



**ANSI-NIST**  
***Nuclear Energy Standards***  
***Coordination Collaborative***

**Meeting Report**

Monday, November 22, 2010.

**NIST Headquarters**  
100 Bureau Drive, Stop 1070  
Building 101 Employee Lounge  
Gaithersburg, MD 20899-1

**Agenda Item 1      Opening Remarks and Introductions**

Dr. Ambler Thompson, NIST, opened the meeting by thanking all attendees, both those attending in-person and those participating via teleconference. All attendees were asked to introduce themselves and state the organization they represented. A complete list of attendees is available as attachment 1 of this report.

**Agenda Item 2      Approval of the Minutes of the May 26, 2010 Meeting –  
NESCC 10-027**

The NRC was asked to report on the status of its endorsement of AISC N 690-06. It was reported that AISC N 690-94 is referenced in the NRC's Standard Review Plan (SRP) in section 3.8. The latest edition of the standard, AISC N 690-06, will be reviewed for possible endorsement in a Regulatory Guide. This edition contains a new appendix on modular construction that may be given conditional endorsement in the Regulatory Guide, pending a more detailed review of the appendix by the NRC.

The NRC was also requested to provide an update on the work of the MDEP on Digital Instrumentation and Control (DI&C). It was reported that the MDEP has established working groups on DI&C in two areas: design specific (AP1000 and EPR) and issue specific (DI&C, codes and standards, vendor inspection, etc.). Within the ERP design-specific working group, there are four technical sub-groups. The sub-group on EPR I&C is chaired by an NRC staff member.

The EPR I&C sub-group has been meeting since 2007 and consists of DI&C experts from China, Canada, France, Finland, the United Kingdom and the United States. The purpose of the sub-group is to:

- Share technical insights from reviews to improve the overall evaluation for all countries;
- Leverage resources and information where possible;
- Understand differences and commonality among the ERP technical positions as well as regulatory practices; and
- Enhance communication and coordination of information between countries and with external stakeholders.

To date, the sub-group's accomplishments include:

- The development of common positions (internal to MDEP);
- Communication and coordination for the EPR data communication issues;
- Communication of MDEP EPR I&C efforts at a nuclear conference; and
- Observation of inspection activities of one member by another member country.

The meeting minutes were approved as written in document NESCC 10-027.

**Agenda Item 3           Advanced Manufacturing and Fabrication  
(NESCC 10-039)**

Mr. Thomas Miller, U.S. Department of Energy, offered the presentation contained in NESCC 10-039. At the conclusion of the presentation, Mr. Miller informed attendees that both the Senate and the House had supported the budget for this initiative previously, and expressed his hope that this would be the case going forward. He further specified that DoE is looking for specific research programs to be submitted by applicants.

**Agenda Item 4           Small Modular Reactor Update  
(NESCC 10-041)**

Mr. Richard Black, U.S. Department of Energy, offered the presentation contained in document NESCC 10-041.

The Department of Energy is working with Small Modular Reactor (SMR) vendors by providing them seed money now in exchange for a discounted power purchase agreement in the future. The biggest current example of this is at Clinch River, which is adjacent to the Oak Ridge National Laboratory. Mr. Black explained that the return on investments for these projects was anticipated to be fruitful.

A request for vendors and project teams to provide proposals to support these projects is expected to be issued in March 2011. The TBA/Empower Team is expected to provide a response which it hopes to have through the NRC approval process as quickly as possible.

It was inquired as to how next generation nuclear plants (NGNP) relate to SMRs, as NGNP can technically be defined as an SMR based on its size. It was noted that while NGNP can fit into the definition of an SMR, NGNP are supported in a separate line item in the federal budget. Further, the need for new technological standards to support SMRs is minimal, as opposed to a wide ranging need for NGNP.

At the conclusion of the discussion, ASME was encouraged to review the fabrication and construction standards available for SMRs.

**Agenda Item 5      Long-term Experience of the Gas Industry with Polyethylene Pipe Systems  
(NESCC 10-037)**

Mr. Ernest Lever, Gas Technology Institute, offered the presentation contained in document NESCC 10-037.

It was explained that most of the standards used currently are ASTM standards, which are performance based. The work the Gas Technology Institute has done has shown that more prescriptive construction standards are needed. The Institute has pointed out the gaps and now needs standards developed to address them.

**Agenda Item 6      ACI Nuclear Concrete Inspection and Training Program – Current Status  
(NESCC 10-040)**

Mr. Douglas Sordyl, American Concrete Institute, offered the presentation contained in document NESCC 10-040.

At the conclusion of the presentation, much discussion ensued about Level 3 Certification. It was noted that the exam for Level 3 Certification has not been offered by ACI in 15 years. This does not mean that there are no certified inspectors, but that those who are certified do not have the most up-to-date information. In the time since the exam has been offered, the ACI materials for concrete practice licensing have increased from 3 books to 7 books. Those who currently have the certification do not possess the most up to date information. Instead of simply adding on to the requirements of the Level 3 Certification, ACI has decided to do a complete overhaul of the certification so as to ensure that the most up to date information is included.

ASME indicated their support for this idea, recognizing the need for certified personnel in concrete inspection. ASME, AISC and ACI were encouraged to work together on the certification update, and to engage to DoE and NRC as early as possible when drafting new requirements.

**Agenda Item 7      NEI Digital Update  
(NESCC 10-035)**

Mr. Jim Riley, Nuclear Energy Institute, offered the presentation contained in document NESCC 10-035.

As this was NEI's first presentation to the NESCC, the presentation offered a history of the organization. NEI is a membership organization that includes all utilities with

nuclear power plants, universities and vendors. It is a policy making organization for the nuclear power industry. Attendees noted their appreciation for NEI's participation in the group.

**Agenda Item 8          ASTM Update  
(NESCC 10-036)**

Mr. Joe Koury, ASTM, offered the presentation contained in document NESCC 10-036.

At the conclusion of the presentation, an inquiry regarding whether there is direct referencing of ASTM standards by DoE and NRC, or if the standards were more guidance documents was raised. It was explained that many ASTM standards are embedded in the ASME boiler code, which is used by the NRC. Other NRC documents require inspection to ASTM requirements; and the NRC also endorses ASTM standards in its regulatory guides, which are not mandatory.

**Agenda Item 9          Other Business**

This item was moved from Agenda Item 10 to Agenda 9 because of the timing of the meeting.

Dr. Thompson informed attendees of a request from METI, the Japanese Ministry of Economy, Trade and Industry, regarding membership in the NESCC. The organization was informed that they could have observer status in the NESCC. Attendees supported having international experts attending meetings, citing that harmonization of standards has been a main goal of the NESCC since its inception. China's desire to standardize a reactor was cited as one such example. ANSI reminded attendees that the NESCC was established to first address the needs of the United States. Once these needs have been addressed, the needs of the international community can be evaluated.

Dr. Thompson updated attendees on a workshop that took place in October 2010 in Brazil with ASME and the Department of Commerce (all presentations are available here: [http://www.focusbrazil.org.br/Events/Event-US-Standards2010\\_Program.html](http://www.focusbrazil.org.br/Events/Event-US-Standards2010_Program.html)). Brazil is interested in establishing itself as a major supplier of nuclear products (i.e. reactors) to the rest of the world. These products would be developed using NRC and ASME standards. Originally, Brazil wanted to use the standards in English, but after some consideration, it was agreed that INMETRO and the Brazil Institute of Petroleum would translate the ASME standards to Portuguese. This will allow the standards to be more easily understood. Much more work is anticipated with Brazil in the future.

An update was given on the interest of India in the nuclear power plant industry. Currently, India has expressed much interest in US technology, but has yet to reach out for further information. France and Russia have a much higher level of exposure in India at this time. It would be advantageous to find a way for the US to provide India with some information on our programs. ANSI informed attendees about its close relationship

with the standards body of India, BIS. It would be possible to suggest a workshop be held between ANSI and BIS on this topic, should Indian industry show interest.

**Agenda Item 10      Task Group Report**

**Concrete Task Group (NESCC 10-0033, NESCC 10-034)**

Ms. Clarissa Ferraris, NIST, offered the presentation contained in document NESCC 10-034. She also reviewed the draft report of the Concrete Task Group, contained in NESCC 10-033.

At the conclusion of the presentation, discussion turned to research for improvement of concrete. It was noted that NIST, industry and universities conduct the research focused on compound concrete. The NRC encouraged in-depth research that it could endorse.

The next step for the Task Group will be to finalize the draft report of their findings. Members of the Task Group were encouraged to submit their comments on the text as soon as possible so that consensus can be achieved.

**ACTION:** The NESCC requests the Concrete Task Group to finalize its report and submit to the NESCC for final approval at the March 1, 2011 NESCC Meeting.

**Standards Database Task Group (NESCC 10-031)**

Ms. Andrea Valentin, NRC, offered the presentation contained in NESCC 10-031.

Ms. Valentin noted that the Task Group is currently populated with many NRC experts, and invited others to join. She informed attendees that while the database is currently populated with standards that are accepted or approved in an NRC regulatory guide, there is the possibility that working drafts could also be included. The main goal of the database at this time is to identify the gaps in standards.

The discussion also touched on how user feedback would be collected. It was suggested that a website be created to collect such information, and that an NRC contractor would be needed to monitor it.

Ms. Valentin closed the discussion by encouraging SDOs who wish to have standards endorsed or recognized by the NRC to send letters with such a request to Michael Case at the NRC.

Ms. Valentin will no longer serve as the Convener of the Standards Database Task Group. The NESCC wishes to express its appreciation for the dedication she has shown to the group. Mr. Robert Carpenter, NRC, will now serve as Convener.

**Polymeric Piping for Nuclear Power Plants (NESCC 10-032)**

Mr. Aaron Forster, NIST, offered the presentation contained in document NESCC 10-032.

As per the request from the May 26, 2010 NESCC meeting, the Polymeric Piping Task Group has finalized its scope. The group is currently surveying its members as to the needs they see for polymeric piping standards and will use that information to provide a report the May 2011 meeting of the NESCC.

**Agenda Item 11      Next Steps**

The next meeting of the NESCC will be held on March 1, 2011 at NIST in Gaithersburg, Maryland.

**Agenda Item 12      Adjournment**

The meeting was adjourned at 3:45 pm.

**Nuclear Energy Standards Coordination Collaborative**  
**22-Nov-10**

*In-Person Attendance*

<b>Name</b>	<b>Last Name</b>	<b>Affiliation</b>
Ken	Barry	EPRI
Richard	Black	U.S. Department of Energy
Peter	Buzzard	PSEG Nuclear
Patricia	Campbell	GE Hitachi Nuclear Energy
Robert	Carpenter	NRC
Gerry	Cheek	NIST
David	Darwin	University of Kansas
Clarissa	Ferraris	NIST
Aaron	Forster	NIST
Herman	Graves	NRC
Steve	Hand	Chicago Bridge and Iron
N. Prasad	Kadambi	ANSI
Lisa	Karan	NIST
Dan	Kaufman	AISC
Joe	Koury	ASTM
Ernest	Lever	GTI
Jonathan	Martin	NIST
Nancy	McNabb	ASME
Tom	Miller	U.S. Department of Energy
Michael	Morrison	SCI
Carol	Moyer	NRC
John	Nehasil	ACI
Lynne	Preston	INMM ASC N15
Anthony	Quinn	ASTM
Jim	Riley	NEI
Mike	Salmon	ASCE/LANL
Mike	Schneider	Baker Concrete
Fran	Schrotter	ANSI
Sally	Seitz	ANSI
Matt	Senecal	ACI
Douglas	Sordyl	ACI
Mike	Tholen	ACI
Ambler	Thompson	NIST
Andrea	Valentin	NRC
Jerry	Voss	ISA
Tammy	Way	U.S. Department of Energy
Craig	Welling	U.S. Department of Energy

*Participation via Teleconference*

Jim	August	Core, Inc
Geroge	Campbell	TAG to ISO 85
William	Hinton	NextEra Energy
Steve	Lefler	Duke Energy
William	Maher	FPL

Paul  
Cheryl  
Michael  
Dale

May  
O'Brien  
Schneider  
Wahlquist

NFPA  
Idaho National Laboratory  
Baker Concrete  
Idaho National Laboratory