply chain, and standardization of designs across countries. The Chinese representatives discussed the development of China nuclear Codes and Standards (potentially in lieu of adopting ASME/ASTM Codes and Standards), the status of AP1000 projects in China, and an overview of China's nuclear safety supervision. The latter was presented by Mr. Jiang Guang, Deputy Administrator of NNSA. In his presentation Mr. Guang noted issues similar to those faced by the NRC staff, in particular the incomplete state of the design. He also noted that Westinghouse was unable to complete the design work at the same pace of fabrication. Lastly, he noted that there were quality assurance issues at the site with respect to proper documentation of work that had been done.

Ancillary Meetings

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Meeting with Chinese Nuclear Society

On October 21, 2009, I met with representatives of CNS and ASME. The purpose of my attending the meeting was to discuss the role of Codes and Standards in the US regulatory framework. ASME representatives were seeking greater participation from China in Code development. CNS representatives pointed out that China intended to develop its own Code and offered little definitive support to ASME. I explained that our processes allow alternatives to ASME, provided the alternative can be demonstrated to provide an equivalent level of safety. Members of CNS were also very interested in the AP1000 shield building and I essentially covered the same discussion as with NNSA.

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On October 22, 2009, I visited the Institute of Nuclear and New Energy Technology, Tsinghua University, in Beijing, China, with ASME representatives for briefings on two new nuclear power plant designs under development in China. The briefings were informative and demonstrated the extent to which China has developed its capabilities to design and manufacture nuclear power plants. The designs discussed were a low-power (200 MWt) pressurized water reactor that was to be used to provide heating for cities and desalination plants. The other was their high temperature gas reactor that uses two 200 MWt pebble bed reactors using a steam cycle to produce 250 MWe from a single turbine-generator.

Pending Actions/Planned Next Steps for NRC

None.

Points for Commission Consideration/Items of Interest

The Commission may be interested in the discussion with NNSA regarding the NRC's announcement on the suitability of the AP1000 shield building.

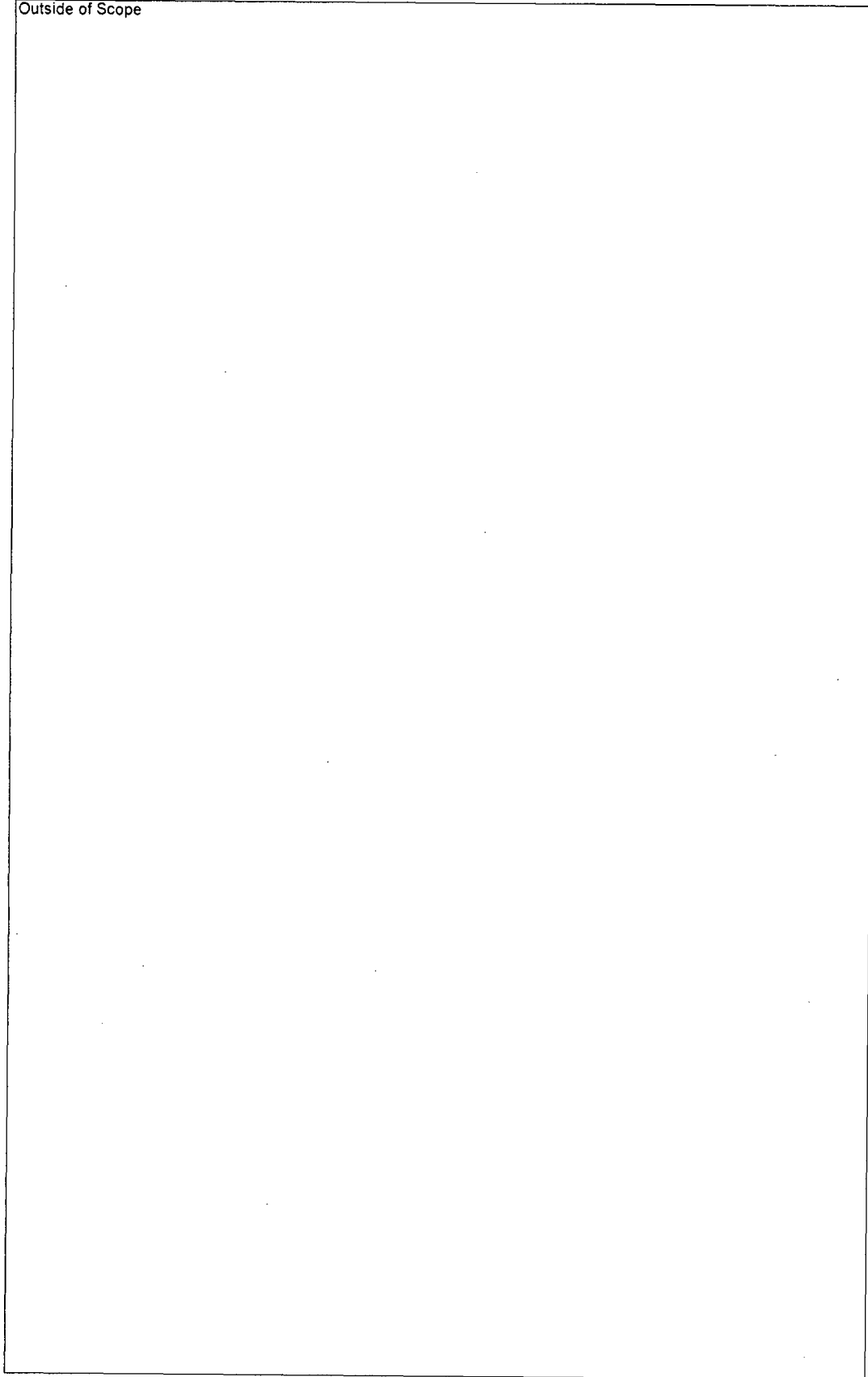
"On the Margins"

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Outside of Scope



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Day 2 Thursday, October 15

09:00 Session 5 Codes & Standards Needs for Light Water Reactors, Including Operating Experience and Life Extension
Session Leads: Ray West – Dominion Resources Services
Koji Yamada – Chubu Electric Power Company
Speakers: Yoji Ueda – Agency for Natural Resources and Energy
Ted Sullivan – U.S. Nuclear Regulatory Commission
Koichi Kashima – Central Research Institute of Electric Power Industry
Ted Meyer – Westinghouse

10:30 Break

10:45 Open Forum: Stakeholders' Needs for Nuclear Codes & Standards
Moderators: Rich Porco – Ellis & Watts International, LLC
Koji Koyama – Mitsubishi Heavy Industries

11:45 Closing Remarks
Bryan Eiler – Vice President, ASME
Dr. Masaki Shiratori – Former President, JSME

12:00 Adjourns

18:00 Reception Hosted by ASME

Agenda
China-US Technical Workshop on
Application of ASME/ASTM Standards Including AP1000 Technology
 19-20 October 2009
 Beijing, China

Date	Content	Organization	Reporter
October 18			
18:30-20:30	ASTM/ASME Reception, Beijing Room Kerry Center		
October 19 AM Moderator: Mr. Sui Yongbin (Special Advisor, CMIF)			
09:00-09:10	Opening Ceremony Introducing VIPs	CMIF	Mr. Sui Yongbin Special Advisor
09:10-09:40	Opening Remarks	SNPTC	Mr. Qiu Dazhuang Vice President
		ASME	Mr. Amos Holt President
		ASTM International	Mr. Roger Stoller First Vice Chairman
09:40-10:00	China's Nuclear Nuclear Standards Development Program	NEA	Mr. Huang LJ Deputy Director- General
10:00-10:30	China's Nuclear Safety Supervision	NNSA	Mr. Jiang Guang Vice Administrator
10:30-10:50	AP1000 Technology in China	SNPTC	Mr. Wang Jun Chief Engineer
10:50-11:10	Gradually Establish China's Nuclear Power Standard Systems in the Process of Engineering Practice	Chinese Academy of Sciences	Mr. Ouyang Yu Academician
11:10-11:30	Sino-China Nuclear Cooperation Plan	China Office U.S. Department of Energy	Mr. Martin Schoenbauer Executive Director

12:00	Buffet Lunch		
October 19 PM Moderator: Mr. Yan Hongqiang (President, SPER)			
13:30-14:30	The U.S. Regulatory Environment	U.S. Nuclear Regulatory Commission (NRC)	Mr. Tom Bergman
14:30-14:55	Q&A		
14:55-15:35	The Westinghouse AP1000 In China and Global Deployment	China AP1000 Onshore Engineering Westinghouse	Mr. Mike Shaqqo Director
15:35-16:00	Q&A		
16:00-16:10	Tea Break		
16:10-17:30	Quality Systems and Nuclear Conformity Assessment	HSB	Mr. Wil LaRochelle
		TUV Rhineland	Mr. Bernie Hrubala
17:30-18:00	Q&A		
18:30	Welcome Reception		
October 20 AM Moderators: Mr. Zheng Mingguang (President, SNERD)			
08:30-08:45	ASME Nuclear Codes & Standards	ASME	Mr. Bryan Erler
08:45-09:40	ASME Quality System Certificate (QSC) for Materiale Organizations	HSB	Mr. Wil LaRochelle
09:40-10:10	Q&A		
10:10-10:20	Tea Break		
10:20-11:20	The Application of ASTM D33 Standards In the Selection, Evaluation and Maintenance of AP1000 Power Plant Coatings and Linings	ASTM International	Mr. Jon Cavallo
11:20-11:50	Q&A		
12:00	Buffet Lunch		
October 20 PM Moderator: Mr. Sui Yongbin (Special Advisor, CMIF)			

13:30-14:20	The Application of ASTM C26 and E10 Standards in Evaluating and Maintaining Components of AP1000 Power Plants	Oak Ridge National Laboratories	Mr. Roger Stoiber
14:20-14:40	Q&A		
14:40-15:30	The Application of ASTM International Corrosion Test Methods and Practices in the Evaluation, Maintenance and Operation of AP1000 Plants	NACE International - The Corrosion Society	Ms. Helena Seelinger
15:30-15:50	Q&A		
15:50-18:00	Tea Break		
16:00-16:50	The AP1000 Supply Chain for Materials	Sanmen AP1000 Westinghouse	Mr. Lee Clyde Engineering Manager
16:50-17:10	Q&A		
17:10-17:50	ASTM International Partnerships in China & Participating in ASTM Technical Committees	ASTM International	Ms. Teresa Cendrowska Vice President Global Cooperation
	ASME Code and Your Organization	ASME	Mr. Mark Sheehan Managing Director Development
17:50-18:00	Closing Remarks	CMIF	Mr. Sun Changji Special Advisor

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