

**MINUTES OF THE PROGRAM COMMITTEE MEETING OF THE NUCLEAR
INSTALLATIONS SAFETY DIVISION**

**NOVEMBER 13, 2005
WASHINGTON, DC**

(Agenda Attached)

ATTENDEES:

- David Diamond, Program Committee Chair; diamond@bnl.gov, 631-344-2604
- Dana Powers, Program Committee Vice-Chair, Executive Committee; dapower@sandia.gov, 505-845-9838
- Raymond Gallucci, Program Committee Secretary; rhg@nrc.gov, 301-415-1255
- Steve Schultz, Special Sessions Coordinator; spschultz@duke-energy.com, 980-373-8499
- Kevin O’Kula, Topical Meetings Coordinator, Executive Committee; kevin.okula@wsms.com, 803-502-9620
- Gary E. Wilson, Website and Newsletter Editor; KatJon@ida.net, 208-520-9709
- Ian Wall; ianwall@alum.mit.edu, 650-324-0321
- Erik Beckjord; ebeckjord@att.net, 202-234-5546
- Joe Green, Division Chair, Executive Committee; joseph.green@shawgrp.com, 617-589-1400
- N. Prasad Kadambi; npk@nrc.gov, 301-415-5896
- Linda Hansen, Division Secretary/Treasurer, Executive Committee; linda.hansen@inl.gov, 208-533-7640
- Herb Massie, Past Program Committee Chair; herbertm@dnfsb.gov, 202-694-7133
- Ronald King; ronald.king@inl.gov, 208-526-3660
- Jan van Erp; vanerp@aol.com, 630-375-7938
- Charles “Chip” Martin, Division Vice-Chair, Executive Committee; charlesm@dnfsb.gov, 202-694-7132
- Tony Baratta; ajb5@nrc.gov, 301-415-7468
- Larry Zull; larryz@dnfsb.gov, 202-694-7154

A. Introductory Remarks

Dave called the Meeting to order at 7:45 PM, welcoming all, especially the four new candidates for membership on the Program Committee: Ian Wall, Prasad Kadambi, Gary Wilson, and Don Williams.

B. Approval of Meetings from Previous Meeting

Dana Powers, former Secretary, presented the Minutes of the previous Program Committee Meeting on June 5, 2005, at San Diego, California (previously distributed electronically as a draft for review). A motion was made to accept them as written. This was seconded, and the Minutes were unanimously approved.

C. NISD Executive Committee Update

Joe Green recognized the efforts of Gary Wilson for vitalizing and updating the NISD website. He further recognized the timely issuance of the NISD Newsletter, noting that the next issue will be needed one month prior to the ANS Summer Meeting in June 2006 at Reno, Nevada. Joe next reported that the Professional Divisions Committee stressed four initiatives, as follows. First is the “Young Generation” initiative to attract and retain new members to the ANS. Second is the initiative

on “New Plant Deployment,” for which the question was raised whether or not this constituted a conflict of interest for the ANS. The consensus of the group was that it likely did not. Third is the “New Strategic Plan” and its various cross-cutting issues, namely international development and improved information technology. It was noted that a recent 22% response to an electronic survey was considered very good when compared to responses from other types of surveys, such as mail-ins. The fourth initiative stressed “International Involvement” with other nuclear societies. It was noted that the Chinese and European Nuclear Societies have expressed interest in working with the ANS.

Joe also mentioned that the Professional Divisions Committee expressed interest in the following areas: (1) developing technical and working groups; (2) obtaining an additional \$50K match for the “Landis Challenge,” perhaps via industry contributions; (3) increasing the involvement of the NISD on Standards; (4) risk-informed safety analysis; and (5) a nuclear security technical group.

D. Committee Reports

Washington Paper Review

Dana reported that the July 2005 paper review meeting in preparation for this November ANS Winter Meeting (Washington, DC) went well, but could have been smoother if papers submitted at the “last minute” were reviewed prior to the paper review meeting. He noted that the paper review meeting in July is usually “tougher” than the one held in February for the upcoming annual ANS Summer Meeting.

National Program Committee

Dave reported that the NISD Special Sessions for this November ANS Winter Meeting were forwarded to the National Program Committee in June 2005 and that Doug Crawford has replaced Steve Sheperd as Committee Chair.

Thermal-Hydraulics Division Liaison

Gary, in place of Undine Shoop, reported that the TH Division expressed interest in working with the NISD on their planned workshop on the subject of “Large-Scale Test Facility Programs – Revisited.” Bob Martin (Robert.Martin@Framatome-ANP.com) will serve as the THD liaison to the NISD. Gary also mentioned that Dr. Robert Henry was the primary contact for the proposed workshop. Since Dr. Henry was not in attendance at the NISD PC meeting; Gary agreed to send him an e-mail expressing the THD interest and contact. On a slightly different note, Gary reported that the TH Division is resistant to the National Program Committee’s desire that all divisions have the same bylaws.

With regard to “Revisiting Large Scale Test Facility” experiments, Ian reminded the group that EPRI ran many such large scale experiments in the past and that there was a danger of losing the historic knowledge unless the results were archived soon (possibly coordinating with Ashok Thadani of the NRC). Should this historic knowledge be lost, we could end up redoing old experiments.

Dana remarked how the EPRI tests on aerosol physics should be coordinated with corresponding European test results. Also, Sandia is interested in archiving these EPRI results.

Operations and Power Division Liaison

Prasad reported that only four people attended this meeting, so no business was transacted.

Fuel Cycle and Waste Management Division Liaison

Herb attended this meeting, noting that the areas of interest have potential overlap with some of the same interests of NISD and may warrant closer monitoring in the future.

E. Special Sessions Report (attached)

ANS Winter Meeting, November 2005, Washington, DC

Steve noted that, at the July paper review meeting, NISD had 23 papers and three panel sessions planned. Ultimately, two papers related to security were withdrawn, but an extra panel session was added, so the Washington Meeting contains 21 papers and four panel sessions credited to NISD. While the 21 papers meet the expectation of at least 20 papers, it is a relatively low number for one of the larger divisions, such as NISD. A philosophical question was raised next. Typically, NISD delivers about half of the number of sessions it proposes for the upcoming meeting. Does the Program Committee consider this *modus operandi* acceptable, or would it prefer to propose less sessions, but deliver nearly all (i.e., more carefully screen the proposed sessions prior to proposal)? Dana responded that he felt the present approach (propose more, deliver about half) seems to be working, and the consensus of the group was that this was acceptable.

Joe next reminded the group that the ANS wanted only a limited number of non-members to be invited as panel speakers, mainly since such invitees are given a free, one-day registration. This prompted a discussion revolving around two areas: (1) given the relatively small difference in fees between one-day and full registration, why limit these invitees to a one-day free registration; and (2) why should the free registrations for invitees be limited to non-ANS members, as if ANS member speakers were somehow “less welcome?” Joe will take this feedback back to the National Program Committee for consideration.

Larry observed that it appears that panel sessions, vs. paper sessions, were becoming dominant at the ANS Meetings. Whether or not this trend was positive was not resolved.

ANS Summer Meeting, June 2006, Reno, Nevada

Steve opened the discussion on the upcoming Summer Meeting with the planned session on “Mathematical Fire Modeling and Its Application to Nuclear Power Plants.” Kevin recommended a less selective title for the session, such as “Fire Safety in Nuclear Facilities,” especially since there are efforts along these lines in non-reactor facilities (Larry noted efforts by Hughes Consultants for the DOE and the fire analysis for the Savannah River Tritium Extraction Facility, also under the DOE; Dana noted NASA work on propellant fires as well). This suggestion was received well and, if possible, the session name would be changed for the Reno Meeting. Ray reported that he had received agreement on the two co-chairs for the Reno session on fire modeling and expected 2-4 papers from the NRC alone. Dana then initiated discussion as to whether NISD should plan a “Fire Safety in Nuclear Facilities” session as a regular for the next few years, while continued developments both in fire modeling and fire safety analysis are expected. The general consensus was that this was prudent, especially considering the expected transition of commercial nuclear plant fire protection programs from traditional to risk-informed bases.

With regard to the planned session on “New Regulatory Approaches for Pressurized Thermal Shock Analysis and Licensing,” Steve reported that Mike Mayfield of the NRC would be available as an organizer. Steve also noted that a lead would have to be found for the planned session of “Alternative

Source Term Applications to Improve Power Reactor Safety Analysis.” Robert Dennig of the NRC, currently listed as the lead, was just a placeholder.

Considerable discussion next ensued concerning the planned session on “Progress in the Yucca Mountain Licensing Program,” resulting from the “lack of progress” given the recent negative developments in this program. Tony reported that, rather than progress, the program seemed to be in reverse, with the DOE’s application for a license now planned for at least a two-year delay. He suggested that, if the session is to be retained for the Reno Meeting, at least the term “Progress” should be changed to “Status” in the title. Both he and Dana felt that delaying the session till the ANS Winter Meeting in Albuquerque in November 2006 might be prudent, especially since it would be more consistent with the theme of that meeting (“Securing the Future in Times of Change”). Larry suggested yet another alternative, that being to expand the session from one focused on Yucca Mountain to one encompassing dry cask storage and reprocessing options as well (Tony furthered this suggestion). Dave cautioned that NISD must maintain an emphasis on risk and safety to avoid infringing on the territory of other divisions, such as Fuel Cycle and Waste Management. Tony thought that an expanded session might be more appropriate for a plenary-type panel session with invited “high-level” speakers organized by the Reno Meeting’s planning committee rather than any specific division. Technical sessions could be delayed till the Albuquerque Meeting.

With respect to the planned session of “Clad Embrittlement Criterion for Revised 10 CFR 50.46 Design Basis Accidents,” Dana observed that he had received commitments for four papers, so needed just one more. Expected contributors include Argonne, Westinghouse, and EPRI, with the possibility of a European paper. Ian Wall recommended a change of session organizer for “Consideration and Integration of the Six ASME and ANS PRA Methodology Standards” because Bob Budnitz was no longer involved with these Standards. Ian suggested Sid Bernstein, who is intricately involved from the ASME side and is retired (and, therefore, readily available). Rick Grantom was also suggested from the ANS Standard side. As part of a brief discussion as to which society was leading the Standards effort, Ian noted that the ASME had the ultimate responsibility to coordinate all the Standards, while Prasad observed that the ANS currently has three Standards in progress (External Events, Low Power-Shutdown, and Fire).

Steve said that he would check with Undine Shoop concerning the four sessions that she was organizing for the Reno Meeting. Dana believed that the one on “Radioactive Source Accountability” would be in good shape.

ANS Winter Meeting, November 2006, Albuquerque, New Mexico

Steve expects that generating papers for the NISD sessions at Albuquerque would be easier than at Reno because there were currently no embedded topical planned for Albuquerque. Herb believes that the planned session on “Safety Aspects of Siting Nuclear Facilities,” proposed by DNFSB, could focus on updates to siting rules that are at least 20 years old. Dana noted that several early site permits will be coming in to the NRC, including one by Clinton Nuclear Station which proposes an alternative methodology for seismic analysis. It could be productive to prompt the various applicants to submit papers on their proposed applications. Dana sees “weather effects based on historic cycles” as a potentially fruitful area for technical discussion.

Herb is especially optimistic regarding the planned session of “Safety Aspects of Reprocessing Spent Nuclear Fuel.” He believes two session might be possible, and consideration should be given to co-sponsorship with the Fuel Cycle and Waste Management Division (NISD would retain the lead on safety emphasis). Steve also believes that the planned session on “Control Room Habitability” will be successful, since the timing will be right for lessons learned and upcoming developments. A

suggestion was made to expand the title of the planned session on “Mixed Oxide Fuel Fabrication Facility Construction” to include “and Utilization.”

Steve next solicited feedback on the list of sessions recommended for previous meetings but not developed. The two related to fire (“Fire Risk Requantification Study” and “Fire Progression Modeling”) were judged amenable to combination as part of the planned regular session on “Fire Safety at Nuclear Facilities” (discussed earlier). Ron mentioned a session not listed, but previously suggested, that being one on “Research Reactors.” Dave volunteered to prompt papers in this area, with Tony serving as a liaison with recent college graduates of nuclear engineering programs.

Dave asked if it would make sense to move some of the planned sessions for the Albuquerque Meeting up to the Reno Meeting, since the NISD itinerary for Reno seemed “sparse.” Steve responded that this would be difficult. Furthermore, he did not think there should be a concern for Reno since six of the sessions were “sure things.” Prasad asked if there might be enough interest for a session on gas-cooled reactors, considering that the South Africans had been discussing these with the NRC and were planning a series of “white papers” over the next year in anticipation of requesting that the PBMR be certified in the US. Ian mentioned that the South Africans had presented two papers on this subject at PSA’05 in September 2005. Dave offered that AREVA may be developing plans for a gas-cooled reactor concept as well.

Ron suggested that a session on digital systems might be productive, noting activity by the Koreans in this area. Chip offered to organize a session on this. Dana believes that there is enough experimental work in the sump blockage arena to justify a session at Albuquerque, noting studies being performed at Argonne, Pacific Northwest, and Penn State.

Gary offered to include the proposed sessions for the Albuquerque Meeting on the NISD website. Steve will review the proposed listing so that Gary could add it by mid-December. Ian recommended that the NISD Newsletter include the website address as well, a suggestion that Gary will enact, starting with the Spring 2006 issue.

F. Topical Meetings Report

Probabilistic Safety Assessment PSA’05 (attached)

Ian thanked NISD for its support of PSA’05, which was very successful except for the many parallel sessions that prevented participants from attending all the sessions they would have liked. Only 10% of the 250 summaries submitted were not accepted. The participant total was 252, including 63 from 18 countries. Ian cited the following reasons for the large attendance: (1) well-organized; (2) advanced planning; (3) persistent, focused publicity; (4) strong leadership, with good name recognition; (5) EPRI sponsorship that attracted utilities; (6) diversity among session co-chairs; (7) broad technical scope; and (8) location in downtown San Francisco. Obstacles to be overcome included sensitivity with regard to sessions on plant security (the term “terrorist” had been included in the original call for papers), handled by a change in session title, multiple, redundant reviews of submitted papers and summaries, and restriction to written questions only, enabling pre-screening. Reviewers also encountered difficulty with the COS website when reviewing papers. The technical program committee felt overwhelmed by the number of papers they had to review at the last minute, partly due to submitters ignoring the early deadlines.

Some lessons learned with regard to logistics included the questionability of erring too conservatively in estimating the number of attendees. Ian originally proposed an estimate of 190, subsequently reduced to 130 at the ANS’s urging. Ultimately, this resulted in the conference being able to attract only smaller hotels, leading to rooms that were too small for some sessions and the need for so many

parallel technical sessions. Realistic projections of the attendance are recommended for future meetings, if only to attract more suitable accommodations. One session chair suggested a “best paper” commendation, although there was no provision for this in the conference plans. The Program Committee suggested that ANS consider issuing a letter of commendation without formally endorsing any “best paper” for the conference.

Nuclear Safety Aspects of Hydrogen Production, Control, and Management

Kevin opened the floor to the question whether this topical, part of the series on Advanced Nuclear Safety, should be held during the Albuquerque Meeting as an embedded topical or else as a standalone in fall 2006 or spring 2007. Of the three series of topicals, the only one consistently successful as a standalone has been the PSA topical. Success of a topical is highly dependent upon finding an active local section to sponsor, as was the case for PSA’05. Kevin will draft a letter to the local ANS sections (Dana will review) requesting sponsorship for a standalone topical on Hydrogen. The group next discussed the need for a third topical, that being the one in the Operating Nuclear Facility Safety series, which would normally occur in 2007. Linda questioned if the ANS would support this as a standalone, given that it was an embedded topical the last time. It was noted that papers for a standalone might be attracted by sessions on fire safety analysis and modeling.

Kevin recommended that the next PSA topical be held on schedule in 2008, given that PSAM will likely be held outside the US that year. This would again be a standalone.

G. New Business

New Members

Dave noted that four new members for the Program Committee have been proposed (listed previously). The group accepted all, so the recommendation that the Executive Committee appoint them as new members will be made.

List of Paper Reviewers

Dave handed out a list of “official” paper reviewers for NISD (attached), suggesting that it be updated if feasible. Chip recommended that, when additional reviewers are needed, especially in a particular technical area, names could be drawn from a “master list” of all NISD members, i.e., reviewers need not be limited to Program or Executive Committee members. Dana and Linda both noted that it would be helpful if a user-friendly template for preparing summaries and papers were available on the ANS/COS website (if one is already there, it is not easily accessible). This would reduce, if not eliminate, the undesirable need to reject papers due to format concerns.

NISD Website

Dave questioned whether the website included the latest guidelines of roles and responsibilities of Program Committee members, vs. an earlier version. To ensure that Gary has the latest, Dana will forward him the last update he received from Chip

Old/New Business

Steve asked what should be included as attachments to the Minutes, the ones handed out for the meeting, or the ones amended after the meeting. Dana noted in the Program Committee guidelines that the Minutes should be added to the NISD website as soon after each meeting as they are

available. It was noted that such minutes were actually "Draft" versions until approved (and sometime amended) at the following meetings. Gary agreed to make the necessary distinctions in the website, i.e., any Minutes added to the website will be marked either draft or approved depending on the correct status.

The meeting was adjourned at 11:10 PM.