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MEETING HIGHLIGHTS

Saturday - June 16th
8:00 a.m. - 5:00 p.m. ABET Training Workshop for Program Evaluators
8:00 a.m. - 5:00 p.m. Teachers Workshop
9:00 a.m. - 5:00 p.m. Professional Development Workshop: Keys to Career Success - Essential Skills for Life (sponsored by NAYGN)
4:30 p.m. - 6:30 p.m. Professional Divisions Training Workshop

Sunday - June 17th
9:00 a.m. - 5:00 p.m. Professional Development Workshop: Reducing Human Errors in Nuclear Environments
9:00 a.m. - 5:00 p.m. Professional Development Workshop: Preparing for the Nuclear Engineering Professional Engineering Exam
1:00 p.m. - 1:30 p.m. First-Time Attendees Orientation
2:30 p.m. - 5:00 p.m. Student Assistant Training Session
5:00 p.m. - 6:00 p.m. Mentoring Program
6:00 p.m. - 7:30 p.m. ANS President’s Reception

Monday - June 18th
8:00 a.m. - 10:00 a.m. Spouse/Guest Hospitality
8:00 a.m. - 11:30 a.m. Plenary Session: Safety Culture and Its Relationship to Economic Value in a Competitive Market
8:30 a.m. - 1:00 p.m. Spouse/Guest Tour: Mitchell Park Horticultural Conservatory and Pabst Mansion
11:30 a.m. - 1:00 p.m. Operations & Power Division Luncheon
11:30 a.m. - 1:00 p.m. DDR and FCWM Divisions Luncheon
1:00 p.m. - 4:00 p.m. Technical Sessions - National Meeting
1:00 p.m. - 4:00 p.m. Plenary Session ANS/AESJ Topical Meeting: Nuclear Safety Goals and Safety Culture
6:30 p.m. - 9:30 p.m. Strolling Dinner at Milwaukee Public Museum

“Imagine a sprawling city near the south end of Lake Michigan with marvelous museums, great shopping, terrific ethnic food, a world-class zoo, sports of all sorts, an excellent symphony orchestra and a daily rush hour that slows you down all of 10 minutes.”

— Chicago Sun-Times, describing Milwaukee
Tuesday - June 19th
7:30 a.m. - 4:30 p.m. Spouse/Guest Tour: Kohler Company Factory/Design Center; Shops at Woodlake & Lunch at the American Club
8:00 a.m. - 10:00 a.m. Spouse/Guest Hospitality
8:30 a.m. - 11:30 a.m. Plenary Session: 11th Annual DOE Facility Safety Analysis Working Group (SAWG) Workshop
8:30 a.m. - 11:30 a.m. Technical Sessions
11:30 a.m. - 1:00 p.m. ANS Honors and Awards Luncheon
1:00 p.m. - 4:00 p.m. Technical Sessions
4:00 p.m. - 6:00 p.m. ANS President's Session
7:00 p.m. - 10:00 p.m. Multi-Division Mixer at Mader's Restaurant

Wednesday - June 20th
7:30 a.m. - 5:00 p.m. Technical Tour: Point Beach Nuclear Power Plant
8:00 a.m. - 4:00 p.m. DOE Nuclear Criticality Safety Program
8:00 a.m. - 10:00 a.m. Spouse/Guest Hospitality
8:30 a.m. - 5:00 p.m. Professional Development Workshop: Root Cause Analysis: Getting to the Safety Culture and Business Process Lessons to be Learned
8:30 a.m. - 11:30 a.m. Technical Sessions
8:45 a.m. - Noon Spouse/Guest Tour: Harley Davidson Engine Plant
11:30 a.m. - 1:00 p.m. Nuclear Installations Safety Division Luncheon
1:00 p.m. - 4:00 p.m. Technical Sessions
5:45 p.m. - 9:00 p.m. Reception/Dinner - Wisconsin Electric Power Company Public Service Building Auditorium

Thursday - June 21st
8:30 a.m. - 5:00 p.m. Professional Development Workshop: Dry Spent Fuel Management - Lessons Learned (Workshop V)
8:30 a.m. - 11:30 a.m. Technical Sessions

Milwaukee is home to a number of museums, a world-renowned zoo, a variety of performing arts, professional sports and a varied restaurant community that allows visitors to experience the city's heritage and history while feasting on its best dishes.
The 2001 Annual Meeting will be held June 17-21, 2001, in Milwaukee, Wisconsin. Two embedded topical meetings: “11th Annual DOE Facility Safety Analysis Working Group (SAWG) Workshop,” and the ANS/AESJ sponsored embedded meeting “Nuclear Safety Goals and Safety Culture” will be held in conjunction with the 2001 Annual Meeting.

ACCOMMODATIONS AND HOTEL INFORMATION
The Midwest Express Convention Center and the Hyatt Regency Milwaukee will be the location for the 2001 Annual Meeting, where all meeting activities, technical sessions and governance committee meetings will take place. At the Hyatt Regency Milwaukee, 484 luxurious guest rooms surround an 18-story open atrium in downtown Milwaukee. Glass-enclosed skywalks connect Hyatt Regency Milwaukee to the Midwest Express Center and Grand Avenue Shopping Center.

LOCAL ATTRACTIONS
Located along the shores of Lake Michigan, Milwaukee is an exciting destination with old world charm and an abundance of new world vitality. Safe, affordable and convenient, Milwaukee has everything you’d expect in one of the fastest growing meeting destinations.

- Take a stroll along Milwaukee's new RiverWalk, a pleasant way to experience Milwaukee's nightlife, restaurants and shops, and a great place to take in a concert or special event.
- Visit animals in their natural environments on 194 wooded acres at the Milwaukee County Zoo.
- Journey through the tropics and the desert, and enjoy seasonal displays at the Mitchell Park Horticultural Conservatory (the Domes).
- Experience Milwaukee's German heritage with a visit to the restaurants and cheese, spice and sausage shops of Old World Third Street.
- Explore historic mansions, rich history and scenic shorelines.

PROFESSIONAL DEVELOPMENT WORKSHOPS

NOTE: REGISTRATION FOR THE WORKSHOPS IS SEPARATE FROM, AND IN ADDITION TO, THE MEETING REGISTRATION FEE.

Workshop #1
“Keys to Career Success: Essential Skills for Life”
(sponsored by NAYGN)
Saturday, June 16, 2001
9:00 a.m. - 5:00 p.m.
Room: Executive C & D

Workshop #2
Reducing Human Errors in Nuclear Environments

Sunday, June 17, 2001
9:00 a.m. - 5:00 p.m.
Room: Lakeshore B

Workshop #3
Preparing for the Nuclear Engineering Professional Engineering Exam
Sunday, June 17, 2001
9:00 a.m. - 5:00 p.m.
Room: Lakeshore A

Workshop #4
Root Cause Analysis: Getting to the Safety Culture and Business Process Lessons to be Learned
Wednesday, June 20, 2001
8:30 a.m. - 5:00 p.m.
Room: Lakeshore A

Workshop #5
Dry Spent Nuclear Fuel Management - Lessons Learned (Workshop V)
Thursday, June 21, 2001
8:30 a.m. - 5:00 p.m.
Room: Lakeshore A

STUDENT ASSISTANCE PROGRAM
Attendance at the 2001 ANS Annual Meeting is an exciting professional opportunity for college and graduate students. To help defray travel and living expenses, students can sign up to work as session chairs’ assistants. Student assistants must attend
the Student Training Session on Sunday, June 17th, 2:30 p.m. - 5:00 p.m. in the Lakeshore C Room of the Hyatt Regency Milwaukee Hotel.

ANS student members who register for the meeting and/or work as session chairs’ assistants should pick up a travel assistance request form which can be found in the student headquarters room. Student travel assistance is provided through contributions from ANS professional divisions.

The student headquarters will be located in the Juneau Room of the Hyatt Regency Milwaukee Hotel.

FIRST-TIME ATTENDEE ORIENTATION
The ANS Membership Committee will offer an orientation session for the first-time ANS meeting attendees. Learn what goes on at national meetings, how to get involved at the national and local levels, and how the national organization works, both administratively and for its members. Whether you are attending as a new national or local member, or are moving into full membership from a student branch, come to the session. The session will be held from 1:00 p.m. - 1:30 p.m. on Sunday, June 17th, in the Lakeshore C Room of the Hyatt Regency Milwaukee Hotel. The Membership Committee invites you to attend and learn how to get involved and stay involved.

MENTORING PROGRAM
A special mentoring program will be held from 5:00 p.m. - 6:00 p.m. on Sunday, June 17th in the Lakeshore C Room of the Hyatt Regency Milwaukee Hotel. ANS members who will serve as mentors hold a variety of positions within the Society, serving on governance committees and working within the divisions. The mentors encompass a wide range of careers and technical specialties, all of which they hope to share with first-time meeting attendees, student members, new members, and those seeking career advancement and networking opportunities.

SPouse/Guest Hospitality
The Lakeshore B Room of the Hyatt Regency Milwaukee Hotel will be open from 8:00 a.m. - 10:00 a.m., Monday, June 18th through Wednesday, June 20th. Continental breakfast will be served each morning. Spouse/Guest registration is required for admittance to the hospitality room.

ATTENTION RUNNERS: FUN RUN (ORGANIZED BY NAYGN)
On Tuesday, June 19th, there will be a noncompetitive run starting at 6:00 a.m. from the lobby of the Hyatt Regency Milwaukee Hotel. Come prepared with running shoes to have fun for the third run of the new millennium.

IMPORTANT INFORMATION
ANS REGISTRATION
ANS Registration will be located in the main lobby of the Hyatt Regency Milwaukee Hotel on Saturday, June 16th, and Sunday, June 17th. On Monday, June 18th, through Thursday, June 21st, ANS Registration will be located in the Mezzanine Foyer of the Midwest Express Convention Center. Meetings and Workshop Registration, Speakers and Session Chair Desk and the Message Desk will also be located in the ANS Registration area.

Registration is required for all attendees and presenters. Badges are required for admission to all technical sessions, workshops and events. An Advance Registration form for the meeting and workshops is included in the back of this program.

REGISTRATION HOURS
SATURDAY, JUNE 16TH
8:30 a.m. - 12:00 p.m.*
* Registration for Workshop: “Keys to Career Success” only
2:00 p.m. - 5:00 p.m.

SUNDAY, JUNE 17TH
7:00 a.m. - 6:00 p.m.

MONDAY, JUNE 18TH
7:30 a.m. - 5:00 p.m.

TUESDAY, JUNE 19TH
7:30 a.m. - 5:00 p.m.

WEDNESDAY, JUNE 20TH
7:30 a.m. - 5:00 p.m.

THURSDAY, JUNE 21ST
7:30 a.m. - 10:00 a.m.

MESSAGE/INFORMATION DESK
For those who wish to reach an attendee at the meeting, call the hotel phone number at 414/276-1234 and ask for the ANS Message Desk. To send a fax, the hotel fax number is 414/276-6338.

NOTICE FOR SPEAKERS
All speakers and session chairs must sign in at the “Speakers’ Desk,” located in the Main Lobby of the Hyatt Regency Milwaukee Hotel (Saturday, June 16th and Sunday, June 17th) or located in the Mezzanine Foyer of the Midwest Express Convention Center (Monday, June 18th through Thursday, June 21st).

A Speaker’s Preview Room, the Marquette Room of the Hyatt Regency Milwaukee Hotel, will be available on Sunday (June 17th) from 12 noon to 6:00 p.m.; on Monday (June 18th) through Wednesday (June 20th) from 7:00 a.m. to 4:00 p.m.; and on Thursday (June 21st) from 7:00 a.m. until 10:00 a.m. Audio/Visual equipment will be set up so that speakers may preview their presentation materials.

CONFERENCE OFFICE
Gilpatrick A

ANS SECRETARIAT
Gilpatrick B&C
Special Events & Spouse/Guest Tours

CONFERENCE LUNCHEONS
OPERATIONS & POWER DIVISION LUNCHEON
Monday, June 18, 2001
11:30 a.m. - 1:00 p.m.
Lakeshore B Room

Tickets may be purchased on-site at the ANS Registration Desk for $35 each.

DD&R AND FUEL CYCLE WASTE MANAGEMENT DIVISIONS LUNCHEON
Monday, June 18, 2001
11:30 a.m. - 1:00 p.m.
Lakeshore A Room

Plan to attend this luncheon and hear Pete Lyons' talk, "Legislative Initiatives Impacting Nuclear Energy." Tickets may be purchased on-site at the ANS Registration Desk for $35 each.

HONORS & AWARDS LUNCHEON
Tuesday, June 19, 2001
11:30 a.m. - 1:00 p.m.
Regency A Room

Plan to attend the Honors and Awards Luncheon held to recognize the outstanding efforts of the award winners and to celebrate their accomplishments. Tickets for the Honors and Awards Luncheon may be purchased on-site at the ANS Registration Desk for $35 each.

NISD LUNCHEON
Wednesday, June 20, 2001
11:30 a.m. - 1:00 p.m.
Lakeshore B Room

Tickets may be purchased on-site at the ANS Registration desk for $35 each.

EVENING EVENTS
ANS PRESIDENT'S RECEPTION
Sunday, June 17, 2001
6:00 p.m. - 7:30 p.m.
Location: Regency C & D (Hyatt Regency Hotel)

The ANS President's Reception kicks off the meeting on Sunday, June 17th, in the Regency C & D Rooms of the Hyatt Regency Milwaukee Hotel. One ticket to the ANS President's Reception is included in the meeting registration fee. Additional tickets can be purchased on-site at the ANS Registration Desk for $40 each.

STROLLING DINNER - MILWAUKEE PUBLIC MUSEUM
Monday, June 18, 2001
6:30 p.m. - 9:30 p.m.

Where else can you travel through the Streets of Old Milwaukee, tour a European Village, hear the sights and sounds of the Rainforest, see hundreds of butterflies in the Butterfly Garden Galleries, and experience A Sense of Wonder and other educational exhibits? Only at the Milwaukee Public Museum - a place where you can choose your world.

Treat your taste buds to an amazing array of culinary delights as you wander through the first level of the museum. Tickets can be purchased on-site at the ANS Registration Desk for $35 each.

MULTI-DIVISION MIXER
Tuesday, June 19, 2001
7:00 p.m. - 10:00 p.m.
Location: Mader's Restaurant

Tickets can be purchased on-site at the ANS Registration Desk for $35 each.

RECEPTION/DINNER- WISCONSIN ELECTRIC POWER COMPANY PUBLIC SERVICE BUILDING AUDITORIUM
Wednesday, June 20, 2001
5:45 p.m. - 9:00 p.m.

Dine in the classic Public Service Building, the headquarters for Wisconsin Electric and its parent company, Wisconsin Energy Corporation. Renovation began in 1995 on this 100-year-old building which features marble, brass and intricate detailing throughout. The building is listed on the National Register of Historic Places.

Reception and sit-down dinner is limited to 175 persons. Availability is on a first-come, first-serve basis. Tickets can be purchased on-site at the ANS Registration Desk for $35 each.

SPOUSE/GUEST TOURS
NOTE: BUSES WILL LEAVE PROMPTLY FROM THE HYATT HOTEL LOBBY AT SPECIFIED TIME. REFUNDS CANNOT BE PROVIDED FOR MISSING THE DEPARTURE BUS.

MITCHELL PARK HORTICULTURAL CONSERVATORY (“THE DOMES”) AND CAPTAIN FREDERICK PABST MANSION
Monday, June 18, 2001
8:30 a.m. - 1:00 p.m.

CAPTAIN FREDERICK PABST MANSION
Your morning begins with a guided tour of the historic Pabst Mansion, boasting 37 rooms, 12 baths and 14 fireplaces. The mansion is beautifully decorated for "Wed in Splendor," showcasing the wonders of Victorian marriage celebrations. Marie Pabst Goodrich's fabulous 1892 wedding ensemble will be displayed, along with memorabilia of the glittering affairs that marked the nuptials of her sisters, brothers and cousins. Don't miss this fascinating glimpse into the lives of Milwaukee's preeminent German family.

MITCHELL PARK HORTICULTURAL CONSERVATORY
Board the bus for a short ride to the Mitchell Park Horticultural Conservatory, better known in Milwaukee as "The Domes," for a leisurely walk through three climate-controlled domes. The floral exhibit dome will feature "Garden of Versailles" and will inspire your own garden landscape. Stroll the jungle-like trails of the tropical dome and see a rich diversity of plants from the rainforests of five continents. Be sure to look...
for the colorful birds and iguanas that call the tropical dome their home. The deserts of Africa, Madagascar, South America and North America await you in the arid dome. This dome includes the world’s finest collections of cacti, succulents, shrubs and arid-land bulbs. The diversity of plant life at “The Domes” reminds us all of the earth’s unique diversity of plant and animal species so very vital to our own survival.

Tickets can be purchased on-site at the ANS Registration Desk for $23 each. (Lunch is NOT provided.)

**KOHLER COMPANY FACTORY AND DESIGN CENTER TOUR, SHOPPING AT WOODLAKE, AND LUNCH AT THE AMERICAN CLUB**

**Tuesday, June 19, 2001**

7:30 a.m. - 4:30 p.m.

Whether you’re relaxing in a soothing bubble bath or grabbing a quick shower, you no doubt have come across the Kohler label. This 2-1/2 hour guided factory tour of the Kohler Company includes an overview of the production of vitreous china and enameled cast iron plumbing products in the pottery, brass building, foundry and enamel shops. Tour participants must be at least 14 years of age and wear fully-enclosed footwear.

Now that you’ve seen how Kohler products are made, take a leisurely walk through the Kohler Design Center, showcasing the Kohler Company fine furnishings, plumbing fixtures and power systems. Twenty-five designer bathrooms and kitchens offer a world of decorating ideas.

Enjoy lunch in the Wisconsin Room of the American Club. The American Club is a stately red brick structure built in 1918... In 1978, the building was placed on the National Register of Historic Places. Carefully refurbished and reopened in 1981 as a luxurious resort hotel, it continues to honor its heritage today-welcoming guests with an old world elegance and style.

The American Club is a stately red brick structure built in 1918... In 1978, the building was placed on the National Register of Historic Places. Carefully refurbished and reopened in 1981 as a luxurious resort hotel, it continues to honor its heritage today-welcoming guests with an old world elegance and style.

**HARLEY DAVIDSON ENGINE PLANT TOUR**

**Wednesday, June 20, 2001**

8:45 a.m. - 12:00 p.m. (Noon)

Still in the mood for browsing? Visit the Shops of Woodlake, a collection of specialty shops featuring a sophisticated collection of gourmet, home and garden, interior decorating, and apparel items.

Tickets can be purchased on-site at the ANS Registration Desk for $15 each. (Lunch is NOT included in ticket price.)

**MIDWEST EXPRESS AIRLINES MAINTENANCE FACILITY AND HARLEY DAVIDSON ENGINE PLANT TOUR**

**Tuesday, June 19, 2001**

9:15 a.m. - 3:30 p.m.

The “Best Care in the Air” starts on the ground at your visit to Milwaukee’s Midwest Express Airlines’ aircraft hanger/maintenance facility. Hear why Midwest Express Airlines boasts one of the best safety records in the airline industry. Your tour includes their very own chocolate chip cookies, served exclusively on Midwest Express Airlines flights. Tour participants must wear fully-enclosed footwear.

Strap on your leather and get your engine revving for a tour of the Harley Davidson engine line. This one-hour tour takes you through the engine assembly line and gives you an opportunity to see what goes into the production of a Harley. Tour includes a short video and an opportunity to visit the Harley Davidson gift shop. All participants must wear fully-enclosed footwear and be over 12 years of age.

Tickets can be purchased on-site at the ANS Registration Desk for $30 each. (Ticket price includes lunch.)

**HARLEY DAVIDSON ENGINE PLANT TOUR**

**Wednesday, June 20, 2001**

8:45 a.m. - 12:00 p.m. (Noon)

Strap on your leather and get your engine revving for a tour of the Harley Davidson engine line. This one-hour tour takes you through the engine assembly line and gives you an opportunity to see what goes into the production of a Harley Davidson motorcycle. Tour includes a short video and an opportunity to visit the Harley Davidson gift shop. All participants must wear fully-enclosed footwear and be over 12 years of age.

Tickets can be purchased on-site at the ANS Registration Desk for $15 each. (Lunch is NOT included in ticket price.)

**CANCELLED!**
TECHNICAL TOURS

Note: Tour registrants must complete the mandatory Technical Tour Clearance Form.

TOUR OF ARGONNE NATIONAL LABORATORY: ADVANCED PHOTON SOURCE AND CP-5 DECOMMISSIONING PROJECT

Sunday, June 17, 2001
8:00 a.m. - 5:00 p.m. CANCELLED!

Argonne National Laboratory (ANL) is the home of world-class R&D facilities and the demonstration site of many new technologies. A technical tour of two ANL landmark facilities is offered to ANS meeting attendees, including the Advanced Photon Source (APS), and the decontamination and decommissioning (D&D) project at the site of the CP-5 reactor.

APS produces x-ray beams of unprecedented brilliance, providing scientists from around the world with one of their best research tools. Most of what we know about the three-dimensional arrangement of atoms in materials from elements to catalysts, from DNA to viruses, has come from x-ray research, and this newest x-ray device is taking that research to new levels. Users come from universities, industry, medical schools and other research institutions to conduct frontier science, studying materials of all types using the APS.

The Chicago Pile-5 (CP-5) Research Reactor was a heavy water cooled and moderated reactor that operated from 1954 through 1979 at the ANL-East Site. After completion of its mission, the reactor was defueled and the highly enriched uranium fuel was sent to the DOE Savannah River Site for storage/disposal. Following a period of surveillance and maintenance, the D&D of the reactor was initiated with funding from the DOE Office of Environmental Management. D&D operations were highlighted with an excellent safety record and the simultaneous achievement in 1997 of being the site of the nation's first Large Scale Demonstration Project of D&D technologies.

Tickets must be purchased in advance for $40 each. Ticket price includes bus transportation and a box lunch. Note: Non-U.S. citizens must register for the tour at least 3 weeks in advance.

TOUR OF POINT BEACH NUCLEAR POWER PLANT

Wednesday, June 20, 2001
7:00 a.m. - 5:00 p.m.

Come join this tour and plan on a day at the Point Beach Nuclear Plant that is sure to test your knowledge on nuclear power generation and waste disposal. Tours will be conducted by the plant technical staff with ample opportunities to ask questions and learn the operation of this commercial nuclear generating plant. Highlights of the tour will include the spent fuel dry storage site, spent fuel storage pool, operator training simulator, state-of-the-art training center and power production buildings inside the protected area. The tour will include ample time to explore the new Point Beach Visitor Center, The Energy Center, and talk with Point Beach personnel. This is an outstanding opportunity to see first-hand the generation of electricity from nuclear power and meet and talk with the professional staff that is at the center of making it all possible.

Lunch will be provided in the Visitor Center. Bus transportation will be provided from the hotel and will include a beverage and breakfast snack in the morning en-route to Point Beach.

Important Information–Please Note: space on this tour will be limited and participants are encouraged to register early. Due to the administrative processing requirements for access to the power production controlled areas, complete registration information must be provided prior to the day of departure. On the day of the trip, participants must have a valid photo ID (driver's license or passport) with them; otherwise they will not be able to enter the controlled areas of the plant. Because there will be considerable walking, wear comfortable clothes and flat-soled shoes. No polyester clothing should be worn. Persons with a history of heart attack or who are on medication for medical reasons within the last 6 months will not be able to participate in the tour. Tour participants will pass through security screening similar to airport security and will also be asked to secure any personal items, including all forms of personal jewelry, that may be subject to foreign material exclusion regulations. The tour will be cancelled and the registration fee refunded if there is insufficient interest or other operational conditions develop that would preclude success of the tour. Refunds can not be provided for missing the bus.

Tickets must be purchased in advance for $43 each. Ticket price includes bus transportation, morning snack and lunch.

TOURS OF UNIVERSITY OF WISCONSIN– MADISON (MADISON, WI) • AMERICAN TRANSMISSION COMPANY’S SYSTEM CONTROL CENTER AND ALLIANT ENERGY’S GENERATION AND WHOLESALE POWER TRADING OPERATION (STOUGHTON, WI)

Thursday, June 21, 2001
7:00 a.m. - 5:00 p.m. CANCELLED!

Pushing back the Frontiers of Nuclear Science and Engineering–The University of Wisconsin

The University of Wisconsin is one of the leading universities for applications of nuclear science and engineering. In addition to the traditional program in nuclear engineering, the university has strong interdepartmental programs in fusion and plasma physics, and radiation science. This tour will show participants four different facilities in the departments of Engineering Physics, Electrical and Computer Engineering, and Medical Physics.

1. Wisconsin Nuclear Reactor, a pool reactor with a TRIGA-FLIP reactor core: The steady-state power level is 1 M.W., with pulsing capability to 1000 M.W. The reactor is an effective tool for illustrating various reactor physics concepts which otherwise can only be seen on simulators. In addition to instruction for on-campus students, the reactor is utilized by several utilities for reactor operator training. The reactor is also used for research, primarily as a source of neutrons for radioisotope studies and neutron activation analysis, which is a highly sensitive method for the accurate determination of elemental concentrations in material.

2. Pegasus Toroidal Experiment: This is an extremely low aspect ratio spherical torus for advancing research on fusion energy and plasma science. The spherical torus is a fusion concept being considered as an alternative to the mainline tokamak approach. Pegasus has the capability to reach aspect ratios as low as 1.1, the major radius is in the range .2 to .45 m, depending on the aspect ratio, and the plasma current can go up to about 0.5 mega-amperes. A
novel feature of Pegasus is that it was built largely by a group of undergraduate students working with one professor and a couple of graduate students and technicians. Pegasus is a model example of the benefits of the early involvement of undergraduates in research and what they can accomplish, given adequate encouragement.

3. Helically Symmetric Experiment (HSX): HSX is a new concept in toroidal stellarators. It is the only device in the world that has a Quasi-Helically Symmetric (QHS) magnetic field structure. The (non-planar) magnet coils in HSX have been carefully designed so that there is virtually no toroidal curvature in the resulting magnetic field which confines the plasma. With an aspect ratio of about 8 (major-radius/ minor-radius), HSX has the same toroidal curvature as a conventional toroidal device with an aspect ratio of 400. The goal of the experimental program is to test the improved confinement properties of this device and to advance the stellarator as a fusion reactor.

4. Tomotherapy Machine: You will see the prototype tomotherapy radiation machine, which uses a rotating 6 MeV X-ray beam modulated by moving collimator vanes into and out of the radiation beam. The length of time that a leaf spends out of the beam is proportional to the intensity of radiation allowed through that particular portion of the beam. The result is a radiation dose precisely tailored to the target tumor with much reduced dose to surrounding normal tissue. Tomotherapy is analogous to computed tomography (CT), but differs in that the goal is treatment of cancerous tissue, while the goal of CT is imaging.

Bus transportation and lunch on the shore of Lake Mendota is provided as part of the tour. The group will be divided into four groups; each group will visit all four sites. Comfortable walking shoes are recommended.

**Electric Energy to the Customer: Making it Happen**

The afternoon will be highlighted by a tour of the American Transmission Company's (ATCo) System Transmission Control Center and Alliant Energy's Bulk Power Trading and GenCo System Operation Control Center in Stoughton, Wisconsin. You will see and hear first hand the facilities and activities involved in ensuring a reliable supply of electric energy to customers.

At the ATCo's Control Center, highlights will include the transmission control room where the western portion of the ATCo system is monitored. The western portion includes facilities previously owned and controlled by Madison Gas & Electric and Alliant Energy/Wisconsin Power & Light. The Iowa and Minnesota transmission system of Alliant Energy is also monitored and controlled from this location.

The tour of Alliant Energy's Bulk Power Trading and GenCo System Control Center will include the opportunity to learn about Alliant Energy's eastern and western control areas and how they are linked together with a dynamic tie of purchased transmission. Discussion will cover the capacity and peak loads of the control areas and the dynamics of the power market.

Technical staff of the facilities will conduct the tours and will provide ample opportunities to ask questions. Participants will learn about the ongoing challenge of managing the transmission system, dispatching the power plants and managing the buying and selling of electric energy to insure supply matches demand at every moment of the day, every day of the year. This is an outstanding opportunity to learn about the challenges and opportunities of getting electric energy to the customer in the rapidly changing business environment of the electric industry.

**Important Information - Please Note:**

Space on this tour will be limited and participants are encouraged to register early. Because there will be considerable walking, wear comfortable clothes and flat-soled shoes. The tour will be cancelled and the registration fee refunded if there is insufficient interest or other operational conditions that would preclude success of the tour. At the control centers, reliable electric supply to customers is the first priority and so therefore operational conditions on the day of the tour may affect access to parts of some facilities. Refunds cannot be provided for missing the bus.

Bus transportation will be provided from the hotel and will include a beverage and breakfast in the morning en-route to Madison and lunch on the bus en-route to Stoughton.

**This tour is made possible by financial support from Alliant Energy.**

Ticket price is $45.00 each and includes bus transportation, morning snack and lunch.

**Bus transportation for all evening events, spouse/guest tours and technical tours will depart from and return to the front entrance (lobby area) of the Hyatt Regency Milwaukee Hotel.**
SESSIONS BY TRACK (Asterisks mean special sessions)

TRACK 1: Safety Culture and Its Relationship to Economic Value in the Competitive Market

ANS PLenary
*Safety Culture and Its Relationship to Economic Value in the Competitive Market, Mon. a.m. (8:00 – 11:30 a.m.)

President’s Special Session
*Safety Considerations for Advanced Reactors, Tues. p.m. (4:00 – 6:00 p.m.)

TRACK 2: Business Outlook and the Significance of Safety

*Safety of Nuclear Power Reactor Installations in a Deregulated Environment-Panel, Mon. p.m.
*Financing the Next Generation of New Reactors in the United States-Panel, Tues. a.m.
*Business Challenges for the Young Generation—I-Panel, Tues. a.m.
*Business Challenges for the Young Generation—II-Panel, Tues. p.m.
*Implementation of Alternative Source Term Technology to Improve Nuclear Installation Safety-Panel, Tues., p.m.
*Business Planning for License Renewal and Plant Acquisitions-Panel, Tues. p.m.
*The National Laboratory Business Role in Energy Technology Research and Development-Panel, Wed., a.m.
*Business Challenges in the Universities-Panel, Wed. p.m.
*Business Challenges in the Vendor Community-Panel, Thurs. a.m.

TRACK 3: Growth of Nuclear Technology and Research

*Present Status of Reactor Physics in the United States and Japan—I, Tues. a.m.
*Present Status of Reactor Physics in the United States and Japan—II, Tues. p.m.
*Present Status of Reactor Physics in the United States and Japan—III, Wed. a.m.
*Present Status of Reactor Physics in the United States and Japan—IV, Wed. p.m.
*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—I, Tues. a.m.
*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—II, Tues. p.m.
*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—III, Wed. a.m.
*Generation IV Nuclear Energy Systems: Road Map and Concepts-Papers/Panel, Tues. a.m.
*Neutron Beam Experiments Using Nuclear Research Reactors: Honoring the Retirement of Professor Bernard W. Wehring—I, Wed. a.m.
*Neutron Beam Experiments Using Nuclear Research Reactors: Honoring the Retirement of Professor Bernard W. Wehring—II, Wed. p.m.
*M anpower and Management Issues at Nonpower Reactors-Panel, Wed. a.m.
Corrosion in Nuclear Systems, Wed. a.m.
Fuels for Space Nuclear Power Systems, Wed. a.m.
*M athematics and Computational Methods Development in U.S. Department of Energy-Sponsored Research (Nuclear Energy Research Initiative and Nuclear Engineering Education Research), Wed. p.m.

TRACK 4: Basic Nuclear Science

*Variance Reduction for Monte Carlo Criticality Simulations, Tues. p.m.
Computational Methods and Modeling, Wed. a.m.
*Current Issues in Computational Methods-Roundtable, Wed. a.m.
Thermal Hydraulics— I, Wed. p.m.
Technical Sessions By Track

TRACK 5: Safety in Engineering, Construction, Operations, and Maintenance
* Reactor Physics Design, Validation, and Operating Experience, Mon. p.m.
* New Developments for Control Room Habitability Evaluation and Analysis–Panel, Tues. a.m.
Nuclear Safety Analysis, Wed. p.m.
Nuclear Safety: Operational Aspects, Thurs. a.m.

TRACK 6: Safety and Risk Management
* Plant Operational Risk Management–Panel/Paper, Mon. p.m.
* Use of Risk-Informed Methodology in Nuclear Criticality Safety–Panel, Mon. p.m.
* Modeling Shutdown Operation Risk–Panel, Mon. p.m.
Criticality Experiments: Analysis, Evaluation, and Programs, Tues. a.m.
Nuclear Criticality Safety: General, Tues. p.m.
* Significance Determination Process: Progressive Development–Panel, Tues. p.m.
* Performance-Based Regulation–Panel, Wed. a.m.
* Innovative Probabilistic Risk Assessment Applications: Barrier Impairments and Fracture Toughness–Papers/Panel, Wed. p.m.

TRACK 7: Policy and Public Interest
* U.S. Russian Nuclear Security Cooperation: Navigating the Present Realities–Panel, Tues. a.m.
* Progress on the U.S.-Russian Excess Weapons Plutonium Disposition Program–Panel, Tues. p.m.
* Clearance Criteria: Still Eluding Consensus?–Panel, Tues. p.m.
* Safeguards for Generation IV Reactors–Panel, Wed. a.m.
* Industry Update: Ensuring Public Safety During Material and Site Release–Panel, Wed. p.m.
* Innovative Public Information Programs–Paper/Panel, Thurs. a.m.

TRACK 8: Health and Radiological Applications
Isotopes and Radiation: General, Mon. p.m.
Radiation Shielding Techniques and Applications, Mon. p.m.
* Developments in Gamma-Ray Spectrometry: Systems, Software, and Methods–I, Tues. a.m.
* Developments in Gamma-Ray Spectrometry: Systems, Software, and Methods–II, Tues. p.m.

TRACK 9: Fuel Cycle, Spent Fuel, Decommissioning, and Waste Management
* Dry Storage of Commercial Spent Nuclear Fuel–Panel, Mon. p.m.
Environmental Sciences: General, Mon. p.m.
* Licensing and Safety Issues Associated with Dry Cask Storage Update–Panel, Tues. a.m.
* Decommissioning Hot Topics and Emerging Safety Issues–Panel Wed. a.m.
Fuel Cycle and Waste Management, Wed. p.m.
* Safety Yields Decommissioning Successes–Panel, Thurs. a.m.
Technical Sessions by Division

(Asterisks mean special sessions. Parentheses indicate cosponsorship.)

**ANS Plenary**

*Safety Culture and Its Relationship to Economic Value in the Competitive Market, Mon. a.m. (8:00 a.m. – 11:30 a.m.)*

**President’s Special Session**

*Safety Considerations for Advanced Reactors, Tues. p.m. (4:00 – 6:00 p.m.)*

**Accelerator Applications (AAD)**

(Corrosion in Nuclear Systems, Wed. a.m.)

*Hydrogen Cold Neutron Source Design: The Ortho:Para Question-Panel, Thurs. a.m.*

**Biology and Medicine (BMD)**

(Isotopes and Radiation: General, Mon. p.m.)

(*Developments in Gamma-Ray Spectrometry: Systems, Software, and Methods—I, Tues. a.m.)*

(*Developments in Gamma-Ray Spectrometry: Systems, Software, and Methods—II, Tues. p.m.)*

(*Neutron Beam Experiments Using Nuclear Research Reactors: Honoring the Retirement of Professor Bernard W. Wehring—I, Wed. a.m.)*

(*Neutron Beam Experiments Using Nuclear Research Reactors: Honoring the Retirement of Professor Bernard W. Wehring—II, Wed. p.m.)*

**Decommissioning, Decontamination, and Reutilization (DDRD)**

(*Dry Storage of Commercial Spent Nuclear Fuel–Panel, Mon. p.m.)*

*Licensing and Safety Issues Associated with Dry Cask Storage Update–Panel, Tues. a.m.*

*CLEARANCE CRITERIA: STILL ELUDING CONSENSUS?–Panel, Tues. p.m.*

*DECOMMISSIONING HOT TOPICS AND EMERGING SAFETY ISSUES–Panel, Wed. a.m.*

*INDUSTRY UPDATE: ENSURING PUBLIC SAFETY DURING MATERIAL AND SITE RELEASE–Panel, Wed. p.m.*

**Environmental Sciences (ESD)**

(Environmental Sciences: General, Mon. p.m.)

(Isotopes and Radiation: General, Mon. p.m.)

(*Licensing and Safety Issues Associated with Dry Cask Storage Update–Panel, Tues. a.m.)*

**Fusion Energy (FED)**

(*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—I, Tues. a.m.)*

(*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—II, Tues. p.m.)*

(*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—III, Wed. a.m.)*

**Human Factors (HFD)**

(*Plant Operational Risk Management–Panel/Paper, Mon. p.m.)*

(*Use of Risk-Informed Methodology in Nuclear Criticality Safety–Panel, Mon. p.m.)*

(Modeling Shutdown Operation Risk–Panel, Mon. p.m.)

(*New Developments for Control Room Habitability Evaluation and Analysis–Panel, Tues. a.m.)*

(*Performance-Based Regulation–Panel, Wed. a.m.)*

(*Innovative Public Information Programs–Paper/Panel, Thurs. a.m.)*

**Isotopes and Radiation (IRD)**

(Environmental Sciences: General, Mon. p.m.)

(Isotopes and Radiation: General, Mon. p.m.)

(*Developments in Gamma-Ray Spectrometry: Systems, Software, and Methods—I, Tues. a.m.)*

(*Developments in Gamma-Ray Spectrometry: Systems, Software, and Methods—II, Tues. p.m.)*

(*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—I, Tues. a.m.)*

(*U.S. Department of Energy’s Nuclear Engineering Education Research: Highlights of Recent and Current Research—II, Tues. p.m.)*
Nuclear Criticality Safety (NCSD)
*Use of Risk-Informed Methodology in Nuclear Criticality Safety—Panel, Mon. p.m.
Criticality Experiments Analysis, Evaluation, and Programs, Tues. a.m.
*Variance Reduction for Monte Carlo Criticality Simulations, Tues. p.m.
Nuclear Criticality Safety: General, Tues. p.m.
(Computational Methods and Modeling, Wed. a.m.)
(*Current Issues in Computational Methods—Roundtable, Wed. a.m.)
(Fuel Cycle and Waste Management, Wed. p.m.)

Nuclear Installations Safety (NISD)
*Safety of Nuclear Power Reactor Installations in a Deregulated Environment—Panel, Mon. p.m.
*Modeling Shutdown Operation Risk—Panel, Mon. p.m.
*New Developments for Control Room Habitability Evaluation and Analysis—Panel, Tues. a.m.
*Implementation of Alternative Source Term Technology to Improve Nuclear Installation Safety—Panel, Tues. p.m.
Nuclear Safety Analysis, Wed. p.m.
Nuclear Safety: Operational Aspects, Thurs. a.m.

Operations and Power (OPD)
*Safety of Nuclear Power Reactor Installations in a Deregulated Environment—Panel, Mon. p.m.
*Dry Storage of Commercial Spent Nuclear Fuel—Panel, Mon. p.m.
*Plant Operational Risk Management—Panel/Paper, Mon. p.m.
*Modeling Shutdown Operation Risk—Panel, Mon. p.m.
(*New Developments for Control Room Habitability Evaluation and Analysis—Panel, Tues. a.m.)
*Financing the Next Generation of New Reactors in the United States—Panel, Tues. a.m.
*Business Challenges for the Young Generation—I—Panel, Tues. a.m.
*Business Challenges for the Young Generation—I—I—Panel, Tues. p.m.
*Generation IV Nuclear Energy Systems: Road Map and Concepts—Papers/Panel, Tues. a.m.
Technical Sessions by Division

Official Program

(*Licensing and Safety Issues Associated with Dry Cask Storage Update—Panel, Tues. a.m.)

(*Business Planning for License Renewal and Plant Acquisitions—Panel, Tues. p.m.)

(*Significance Determination Process: Progressive Development, Tues. p.m.)

(*Performance-Based Regulation—Panel, Wed. a.m.)

(*Manpower and Management Issues at Nonpower Reactors General—Panel, Wed. a.m.)

(*The National Laboratory Business Role in Energy Technology Research and Development—Panel, Wed. a.m.)

(*Nuclear Safety Analysis, Wed. p.m.)

(*Innovative Probabilistic Risk Assessment Applications: Barrier Impairments and Fracture Toughness—Papers/Panel, Wed. p.m.)

(*Business Challenges in the Universities—Panel, Wed. p.m.)

(*Innovative Public Information Programs—Paper/Panel, Thurs. a.m.)

(*Safety Yields Decommissioning Successes—Panel, Thurs. a.m.)

RADIATION PROTECTION AND SHIELDING (RPSD)
Radiation Shielding Techniques and Applications, Mon. p.m.

(Computational Methods and Modeling, Wed. a.m.)

(*Current Issues in Computational Methods—Roundtable, Wed. a.m.)

(*Mathematics and Computational Methods Development in U.S. Department of Energy–Sponsored Research [Nuclear Energy Research Initiative and Nuclear Engineering Education Research], Wed. p.m.)

(Transport Methods—General, Thurs. a.m.)

REACTION PHYSICS (RPN)
*Reactor Physics Design, Validation, and Operating Experience, Mon. p.m.


(*Present Status of Reactor Physics in the United States and Japan—I, Tues. a.m.)

(*Present Status of Reactor Physics in the United States and Japan—II, Tues. p.m.)

(*Present Status of Reactor Physics in the United States and Japan—III, Wed. a.m.)

(*Present Status of Reactor Physics in the United States and Japan—IV, Wed. p.m.)

(Criticality Experiments: Analysis, Evaluation, and Programs, Tues. a.m.)

(*Variance Reduction for Monte Carlo Criticality Simulations, Tues. p.m.)

(Computational Methods and Modeling, Wed. a.m.)

(*Current Issues in Computational Methods—Roundtable, Wed. a.m.)

(*Mathematics and Computational Methods Development in U.S. Department of Energy–Sponsored Research [Nuclear Energy Research Initiative and Nuclear Engineering Education Research], Wed. p.m.)

(*Hydrogen Cold Neutron Source Design: The Ortho:Para Question—Panel, Thurs. a.m.)

Reactor Analysis Methods, Thurs. a.m.

(Transport Methods—General, Thurs. a.m.)

THERMAL HYDRAULICS (THD)


Thermal Hydraulics—I, Wed. p.m.

Thermal Hydraulics—II, Thurs. a.m.

SPECIAL COMMITTEE ON NUCLEAR NONPROLIFERATION (SCNN)
*U.S. Russian Nuclear Security Cooperation: Navigating the Present Realities—Panel, Tues. a.m.

*Progress on the U.S.-Russian Excess Weapons Plutonium Disposition Program—Panel, Tues. p.m.

*Safeguards for Generation IV Reactors—Panel, Wed. a.m.

ANS PUBLIC INFORMATION COMMITTEE (ANS PIC)
(*Innovative Public Information Programs—Paper/Panel, Thurs. a.m.)
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<td><strong>ANS PLenary: Safety Culture &amp; Its Relationship to Economic Value in a Competitive Market</strong></td>
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<td>HR-Regency C &amp; D</td>
<td><strong>1:00-4:00 p.m. AESJ/ANS Opening Plenary</strong></td>
<td><strong>Session II: Defining Safety Culture &amp; the Nexus Between Safety Goals &amp; Safety Culture</strong></td>
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<td><strong>4:00-6:00 p.m. Special Session: 10 CFR 830 Implementation: Department of Energy Perspective</strong></td>
<td>**1:30-4:30 p.m. Regulatory Perspectives for Improving Safety Culture - Panel</td>
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<td>**1:30-4:30 p.m. Regulatory Perspectives for Improving Safety Culture - Panel</td>
<td>**1:30-4:30 p.m. Chemical Safety &amp; Process Safety Management - Panel</td>
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<td><strong>1:30-5:00 p.m. Natural Phenomena Impacts to DOE Facilities</strong></td>
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<td>HR-Executive D</td>
<td><strong>= AESJ/ANS Joint Meeting on Safety Goals and Safety Culture</strong></td>
<td><strong>= Special Session</strong></td>
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**= special session

+= 11th Annual DOE Facility Contractors Group SAWG Workshop

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<td>HR-Executive A</td>
<td>Implementation of the Nuclear Safety Rule - Panel</td>
<td>12:30-2:00 p.m. - Maintaining Critical Expertise in the DOE Complex - Panel</td>
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<td>HR-Executive B</td>
<td>8:30 a.m. - 12:00 p.m. - Facility Safety: Hazard and Accident Analyses</td>
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<td>8:30 a.m. - 12:00 p.m. - New Missions, New Opportunities - Safety Support for 21st Century Facilities</td>
<td>1:30-5:00 p.m. - Control Selection &amp; Statistical Methodology</td>
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<td>8:00 a.m. - 12:00 p.m. - Integrated Safety Management Processes &amp; Applications</td>
<td>1:30-4:30 p.m. - Worker Safety and Integration with the Safety Basis</td>
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Monday, June 18
8:00 a.m.

*ANS Plenary: Safety Culture and Its Relationship to Economic Value in a Competitive Market, Session organizer: Michael B. Sellman (Nuclear Management Company). All invited. Chair: Michael B. Sellman

Regency A, B, C, D (Hyatt Regency Hotel) 8:00 a.m.

These are times of great optimism within the nuclear power industry—the likes of which it has not experienced in more than two decades. Increased demand for electricity and continued environmental concerns have highlighted the worldwide need for a sustainable nuclear industry and have opened public dialogue about the possibility of the construction of new nuclear power plants. The recent power crisis in California and power shortages elsewhere have heightened this renewed interest in nuclear power.

This new optimism within the industry must be backed by solid public support for the industry to once again flourish. This support will only come from absolute public confidence in the safety of nuclear power and the industry's ability to operate responsibly. Safety and safety culture are the foundation for the future growth of this industry, and thus, it is the overall theme of this conference and the major theme to be addressed by this distinguished slate of plenary speakers.

Introductions:
Thomas J. Lewis, Director, Administrations, Nuclear Management Company and Assistant General Chair

Welcome and Opening Remarks:
James Lake, President, American Nuclear Society
Richard Abdoo, Chair of the Board and CEO, Wisconsin Electric Company

Setting the Stage for Safety Culture and Its Relationship to Economic Value:
Michael B. Sellman, General Chair, 2001 Annual Meeting

Presentations:
Commissioner Jeffrey Merrifield, U.S. Nuclear Regulatory Commission
Professor Shunsuke Kondo, The University of Tokyo–Japan
David W. Bersoff, Director of the Yankelovich Monitor

There will be a question-and-answer session after the last presentation.

Monday, June 18
1:00 p.m.


201A (Midwest Express Convention Center) 1:00 p.m.

Panelists:
Stephen Floyd (NEI)  
Herbert N. Berkow (NRC)


201B (Midwest Express Convention Center) 1:00 p.m.

Panelists:
Robert Einziger (ANL)  
Tom Brookmire (Dominion Gen/Res)  
Bruce Hilton (ANL-Idaho)  
Mike Billone (ANL)  
Ping Hsu (Southern Co.)  
Kimberly Gruss (NRC, Rockville)  
Charles Inerrante (NRC, Rockville)  
Carl Beyer (PNNL)  
Albert Machiels (EPRI)

*Plant Operational Risk Management–Panel/Paper, sponsored by OPD; cosponsored by HFD. Session Organizer: Nanette Gilles (NRC). Chair: Robert Dennig (NRC)

201C (Midwest Express Convention Center) 1:00 p.m.

Panel Discussion
1:00 p.m.

Invited Panelists:
Rick Grantom (STOC)  
Gary Chung (SCE, San Onofre)  
Biff Bradley (NEI)  
Mark Reinhart (NRC)  
Robert Dennig (NRC)

Paper
3:30 p.m.

Plant Configuration Risk Assessment Methodology Development for Periodic Maintenance, Huichang Yang, Chang Hyun Chung (Seoul Natl Univ–Korea), Key Yong Sung (KINS–Korea)

Environmental Sciences: General, sponsored by ESD; cosponsored by IRD. Session Organizer: Ruth Weiner (Jason Assoc). Chair: Robert Addis (Westinghouse SRC)

201D (Midwest Express Convention Center) 1:00 p.m.


Edward L. Quinn (MDM Eng)  
Ronald E. Hagen (DOE)  
Thomas C. Esselman (Altran, Boston)
1:40 p.m.

2:00 p.m.
Radiological and Chemical Risks in the Canadian Uranium Fuel Cycle, Douglas B. Chambers (SENES Consult–Canada)

Isotopes and Radiation: General, sponsored by IRD, cosponsored by BMD, ESD. Session Organizer: Markku Koskelo (Canberra). Chair: Robert Gehrke (IN EEL/BWXT)

201D (Midwest Express Convention Center)
NOTE: This session will immediately follow the preceding session, which begins at 1:00 p.m. in the same room.

2:25 p.m.
Radioisotope Batteries for Long-Life, Low-Power Applications, Kenneth E. Bower, Shahid M. Yousaf, Steffen Deus (TRACE Photonics), Maxim M. Sychov (St. Petersburg State Inst Technol–Russia)

2:45 p.m.
Radiation Pasteurization for Diverse Food Products, L. A. Braby, A. D. Whittaker, M. McLellan, A. E. Waltar (Texas A&M)

3:05 p.m.
Extraction of 239Th from 233U for Medical Research Applications, Fred J. Perez, John M. Keller (ORNL)

3:25 p.m.
Light Ion–Induced Sputtering Yields of Heavy Solids in the Low-Energy Region, J. Vukanic (Inst Nucl Sci–Yugoslavia)

*Reactor Physics Design, Validation, and Operating Experience, sponsored by RPD. Chair: Timothy Valentine (ORNL)

202A (Midwest Express Convention Center)
1:00 p.m.
An Innovative ThO2-UO2 Fuel for LWRs, X. Zhao, M. J. Driscoll, M. S. Kazimi, P. Hejzlar (MIT)

1:20 p.m.
Thorium Fuel in Tight Pitch LWR Lattices, Taek Kyum Kim, T. J. Downar (Purdue Univ)

1:40 p.m.
VENUS-2 MOX Core Benchmark: ORNL Results Using HELIOS, Ronald J. Ellis (ORNL)

2:00 p.m.
Weapons-Grade MOX Fuel Burnup Validation in ATR, G. S. Chang, R. C. Pedersen (IN EEL)

2:20 p.m.
A Negative Reactivity Feedback Device for Actinide Burner Cores, M. J. Driscoll, P. Hejzlar (MIT)

2:40 p.m.
A Modular, Gas Turbine Fast Reactor Concept (M FGR-GT), P. Hejzlar, M. J. Driscoll, N. E. Todreas (MIT)

3:00 p.m.
Criticality of Nuclear Reactor Cores Incorporating Direct Electricity Conversion, Pavel V. Tsvetkov, Theodore A. Parish (Texas A&M), Gary E. Rochau, Ronald Lipinski, Gary F. Polansky, Stephen A. Slutz (SNL), Denis E. Beller (LANL), Lloyd C. Brown (General Atomics), Samim Anghaie (Univ of Florida)

3:20 p.m.
Design Parameters for Graphite-Reflected Graphite-Foam Uranium Cores with Zero-Burnup Reactivity Swing, Felix C. Difilippo (ORNL), invited


202B (Midwest Express Convention Center)
1:00 p.m.
Analysis of the PWR MSLB Benchmark by the Coupled Code System ATHLET-QUABOX/CUBBOX, S. Langenbuch, K.-D. Schmidt, K. Velkov (GRS–Germany), invited

1:25 p.m.
Sensitivity Studies for MSLB Exercises 2 and 3 with RELAP5/PAN BOX, R. Böer, A. Knoll (Framatome ANP–Germany)

1:50 p.m.
Application of RELAP5-3D and RELAP5/MOD 3.22 to Phase I of O ECD PWR MSLB Benchmark, A. Spadoni, F. D’Auria (Univ of Pisa–Italy), Y. Hassan (Texas A&M)

2:15 p.m.
Methods and Results for the MSLB NEA Benchmark Using SIM-TRAN and RELAP-5, José M. Aragonés, Carol Ahnert, Oscar Cabellos, Nuria García-Herranz (UPM–Spain), invited

2:40 p.m.
Analyses of the OECD-M SLB Benchmark with the Codes DYN 3D and DYN 3D/ATHLET, U. Grundmann, S. Kliem (FzR–Germany), invited

3:05 p.m.
CEA-IPSN Participation in the MSLB Benchmark, E. Royer, E. Raimond, D. Caruge (CEA, Saclay–France), invited

3:30 p.m.
Using the OECD/NRC PWR MSLB Benchmark to Study Current Numerical and Computational Issues of Coupled Calculations, K. Ivanov, N. Todorova (Penn State), E. Sartori (OECD-NEA Data Bank–France), invited

*Use of Risk-Informed Methodology in Nuclear Criticality Safety–Panel, sponsored by NCSD; cosponsored by HFD. Session Organizer: Harry Felsher (NRC). All invited. Chair: Harry Felsher

202D (Midwest Express Convention Center)
1:00 p.m.
**Panelists:** Dennis D’amon (NRC)
Modeling Shutdown Operation Risk—Panel, sponsored by OPD; cosponsored by HFD, NISD. Session Organizer: Dennis Henneke (Duke Power). All invited. Chair: Dennis Henneke

202E (Midwest Express Convention Center) 1:00 p.m.

Panelists:
Dennis Henneke (Duke Power)
Robert Youngblood (ISL)
Erasmia Lois (NRC)
Jeff Julius (Scientech, Kent)

Radiation Shielding Techniques and Applications, sponsored by RPSD; cosponsored by MCD. Chair: David Anderson (Electric Boat Corp)

203A (Midwest Express Convention Center) 1:00 p.m.

Use of Genetic Algorithm in Radiation Shielding Design Optimization, Byeong Soo Kim, Joo Hyun M oon, Chang Sun Kang (Seoul Natl Univ–Korea)

1:30 p.m.

Shielding and Mechanical Properties of Nurescell, William H. Miller (Univ of Missouri, Columbia), Adrian A. Joseph (Nurescell), Vellore Shroff Gopalaratnam, Tushar K. Ghosh (Univ of Missouri, Columbia)

2:00 p.m.

Analysis of Photon Streaming Through and Around Shield Doors, Marvin Barnett, Joe Hack, Steve Nathan, Travis White (Westinghouse SM S)

2:30 p.m.

Two-Phase Monte Carlo Approach to Photon Streaming Through Three-Legged Penetrations, Travis White, Joe Hack, Steve Nathan, Marvin Barnett (Westinghouse SM S)

3:00 p.m.

Computational Simulation of Radiation Exposure in a Steam Generator Channel Head, Chan-Hyeong Kim, W. Dan Reece (TAMU Nucl Sci), Sang Hyun Cho (Univ of Texas ACC)

3:30 p.m.

Sensitivity of Radiochromatic Films to Alpha-Particle Radiation, V. Stančić, B. Šecerov (Inst Nucl Sci–Yugoslavia)

Tuesday, June 19 8:30 a.m.


201A (Midwest Express Convention Center) 8:30 a.m.

Panelists:
Kurt O. Cozens (N EI)
Robert B. Harvey, Jr. (Duke Eng)
John J. Hayes, Jr. (NRC)
Gregory Jarosz (Transco)
Peter L. Lagus (Lagus Appl Technol)
Kenneth J. Taplett (South Texas Project)
Stephen P. Schultz (Duke Power)


201B (Midwest Express Convention Center) 8:30 a.m.

Theme 1—Managing The Risks U.S.-Russian Federation Cooperative Programs for Nuclear Weapons and Materials Security

Panelists:
Maureen McCarthy (National Nuclear Security Administration) (to be confirmed)

Theme 2—Creating the Benefits The Changing Nature of Russia’s Domestic Nuclear Industry

Panelists:
Ambassador John Rich (Secretary General, Uranium Inst) (to be confirmed)
Ambassador Thomas Graham, Jr. (Executive Director, Lawyers Alliance for World Security; Vice Chair of Radkowsky Thorium Power Corp)
Victor Mizin (MIIS)

Theme 3—Addressing the Impediments U.S. and Russia as Nuclear Exporters Reconciling Nonproliferation Goals, Technology Advancements, and Economic Incentives

Panelists:
Vic Alessi (U.S. Industry Coalition) (to be confirmed)
Debra Cagan (Dept. of State)


201C (Midwest Express Convention Center) 8:30 a.m.

Panelists:
Ron Simard (N EI)
K.-C. Tran (Gamma-Metrics)
Patrick Kelly (M organ Stanley)
Barrett E. Green (Entergy, Jackson)
Edward L. Quinn (M DM Eng)
John Stamos (DOE) (to be confirmed)

Precise Relative and Absolute Germanium Detector Efficiencies for Gamma Rays, R. G. Helmer (Idaho State Univ), J. C. Hardy (Texas A&M), M. A. Ludington (Albion College)

Spectral Analysis by Library Least Squares for Instrumental Neutron Activation Analysis, Robin P. Gardner, Walid A. Metwalli (NCSU)

Specifications for Today’s Coaxial HPGe Detectors, R. J. Gehrke, R. P. Keegan, P. J. Taylor (INEEL)


Nuclear Spectral Analysis with Nonlinear Robust Fitting Techniques, G. P. Lasche (CTC), R. L. Coldwell (Univ of Florida)

Facilitating the Calibration of HPGe Detectors for In Situ Measurements, Peter Shebell (DOE, NY)

Nuclear Data Evaluation for Reactor Applications, L. C. Leal, H. Derrien, N. M. Larson (ORNL), invited

JENDL-3.3: A New Version of JENDL General-Purpose Library, Keiichi Shibata (JAERI–Japan), invited

Neutron Capture and Transmission Measurements and Resonance Parameters of Samarium, G. Leinweber (Lockheed Martin, Troy), R. C. Block (RPI), H. D. Knox (Lockheed Martin, Schenectady)

Monte Carlo Methods in Reactor Physics, Alireza Haghighat (Penn State), invited

Development of the MVP Monte Carlo Code at JAERI, T. Mori, K. O. Kumura, Y. Nagaya (JAERI–Japan), invited

Study on the Static and Kinetic Behavior During the JCO Criticality Accident, Yoshinori Miyoshi, Ken Nakajima, Yuichi Yamane (JAERI–Japan), invited


Significance of Refined Core Thermal-Hydraulics Nodalization in the MSLB Analysis, H. G. Joo, J. J. Jeong, B. O. Cho, W. J. Lee, M. H. Chang (KAERI, Taegon–Korea), T. J. Downar (Purdue Univ), invited

TRAB-3D/SMABRE Calculation of the OECD/NRC PWR MSLB Benchmark, A. Davittila, A. Hämäläinen, R. Kyrki-Rajamäki (VTT Energy–Finland), invited

Analysis of the OECD TM I-1 Main-Steam-Line-Break Benchmark Accident Using the Coupled RELAP5/PANTHER Codes, C. R. Schneider, J.-P. Guisset, J. Zhang (Tractebel–Belgium), P. Bryce, M. Parkes (British Energy–United Kingdom)

Analysis of a Main Steam Line Break in Ascó Nuclear Power Plant, Arantxa Cuadra, José Luis Gago, Francesc Reventós (UPC-SEP–Spain), invited

Neutronics Behavior Comparison Using Different Thermohydraulic Modelizations, G. Verdú Martín, O. Roselló, A. Gómez (UPV–Spain), invited

Performance Testing of SAS-DIF3DK Using the OECD/NEA PWR MSLB Benchmark, T. A. Taiwo, J. E. Cahalan (ANL), invited

Analysis of the OECD MSLB Benchmark Exercise III Using Coupled Codes RELAP5/PARCS and TRAC-M/PARCS, T. Kozlowski, R. M. Miller, T. Downar (Purdue Univ), invited


Development of Time-of-Flight Neutron Depth Profiling at Cornell, Kenan Unlü (Cornell Univ), R. Gregory Downing (RGD Rsch)

9:20 a.m.  
Gamma-Ray Imager Using Three-Dimensional Position-Sensitive CdZnTe Spectrometers, Zhong He, Y. F. Du, D. K. Wehe (Univ of Michigan)

9:45 a.m.  
The Monte Carlo-Based Dosimetry of Beta Emitters for Intravascular Brachytherapy, C. K. Choi, J. Son (Purdue Univ), S. J. Ye (Med Coll of Ohio)

10:10 a.m.  
Optimization Treatment Planning for Interstitial Brachytherapy Using the Adjoint Transport Method, S. Yoo, D. L. Henderson, B. R. Thomadsen (Univ of Wisconsin, Madison)

10:35 a.m.  
Radioisotope Power Sources for MEMS Devices, James P. Blanchard (Univ of Wisconsin, Madison)

11:00 a.m.  
The Research and Development of the Radioisotope Energy Conversion System, Eric V. Steinfields, Tushar K. Ghosh, Mark A. Prelas, Robert V. Tompkins, Sudarshan K. Loyalka (Univ of Missouri, Columbia)


202D (Midwest Express Convention Center)
8:30 a.m.  

8:50 a.m.  
Benchmark Analysis of the MIX-COMP-TERM-02 Experiments Using the SCALE/CENTRM Sequence, D. F. Hollenbach (ORNL)

9:10 a.m.  
Analysis of the Second ZEUS Critical Experiment, Russell D. M osteller, Peter J. Jaegers (LANL)

9:30 a.m.  
Benchmark Experiments with Silicon Dioxide Waste Matrix, Mark Nikolaev, Anatoli Tsiboulia, Igor Matveenko (IPPE–Russia), J. Blair Briggs, Virginia F. Dean (INEEL)

9:50 a.m.  
HEU-SiO₂-Polyethylene-Reflected Critical Assembly, R. W. Brewer, R. G. Sanchez (LANL)

10:10 a.m.  

10:30 a.m.  
Program of Experimental Investigations on Critical Facilities at IPPE, Anatoli Tsiboulia, Igor Matveenko, Anatoli Ketchetkov, Boris Ryazanov, Guennadi Mikhailov (IPPE–Russia)

10:50 a.m.  
Prompt Neutron Decay Constants in Uranium Diluted with Matrix Material Systems, Rene Sanchez, David Loaiza, Glenn Brunson (LANL)


202E (Midwest Express Convention Center)
8:30 a.m.  
PANELISTS:
John Sackett (ANL–Idaho)
Dale Klein (Univ of Texas, Austin)
Ajaya K. Gupta (NC SU)
Wayne G. Gates (OPPD)
Sonja Simmons (NEI)
Steve Trautman (Naval Reactors)

*Generation IV Nuclear Energy Systems: Road Map and Concepts–Papers/Panel, sponsored by OPD. Session Organizer: Carter (Buzz) Savage (JUPITER Corp). Chair: Carter (Buzz) Savage

203A (Midwest Express Convention Center)
8:30 a.m.  
PAPERS
8:30 a.m.  
A Long-Term Energy Source Based on an HTGR Concept, Galina V. Tsvetkova, Kenneth L. Peddicord (Texas A&M)

9:00 a.m.  
Generation II Measurement Systems for Generation IV Nuclear Power Plants, Don W. Miller (Ohio State)

9:30 a.m.  
Measurement and Analysis of Conducted Noise at Main Control Room in Uljin NPP, Cheol-Soo Goo, Bok-Ryul Kim (KINS-Korea), Won-Seo Cho (KTL-Korea)

PANEL DISCUSSION
10:00 a.m.  
INVITED PANELISTS:
Robert Versluis (DOE, Germantown)
John M. Ryskamp (INEEL)
Hussein Khalil (ANL)
Saloman Levy (Levy Assoc)

*Licensing and Safety Issues Associated with Dry Cask Storage Update–Panel, sponsored by DDRD; cosponsored by ESD, FCWMD, NCS&D, OPD. Session Organizers Russell A. Mellor (CYAPCO), Steven M. Mirsky (SAIC, Germantown). All invited. Chair: Russell A. Mellor

203C (Midwest Express Convention Center)
8:30 a.m.  
PANELISTS:
E. William Brach (NRC)
Tom Brookmire (Dominion Gen/Res)
Michael Lackey (PGE, Rainier)
Other panelists to be determined.
Tuesday, June 19
1:00 p.m.


201A (Midwest Express Convention Center)
1:00 p.m.

**Panelists:**
- John N. Hamawi (Entech Eng)
- Jay Y. Lee (NRC)
- Gerald Lahti (Exelon)
- Kerry L. Basehore (Virginia Power, Glen Allen)
- Kurt O. Cozens (NEI)

*Progress on the U.S.-Russian Excess Weapons Plutonium Disposition Program—Panel,* sponsored by FCWMD, SCNN. Session organizer: Herb Feinroth (Gamma Eng). All invited. Chair: Herb Feinroth

201B (Midwest Express Convention Center)
1:00 p.m.

This session will provide international perspectives on the status of actions taken to begin implementation of the historic Russian-U.S. agreement of September 1, 2000, which requires that each party dispose of 34 tons of excess weapons plutonium by 2025, or sooner if possible.

**Panelists:**
- Bruno Sicard (CEA–France)
- Evgeny Kudryavtsev (Minatom–Russia)
- Kenneth A. Sprankle (DOE/NNSA)
- Steve Nesbit (Duke Energy)
- Robert Gadsby (AECL–Canada)
- Kiyonori Aratani (JNC–Japan)


201C (Midwest Express Convention Center)
1:00 p.m.

**Panelists:**
- Chris Grimes (NRC)
- Doug Walters (NEI)
- Barth Doroshuk (Constellation Nucl Svc)
- Joe Gasper (OPPD)
- Harry Salmon (NYP, White Plains/Entergy Northeast)
- Vicki M. Bier (Univ of Wisconsin, Madison)
- Ronald Hagen (DOE)
- Charles J. Richardson (Entergy, Jackson)


201D (Midwest Express Convention Center)
1:00 p.m.

*Using Generic Detector Characterization Templates for Cascade Summing Correction, Ram Venkataraman, Martin Mösinger (Canberra)*

1:30 p.m.

*Performance of the True Coincidence Correction Method in GammaVision, Ronald M. Keyser, Susan E. Haywood, Daniel L. Upp (ORTEC)*

2:00 p.m.

*Low-Energy Gamma-Ray Spectrometry Using a Compton-Suppressed Telescope Detector, R. A. Sigg, D. P. DiPrete (Westinghouse SRC)*

2:30 p.m.

*High-Performance Digital Gamma-Ray Spectrometry, Michael Momayezi (X-Ray Instrum Assoc)*

3:00 p.m.

*Performance of the Zero-Dead-Time Mode of the DSPEC Plus, Ronald M. Keyser, Timothy R. Twomey, Russell D. Bingham (ORTEC)*

3:30 p.m.

*Digital Pulse-Shape Discrimination for HPGe: Fast Neutron Sensitivity, C. E. Aalseth, H. S. Miley (PNNL)*

*Present Status of Reactor Physics in the United States and Japan—II,* sponsored by RPD; cosponsored by MCD. Session Organizers: Toshikazu Takeda (Osaka Univ–Japan), Youssef Shatilla (Westinghouse). All invited. Chair: Youssef Shatilla

202A (Midwest Express Convention Center)
1:00 p.m.

*Deterministic Transport Methods for Reactor Analysis, Marvin L. Adams (Texas A&M)*

1:30 p.m.

*Three-Dimensional Nodal Transport Theory Code and Its Application, Toshihisa Yamamoto, Toshikazu Takeda (Osaka Univ–Japan), Youssef Shatilla (Westinghouse). All invited. Chair: Youssef Shatilla*

2:00 p.m.

*S_{n} Schemes, Linear Infinite-Medium Solutions, and the Diffusion Approximation, Edward W. Larsen (Univ of Michigan)*

2:30 p.m.

*Development of Angular Eigenvalue Method for Radiation Transport Problems, Akinao Shimizu (WERC–Japan)*

3:00 p.m.

*Recent Advances in Light Water Reactor Analysis Methods, T. J. Downar (Purdue Univ)*

3:30 p.m.

*Present Status of GNF New Nodal Simulator, T. Iwamoto, M. Tamitani (JNFC–Japan), B. Moore (GNF)*

*Variance Reduction for Monte Carlo Criticality Simulations,* sponsored by MCD; cosponsored by NCSD, RPD. Session Organizers: Bojan Petrovic (Westinghouse STC), John Wagner (ORNL). All invited. Chairs: Bojan Petrovic, John Wagner
202B (Midwest Express Convention Center)
1:00 p.m.
Source Initialization of the Monte Carlo Criticality Calculation via Discrete Ordinates ($S_n$) Methods, Michael T. Wenner, Alireza Haghighat, Shane Gardner (Penn State)

1:30 p.m.
Assessment of MCNP Statistical Analysis of $k_{eff}$ Eigenvalue Convergence with an Analytical Criticality Verification Test Set, Avnet Sood, R. Arthur Forster, D. Kent Parsons (LANL)

2:00 p.m.
Fission Source Algorithms and Monte Carlo Variances, R. N. Blomquist, E. M. Gelbard (ANL)

2:30 p.m.
Numerical Demonstration of Source Convergence Issues in Monte Carlo Eigenvalue Simulations, Bojan Petrovic (Westinghouse STC)

3:00 p.m.
New Zero-Variance Methods for Monte Carlo Criticality and Source-Detector Problems, Edward W. Larsen, Jeffrey D. Densmore (Univ of Michigan)

3:30 p.m.
Variational Variance Reduction for Monte Carlo Criticality Calculations, Jeffrey D. Densmore, Edward W. Larsen (Univ of Michigan)


202C (Midwest Express Convention Center)
1:00 p.m.
Comparison of Angular Approximations for PWR Cell Calculations, M. A. Smith, N. Tsoulfanidis (Univ of Missouri, Rolla), E. E. Lewis (Northwestern Univ), G. Palmiotti (ANL)

1:20 p.m.
Advanced Finite Element Discretizations for High-Energy Ion Transport, Frederick Gleicher, Anil K. Prinja (Univ of New Mexico)

1:40 p.m.
Coarse-Mesh Nodal Methods Corrected by High-Order Boundary Condition Perturbation Theory, F. Rahnema, M. S. McKinley (Georgia Tech)

2:00 p.m.
Studies of Forced-Convection Heat Transfer Augmentation in Large Containment Enclosures, S. Z. Kuhn, P. F. Peterson (Univ of California, Berkeley)

2:20 p.m.
Automation of Nuclear Fuel Pellet Quality Control, Shahla Keyvan, Xiaolong Song (Univ of Missouri, Rolla)

2:40 p.m.
A Flashing Simulator for Natural Circulation Heated Systems, Behrooz Askari (Univ of Rome–Italy), Rizwan-Uddin (Univ of Illinois)

3:00 p.m.
Hybrid Reactor Simulation and 3-D Information Display of BWR Out-of-Phase Oscillation, Robert Edwards, Zhengyu Huang (Penn State)

3:20 p.m.
Experimental Verification of Epithermal Neutron Scattering to Determine PPM Hydrogen in Metals, William H. Miller, Mihai P. Popovici, R. Liviu Groza (Univ of Missouri, Columbia)

Nuclear Criticality Safety: General, sponsored by NCSD. Session Organizer: Mark DeHart (ORNL). Chair: Francis Alcorn (BWXT Technol)

202D (Midwest Express Convention Center)
1:00 p.m.
Transportation and Storage of MOX and LEU Assemblies at the Balakovo Nuclear Power Plant, Sedat Goluoglu, R. T. Primm III (ORNL)

1:30 p.m.
Evaluation of Criticality Risks During the Storage of Irradiated Assemblies, Sylvain Janski (EdF, Villeurbanne–France)

2:00 p.m.
Tokaimura Criticality Accident: Point Model Stochastic Neutronic Interpretation, Boukhmes M. chtoua (CEA–France)

2:30 p.m.
The CASTOR X/32S Method of Covering Misloading Concerns, Dale Lancaster (NuclearConsultants.com), Charles T. Rombough (CTR Tech Svcs), Rudolf Diersch, Harry Spilker (GNB–Germany)

3:00 p.m.
Reactivity Effect of Burnable Absorbers in Burnup Credit for the CASTOR X/32S Storage and Transport Cask, Charles Rombough (CTR Tech Svcs), Dale Lancaster (NuclearConsultants.com), Rudolf Diersch, Harry Spilker (GNB–Germany)

3:30 p.m.
Application of Fixed Neutron Absorbers in the New Hanford PFP Horizontal Rack Design, J. S. Lan (Fluor Fed Svcs), B. S. Mo (Fluor Hanford), E. M. Miller, H. Toffer (Fluor Fed Svcs)


202E (Midwest Express Convention Center)
1:00 p.m.

Panelists:
Undine Shoop (NRC)
Karl Umstadter (Archimedes Technol)
Christina Plies (Univ of Missouri, Columbia)
Todd Allen (ANL)
Travis D unbar (Naval Reactors)
Sonja Simmons (NEI)


203A (Midwest Express Convention Center)
The IAEA International Project on Innovative Nuclear Reactors and Fuel Cycles - Main Objectives and Approach
Yanko Yanev, Department of Nuclear Energy, International Atomic Energy Agency

Wednesday, June 20
8:30 a.m.


201A (Midwest Express Convention Center)
8:30 a.m.

Panelists:
Michael Modro (INEL)
Jared Wermill (NRC) (to be confirmed)
Vladimir Blinkov (Elektrogorsk Research and Engineering) (to be confirmed)
Yassin Hassan (Texas A & M) (to be confirmed)
Francesco D’Auria (Univ of Pisa-Italy) (to be confirmed)


201B (Midwest Express Convention Center)
8:30 a.m.

Panelists:
Andrew Kadak (Kadak Assoc)
Robert Bari (BNL)
Other panelists to be determined.

*Performance-Based Regulation–Panel, sponsored by OPD; cosponsored by HFD. Session Organizer: N. Prasad Kadambi (NRC, Rockville). All invited. Chair: N. Prasad Kadambi

201C (Midwest Express Convention Center)
8:30 a.m.

Panelists:
Robert Youngblood (ISL)
Vicki Bier (Univ of Wisconsin, Madison)
Richard W. Bukowski (NIST)
N. Prasad Kadambi (NRC, Rockville)
James F. Koonce (DOE, Oakland)

*Neutron Beam Experiments Using Nuclear Research Reactors: Honoring the Retirement of Professor Bernard W. Wehring—I, sponsored by IRD; cosponsored by BM D. Session Organizer: Kenan Ünlü (Cornell Univ). All invited. Chair: Kenan Ünlü
201D (Midwest Express Convention Center)
8:30 a.m.
Innovative Approaches for Neutron Beam Experiments at University Research Reactors, Kenan Ünlü (Cornell Univ), Bernard W. Wehring (NCSU)

8:55 a.m.
Ultracold Neutron Source at the North Carolina State Research Reactor, Bernard W. Wehring, Albert R. Young (NCSU)

9:20 a.m.
A Comparison of Neutron Beams for BNCT, Thomas E. Blue, Jeffrey E. Woillard (Ohio State)

9:45 a.m.
Neutron Detection and Radiography Using Microsphere Plates, R. Gregory Downing, W. Bruce Feller, Paul L. White, P. Brian White (NOVA Scientific)

10:10 a.m.
Recent Advances in Cold Neutron Utilization at the NIST Research Reactor, Robert E. Williams (NIST)

10:35 a.m.
Neutronics Analyses for Beamline Upgrades to the High Flux Isotope Reactor, D. T. Ingersoll, J. A. Bucholz, E. D. Blakeman (ORNL)

11:00 a.m.
Californium-252 Neutron Damage Testing of Advanced Photon Source Permanent Magnets, R. C. Martin (ORNL), J. M. Alderman, P. K. Job (ANL), C. M. Simmons (ORNL)


202A (Midwest Express Convention Center)
8:30 a.m.
Recent Activities of Loading Pattern Optimization Research in Japan, Akio Yamamoto (NFL–Japan), invited

8:55 a.m.
Nuclear Fuel Management Optimization Capabilities, Atul A. Karve (NCSU/GNF), Paul M. Keller, Paul J. Turinsky (NCSU), G. Ivan Maldonado (Iowa State Univ/GNF), invited

9:20 a.m.
Study of Some Genetic Operators Used in an Axial Assembly Fuel Optimization System, C. Martín Del Campo, J. L. François (UNAM–Mexico)

9:45 a.m.
Methods for Evaluating Crud Induced Axial Power Shift, J. R. Secker, Y. A. Shatilla, B. J. Johansen, M. Y. Young, Y. Sung (Westinghouse, Monroeville), invited

10:10 a.m.
SIMULATE-3K: Enhancements and Application to Boiling Water Reactor Transients, Kord S. Smith, Gerardo Grandi (Studsvik USA, Idaho Falls), invited

10:35 a.m.
Sensitivity Studies in Best-Estimate-Oriented BWR RIA Analysis, Hideaki Ikeda (Tohden Software–Japan), Takaofumi Anegawa (TEPCO–Japan), invited

11:00 a.m.
Impact of Coolant Selection on Core Neutronics for Integrated LMR-AMTEC System, Bojan Petrovic, Dmitry V. Paramonov (Westinghouse STD)

Computational Methods and Modeling, sponsored by MCD; cosponsored by NCSD, RPSD, RPD. Chair: Todd J. Urbatsch (LANL)

202B (Midwest Express Convention Center)
8:30 a.m.
Sampling a Position Uniformly in a Trilinear Hexahedral Volume, Todd J. Urbatsch, Thomas M. Evans, H. Grady Hughes (LANL)

8:55 a.m.
Point-Kernel Approach to Determine Organ Doses and Dosimeter Responses, Chan-Hyeong Kim (TAMU Nucl Sci), Warren D. Reece (Texas A&M)

9:20 a.m.
Adaptive Mesh Refinement for the Nodal Integral Method and Application to the Convection-Diffusion Equation, Allen J. Torég, Rizwan-Uddin (Univ of Illinois)


202B (Midwest Express Convention Center)
9:50 a.m.
Panelists to be determined.


202C (Midwest Express Convention Center)
8:30 a.m.

8:50 a.m.
New Methods to Support Cleanup of Plutonium-Contaminated Soils and Sediments, S. B. Clark, H. Kurosaki, S. Lamont, S. M. Loyland Asbury, R. Filby (Washington State Univ)

9:10 a.m.
Spent Nuclear Fuel Characterization Through Neutron Flux Deconvolution, Michael R. Hartman, John C. Lee (Univ of Michigan)

9:30 a.m.
Early Detection of Plant Equipment Failures: A Case Study in Just-
In-Time Maintenance, Alexander G. Parlos, Kyusung Kim, Raj M. Bharadwaj (Texas A&M) 9:50 a.m.
Parameter and State Estimation Using DSD, Tunc Aldemir, Peng Wang, Don W. Miller (Ohio State)
10:10 a.m.
Bayesian Methods for Radiation Dosimetry, Peter G. Groer, Scott Brame (Univ of Tennessee)
10:30 a.m.
Evaluation of a Reactor On-Line Uncertainty Monitoring System, Robert M. Edwards, Weidong He (Penn State)
10:50 a.m.

*Manpower and Management Issues at Nonpower Reactors–Panel, sponsored by ODP; cosponsored by IRD. Session Organizer: Sean O’Kelly (Univ of Texas, Austin). All invited. Chair: Sean O’Kelly
202D (Midwest Express Convention Center) 8:30 a.m.

**Panelists:**
William Vernetson (Univ of Florida)
David Slaughter (Univ of Utah)
Ledyard B. Marsh (NRC)
Sean O’Kelly (Univ of Texas, Austin)

*The National Laboratory Business Role in Energy Technology Research and Development–Panel, sponsored by MSTD. Session Organizer: John Sackett (ANL-Idaho). All invited. Chair: John Sackett
202E (Midwest Express Convention Center) 8:30 a.m.

**Panelists:**
Charles J. Sullivan (Alabama PSC)
Steve Aumeier (ANL)
Tom Sanders (SNL)
Shane Johnson (DOE)
Ralph Bennett (INEEL)

Corrosion in Nuclear Systems, sponsored by MSTD; cosponsored by AAD. Session Organizer: Todd Allen (ANL-Idaho). Chair: Todd Allen
203A (Midwest Express Convention Center) 8:30 a.m.
Liquid Lead Corrosion Under Reducing Conditions with Arsenic Present, Eric P. Loewen (INEEL)
8:55 a.m.
Analysis of Data for Large-Effect Mercury Targets of LANSCOE/WNR Experiments, S. H. Kim, R. P. Taleyarkhan (ORNL)
9:20 a.m.
The Role of Cavitation on Initiating Mercury-Steel Wetting, Rusi P. Taleyarkhan, Seokho H. Kim, Steven J. Pawel, James R. DiStefano (ORNL)
9:45 a.m.
Comparison of the PWR Cladding Corrosion Models for Test IFA-638.1-3, Yong-Deog Kim, Seong-Man Bae, Chang-Sup Lee (KEPRI–Korea)

Fuels for Space Nuclear Power Systems, sponsored by MSTD. Session Organizer: Samim Anghaie (Univ of Florida). Chair: Samim Anghaie
203A (Midwest Express Convention Center) 9:15 a.m.

**Note:** This session will immediately follow the preceding session, which begins at 8:30 a.m. in the same room.
10:15 a.m.
Tri-Carbide Nuclear Fuel Processing and Characterization for Space Nuclear Applications, Travis Warren Knight, Samim Anghaie (Univ of Florida)
10:40 a.m.
Compatibility of Tungsten and Molybdenum with UF₆ and UF₆-UO₂ at 2000 to 2350 K, Robert Joseph Hanrahan, Jr. (LANL), Samim Anghaie (Univ of Florida)
11:05 a.m.
Innovative Semispherical Pb-Hf-Cu Shield for a Fissioning Plasma Core Reactor, Travis Warren Knight, Samim Anghaie (Univ of Florida)

*Decommissioning Hot Topics and Emerging Safety Issues–Panel, sponsored by DDRD. Session Organizers: Thomas S. LaGuardia (TLG Eng, Bridgewater), Patricia A. Augustyn (Graver Technol). Chair: Thomas S. LaGuardia
203C (Midwest Express Convention Center) 8:30 a.m.

**Panelists:**
License Termination Plan Content—NRC Guidance in Preparation and the Use of Screening DGGLs, Robert Nelson (NRC)
Partial Site Release of Property Prior to LTP Approval, Mike Ripley (NRC)
Private Dry Fuel Storage, John Parkyn (PFS)
New 50.59 Rules—Changes and Their Impact on Decommissioning, Lynne Goodman (Detroit Edison)
PCBs in Paint and Other Materials—Experience in Decommissioning, Tracey Goble (Consumers Energy)
Demolition of Buildings After License Termination, James Byrne (GPU Nuclear, Dillsburg)
Decommissioning Liabilities in Nuclear Plant Purchases and Sales, Thomas LaGuardia (TLG Eng, Bridgewater)
Wednesday, June 20
1:00 p.m.

**Nuclear Safety Analysis**, sponsored by NISD; cosponsored by OPD. Chair: Jordi Roglans-Ribas (ANL)

*201A (Midwest Express Convention Center)*

1:00 p.m.
LOCA Simulation Test of the Cladding for High-Burnup Fuel, T. Murata, Y. Taniguchi (NFI–Japan), S. Urata, T. Sato (Kansai Electric–Japan)

1:25 p.m.
Thermal Shock Behavior of PWR High-Burnup Fuel Cladding Under Simulated LOCA Conditions, Honna Kozo (MHI Yokohama-Japan), Doi Soichi (MHI Kobe-Japan), Ozawa Masaki (NDC-Japan), Urata Shigeru, Sato Taku (Kansai Electric-Japan)

1:50 p.m.
LOCA Analysis in a Pebble Bed Reactor, Tieling Zhai, Hee Cheon No, Andrew C. Kadak (MIT)

2:15 p.m.
Visual and Thermal Study of Boiling in Downward-Facing Pressurized Narrow Gap, Yong H. Kim, Kune Y. Suh (Seoul Natl Univ-Korea)

2:40 p.m.
Implementation of Gap-Cooling Phenomena into MELCOR, Jong-Hwa Park, Dong-Ha Kim (KAERI-Korea)

3:05 p.m.
Verification Study of Heat Transfer Models in a Narrow Gap, T. Kohriyama, M. Murase, Y. Okano (INSS-Japan), A. Ezzidi (CSDC-Japan)

3:30 p.m.
Release of a Molten Material in Skull Melting Method, S. W. Hong, B. T. Min, H. D. Kim (KAERI, Taejon-Korea)

**Fuel Cycle and Waste Management**, sponsored by FCWM D; cosponsored by NCSD. Chair: Robert Schaefer (ANL-Idaho)

*201B (Midwest Express Convention Center)*

1:00 p.m.
An Empirical Approach to Bounding the Axial Reactivity Effects of PWR Spent Nuclear Fuel, Patrick M. O'Leary (Framatome, Lynchburg), John M. Scaglione (Bechtel SAIC)

1:25 p.m.
Design of a BWR Core with Overmoderated MOX Fuel Assemblies, J. L. Francois, C. Martin del Campo (UNAM-Mexico)

1:50 p.m.
Analysis of PWR Equilibrium Fuel Cycles Using Nuclide Importance, Hiroshi Sekimoto, Abdul Waris (Tokyo Inst Technol-Japan)

2:15 p.m.
Using the Water Displacer Rod Concept to Improve the Fuel Utilization of SM ART, Yong Se Kwon, Un Chul Lee (Seoul Natl Univ-Korea)

2:40 p.m.
Validation of Argonne National Laboratory Dose Calculations for BN-350 Spent Fuel, R. W. Schaefer (ANL-Idaho)

3:05 p.m.

3:30 p.m.
Thorium Nitrate Stockpile Stewardship and Disposition Technical Basis, William Howard Hermes, Catherine Helene Mattus, Guillermo D. Del Cul, James W. Terry (ORNL)

*Innovative Probabilistic Risk Assessment Applications: Barrier Impairments and Fracture Toughness—Papers/Panel*, sponsored by OPD. Session Organizer: Howard McShane (SCE, San Onofre). Chair: Howard McShane

*201C (Midwest Express Convention Center)*

PAPERS

1:00 p.m.
Applications of Risk-Informed Decision Making to Hazard Barrier Management, Howard McShane (SCE, San Onofre), invited

1:30 p.m.
Demolition Debris and Tornado Missile Hazard During Decommissioning, David Calhoun, Stephen Shepherd (SCE, San Onofre)

2:00 p.m.
Fracture Toughness Uncertainty Characterization and Treatment for Reactor Vessel Safety Analyses, F. Li, M. Modarres (Univ of Maryland)

PANEL DISCUSSION

2:30 p.m.

INVITED PANELISTS:
Michael Osterman (TU Electric)
Steve Root (SCE, San Onofre)
Biff Bradley (NEI)
Other panelists to be determined.

*Neutron Beam Experiments Using Nuclear Research Reactors—Honoring the Retirement of Professor Bernard W. Wehring—II*, sponsored by IRD; cosponsored by BMD. Session Organizer: Kenan Ünlü (Cornell Univ). Chair: Thomas Blue (Ohio State)

*201D (Midwest Express Convention Center)*

1:00 p.m.
A 25-Year Retrospect on Fission Yield Measurements Made with HIAWATHA, Richard B. Strittmatter (LANL), invited

1:25 p.m.
Design of a PGAA Facility at the TRIGA Mark III of ININ, Mexico, C. Ríos-Martínez (CREN-UAZ-Mexico), L. Paredes-Gutiérrez, E. Alemón Arias (ININ-Mexico), invited

1:50 p.m.
Preliminary Experiments to Determine Moisture in Carbon Composites Using PGAA, W. S. Charlton, D. J. Dorsey (Univ of Texas, Austin)

2:15 p.m.
Accurate Characterization of the Shape of the HPGe Detector Peak
Efficiency Curve for Application in PGNAA, Ayman I. Hawari (Univ of Cincinnati), invited

2:40 p.m.
Testing Moderating Detection Systems with $^{252}$Cf-Based Reference Neutron Fields, Nolan E. Hertel, Jeremy Sweezy, Jeremiah S. Sauber, David Vaughn, Andrew Cook, Jeff Tays, Tae-Ik Ro (Georgia Tech), invited

3:05 p.m.
Nuclear Analytical Applications in a Semiconductor Materials Characterization Laboratory, Tim Z. Hossain (AMD), invited

3:30 p.m.
Redesign of the University of Texas Thermal Neutron Imaging Facility Shielding, Daniel J. Dorsey, William S. Charlton (Univ of Texas, Austin)

*Present Status of Reactor Physics in the United States and Japan—IV*, sponsored by RPD; cosponsored by MCD. Session Organizers: Toshikazu Takeda (Osaka Univ–Japan), Youssef Shatilla (Westinghouse). Chair: Gray S. Chang (INEEL)

202A (Midwest Express Convention Center)

1:00 p.m.
Validation of the Nuclear Design Method for MOX Fuel Loaded LWR Cores, E. Saji, Y. Inoue (Toden Software–Japan), M. Mori, T. Ushio (NEL–Japan), invited

1:25 p.m.
Micro-Reactor Physics of MOX-Fueled Core, Toshikazu Takeda (Osaka Univ–Japan), invited

1:50 p.m.
Analysis of High-Moderation MOX Core MISTRAL-3 with SRAC and MVP, Kazuya Ishii (Hitachi–Japan), Masahiro Tabumii (NFI–Japan), Koki Hibi (MHI–Japan), Koichi Sakurada (Toshiba–Japan), Toru Yamamoto, Yutaka Iwata, Masao Uejii (NPEC–Japan), invited

2:15 p.m.
High-Conversion BWR with Island-Type Fuel, Takao Kondo, Mochida Takaaki, Junichi Yamashita (Hitachi–Japan)

2:40 p.m.
Preliminary Optimization Studies of ADS Target and Buffer Design, W. S. Yang (Chosun Univ–Korea), T. A. Taiwo, R. N. Hill (ANL), invited

3:05 p.m.
Accelerator-Driven Subcritical Reactors in Japanese Universities: Experimental Study Using the Kyoto University Critical Assembly, Seiji Shiroya, Hirosho Unesaki, Tsuyoshi Misawa (Kyoto Univ RRI–Japan), invited

3:30 p.m.
Design Studies to Maximize the Discharge Burnup of Liquid-Metal-Cooled ATW Systems, W. S. Yang (Chosun Univ–Korea), T. A. Taiwo (ANL), invited

*Mathematics and Computational Methods Development in U.S. Department of Energy–Sponsored Research (Nuclear Energy Research Initiative and Nuclear Engineering Education Research),* sponsored by MCD; cosponsored by RPSD, RPD. Session Organizer: Madeline Anne Felts (DOE, Germantown). All invited. Chair: Madeline Felts

202B (Midwest Express Convention Center)

1:00 p.m.
Mathematics and Computational Physics Methods Research and Development in DOE’s NERI and NEER Programs, Madeline Anne Felts (DOE, Germantown)

1:30 p.m.
A New Monte Carlo Tallying Methodology for Optimizing the Nuclear Energy Research Initiative Spherical-Shell Transmission Experiment, S. Gardner, A. Haghjhat, Patchimpatapong (Penn State), J. Adams, A. Carlson (NIST), S. Grimes, T. Massey (Ohio Univ)

2:00 p.m.
PENTRAN Modeling for Design and Optimization of the Spherical-Shell Transmission Experiments, Vefa Kucukboyaci, Alireza Haghjhat (Penn State), James M. Adams, Allan D. Carlson (NIST), Steven M. Grimes, Thomas N. Massey (Ohio Univ)

2:30 p.m.
Development of an Expert System for Generation of an Effective Mesh Distribution for the $S_9$ Method, Apisit Patchimpattapong, Alireza Haghjhat (Penn State)

3:00 p.m.
Analysis of Angular V-Cycle Multigrid Formulation for Three-Dimensional Discrete Ordinates Shielding Problems, Vefa Kucukboyaci, Alireza Haghjhat (Penn State)


202D (Midwest Express Convention Center)

1:00 p.m.

1:30 p.m.
An Assessment of Existing Friction Factor Correlations for Wire-Wrapped Fuel Assemblies, Moon-Hyun Chun, Kyong-Won Seo (KAIST–Korea), Ho-Yun Nam (KAERI, Taejon–Korea)

2:00 p.m.
Physico-Numerical Modeling of Fission Product Release from a Molten Pool of Core Debris, Jeong Ick Yun, Kune Y. Suh, Chang Sun Kang (Seoul Natl Univ–Korea)

2:30 p.m.
High-Performance Annular Fuel for Pressurized Water Reactors, P. Hejzlar, M. J. Driscoll, M. S. Kazimi (MIT)

3:00 p.m.
Local Heat Transfer and Flow Transition in U-Tubes During a Reflux Condensation Mode, Moon-Hyun Chun, Kyung-Won Lee (KAIST–Korea), In-Cheol Chu (KAERI, Taejon–Korea)

*Business Challenges in the Universities–Panel*, sponsored by OPD. Session Organizer: Andrew Klein (Oregon State Univ). All invited. Chair: Andrew Klein

202E (Midwest Express Convention Center)

1:00 p.m.
Thursday, June 21
8:30 a.m.

Nuclear Safety: Operational Aspects, sponsored by NISD; cosponsored by OPD. Chair: Gerald Loignon, Jr. (SCE&G)

201A (Midwest Express Convention Center)
8:30 a.m.
Demonstrating the Link Between Safety Culture and Competitiveness, H. Elliot Chakoff, James E. Slider (TevaMetrics)

8:55 a.m.
Significance of Alternate Decay Heat Removal Analysis to Reduce Outage Time at Dresden, LaSalle, and Quad Cities, Candice Chou, Kevin Ramsden (Exelon Nucl)

9:20 a.m.
Hazard Analysis of Passive Systems, Luciano Burgazzi (ENEA, Bologna–Italy)

9:45 a.m.
Application of Wavelet Transform for Cable Aging Assessments, Chul-Hwan Kim (Sungkyunkwan Univ-Korea), Bok-Ryul Kim, Cheol-Soo Goo (KINS-Korea)

10:10 a.m.
Data Communication in a Nuclear Digital I&C System — The Korean Experience, Tae Wook Lim, Jae Youb Byun (KOPEC-Korea), James S. Ihun (Sargent & Lundy)

10:35 a.m.
Effects of a Feed-and-Bleed Operation Using Pilot-Operated Safety Relief Valves at the Korean Next Generation Reactor, Soo Yong Park, Dong H a Kim (KAERI, Taejon-Korea)

11:00 a.m.
Advanced Tooling Technology is Key to Safety and Performance, Dane Piatt, Mike Welch (WSI)

1:00 p.m.

NRC representative (to be determined)
DOE representative (to be determined)

*Panelists:

John C. Lee (Univ of Michigan)
Per Peterson (Univ of California, Berkeley)
Ron Simard (NEI)
W. Gary Gates (OPPD)
Andrew Klein (Oregon State Univ)

*Industry Update: Ensuring Public Safety During Material and Site Free Release—Panel, sponsored by DDRD; cosponsored by ESD, FCWMD. Session Organizers: James Byrne (GPU Nuclear, Dillsburg), Arthur E. Desrosiers (Bartlett Svc, Plymouth). All invited. Chair: Arthur E. Desrosiers

203C (Midwest Express Convention Center)

Thursday, June 21
8:30 a.m.

Innovative Public Information Programs—Paper/Panel, sponsored by OPD; cosponsored by HFD, ANS Public Information Committee. Session Organizers: Barbara Newsom (ESC Learning), John Graham (ETCetera). Chair: Barbara Newsom

201C (Midwest Express Convention Center)
8:30 a.m.

PAPER
8:30 a.m.
Judgment of Opinion Leaders on Nuclear Energy Use, Jong Seok Kim (OKA EA–Korea)

PANEL DISCUSSION
9:00 a.m.
INVITED PANELISTS:
New ANS Public Information Web Site International Programs, Emmy Roos (ETCetera)
ANS Teacher Workshops and the Northern Ohio Section’s Highly Successful Implementation of Them, Chuck Vincent (ANS)
Innovations at Exelon, David Knox (Exelon)
Innovative Public Information Center Programs, Lauretta Kerchma-Olson (Point Beach Energy Center)
NRC representative (to be determined)
DOE representative (to be determined)


201D (Midwest Express Convention Center)
8:30 a.m.

PANELISTS:
J. M. Carpenter (ANL)
L. L. Daemen (LANL)
P. D. Ferguson (ORNL)
R. E. Williams (NIST)
Guenter Muhrer (LANL)
Erik Iverson (ORNL)

Reactor Analysis Methods, sponsored by RPD; cosponsored by MCD. Chair: Temitope Taiwo (ANL)

202A (Midwest Express Convention Center)
8:30 a.m.

Removal of Numerical Singularity in Analytical Nodal Methods via Continued Factoring, Sweng Woong Woo, Nam Zin Cho (KAIST-Korea), Jae M an Noh (KAERI, Taejon-Korea)

8:50 a.m.
An Automatic Optimal Fuel Management Method for CANDU 6 Reactors, Chang Joon Jeong, Nam Zin Cho (KAIST-Korea), Hangbok Choi (KAERI, Taejon-Korea)

9:10 a.m.
A Dynamic Model for Generation IV Reactors, M . I. Zougari, L. F. Miller, F. Mynatt (Univ of Tennessee)
9:30 a.m.
Determination of Core Flux Level for Credible Reactivity Measurement, H. S. Woo, H. C. Lee, S. D. Kim (KNFC–Korea)

9:50 a.m.
Within-Pin Reaction Rate Distributions in a SVEA-96+ Fuel Assembly, C. Pralong (Scherrer Inst–Switzerland/EPFL–Switzerland), P. Grimm (Scherrer Inst–Switzerland), O. Joneja (Scherrer Inst–Switzerland/EPFL–Switzerland), F. Jatuff, M. Murphy (Scherrer Inst–Switzerland), R. Chawla (Scherrer Inst–Switzerland/EPFL–Switzerland)

10:10 a.m.
Angular Dependence of the Fast Flux in Reactor Lattices, Marvin L. Adams (Texas A&M)

10:30 a.m.
MCNP4B Analysis of the HTR-10 Startup Core, J. R. Lebehnacht, M. J. Driscoll (MIT)

10:50 a.m.
Power Distribution Calculations for Various Tantalum Loadings in the HFIR Control Blades, B. J. Marshall, L. F. Miller (Univ of Tennessee)

Transport Methods: General, sponsored by MCD; cosponsored by RPSD, RPD. Chair: William R. Martin (LANL)

202B (Midwest Express Convention Center)
8:30 a.m.

8:50 a.m.
Monte Carlo Particle Transport in Media with Exponentially Varying Time-Dependent Cross Sections, Forrest B. Brown, William R. Martin (LANL)

9:10 a.m.
An Additive Angular-Dependent Rebalance Acceleration Method for Neutron Transport Equations, Nam Zin Cho, Chang Je Park (KAIST–Korea)

9:30 a.m.
Investigation of New Quadrature Sets for the Discrete Ordinates Method with Application to Nonconventional Problems, Gianluca Longoni, Alireza Haghighat, James Brown, Vefa Kucukboyaci (Penn State)

9:50 a.m.
A First Collision Method for Calculating the Eigenvalue in Multiplying Spherical Systems, Brian A. Miller (Univ of New Mexico), Raymond Alcouffe (LANL), Anil K. Prinja (Univ of New Mexico)

10:10 a.m.
A Flux-Limited Diffusion Theory Derived from the Maximum Entropy Eddington Factor, Chukai Yin, Binging Su (Univ of Cincinnati)

10:30 a.m.
Formulation of a Fourier-Boltzmann Transformation to Solve the Three-Dimensional Transport Equation, V. Stančić (Inst Nucl Sci-Yugoslavia)

10:50 a.m.
Formulation of Transport Equation in a Split Form, V. Stančić (Inst Nucl Sci-Yugoslavia)


202D (Midwest Express Convention Center)
8:30 a.m.
Performance of k-ε Turbulence Models in the Simulation of LWR Fuel-Bundle Flows, Constantine P. Tzanos (ANL)

9:00 a.m.
Benchmarking of the TRISO Two-Phase-Flow Module, Donald Hetton, Anela Kumbaro, Yassin Hassan (Texas A&M)

9:30 a.m.
Nonlinear H∞ Control of Nuclear Steam Generators, Fernando Ramalho, John C. Lee (Univ of Michigan)

10:00 a.m.
CFX Code Analysis for Steam Jet Impingement in the Annulus Wall, Sang Hyuk Yoon, Kune Y. Suh (Seoul Natl Univ–Korea)


202E (Midwest Express Convention Center)
8:30 a.m.
PANELISTS:
John Sauger (SWEC, Pickering–Canada)
Mark Marano (Numanco, Reno)
Dana Shave (CWFC)
Robert Pierce (Westinghouse, Windsor)
Michael W. Smiarowski (Siemens-Westinghouse)

*Safety Yields Decommissioning Successes–Panel, sponsored by DDRD; cosponsored by OPD. Session Organizers Steven Bossart (DOE, Morgantown), Richard L. Miller (Bechtel, Frederick). All invited. Chair: Steven Bossart

203C (Midwest Express Convention Center)
8:30 a.m.
PANELISTS:
Human Factors Assessment of D&D Technologies and How This Relates to Improvement of Safety in Decommissioning Projects, Bruce Lippy (OENHP)
PPPL’s Safety Practices, Safety Records, and Corrective Actions to Address Safety Issues, Keith Rule (PPPL)
IN EEL’s Safety Practices in Decommissioning Projects and Safety-Enhancing D&D Technologies, Richard M eservey (BWXT)
Big Rock Point Restoration Project Decommissioning Successes from a Safety Culture Perspective, William Trubilowicz (Consumers Pwr, Big Rock Point)

June 18-21, 2001 • Milwaukee, Wisconsin

Michael J. Hitchler
General Chair
Westinghouse Safety Management Solutions LLC

Kevin R. O’Kula
Technical Program Co-Chair
Westinghouse Safety Management Solutions LLC

Promoting and Assessing an Improved Safety Culture for DOE Facilities


The 2001 SAWG Workshop is an annual DOE, DOE Contractor, and stakeholder meeting emphasizing safe operation and utilization of existing facilities, new missions within the DOE Complex, research & development operations, consolidation of strategic infrastructure, and dispositioning of older, nonviable facilities. The meeting will provide a forum for safety analysts and sharing of lessons learned, operational insights, and unique solutions to Complex-wide issues. Implementation of the Nuclear Safety Management Rule (10 CFR 830), Accident & Consequence Modeling, Natural Phenomena Hazards, Regulatory Issues, Integrated Safety Management Process Implementation, Worker Safety, Decontamination and Decommissioning, Updating the Authorization Basis, Safety Analysis of “Non-Standard” Facilities, and other pertinent topics will be covered.

This is the first SAWG workshop as an ANS embedded topical, and participants from the co-located ANS general meeting and the ANS/Atomic Energy Society of Japan Topical Meeting on Safety Culture and Safety Goals are welcome to attend. It is also the first workshop to be conducted near a DOE Office of Nuclear Energy laboratory (Argonne National Laboratory).

The embedded workshop will offer training and courses in approximately fifteen technical areas, sixty-five paper presentations in twelve sessions, invited, and five panel discussions over an eight-day period. ANS technical tours are planned for nearby research and commercial nuclear facilities, including facilities of Argonne National Laboratory and the University of Wisconsin.

Monday, June 18, 2001 • 4:00 p.m. - 6:00 p.m.

Special Panel Session: 10 CFR 830 Implementation: U.S. Department of Energy Perspective
Richard Black and Dick Englehart; DOE/EH
(Hyatt Regency – Executive A and B)

Tuesday, June 19, 2001 • 8:30 a.m. - 11:30 a.m.

Welcome and Introductions
Michael J. Hitchler, Westinghouse SM S, General Chair of Eleventh EFCOG SAWG Workshop

Keynote Address
Mr. James J. Mangeno, Director, Nuclear Technology Division, National Nuclear Security Administration, DOE
(Hyatt Regency Ballroom)


(Hyatt Regency Ballroom)

Speakers:
Greg Rudy, Manager, DOE, Aiken
Richard Black, Office of Nuclear Safety Policy and Standards, DOE
Beverly Cook, Manager, DOE, Idaho Falls
Gail H. Marcus, Principal Deputy Director of the Office of Nuclear Energy, Science and Technology, DOE

Tuesday, June 19, 2001 • 1:30 p.m. - 4:30 p.m.

(11.g)
Panel: Regulatory Perspectives for Improving Safety Culture, Session Chair: Frank M. McCoy, Westinghouse SM S

Panelists:
Charles (Chip) Martin, DNFSB

(11.g)
(11.m) Chemical Safety and Process Safety Management (Contributed), Session Chair: Ingle Paik, Westinghouse SMS

(11.n) Natural Phenomena Impacts to DOE Facilities (Contributed), Session Chair: Art Crawford (LANL)

Wednesday, June 20, 2001 • 8:30 a.m. - 11:30 a.m.

(11.a) Panel: Implementation of the Nuclear Safety Rule, Session Chair: Brad Evans (Fluor Hanford)

(11.j) Facility Safety: Hazard and Accident Analyses (Invited & Contributed), Session Co-Chairs: Vern Peterson (RMRS/RFETS) and Ron King (ANL-Idaho)

(11.e) New Missions, New Opportunities—Safety Support for 21st Century Facilities (Contributed), Session Co-Chairs: David Seidel (LANL) and Floyd Galegar (SNL)

Embedded Topical Meeting – 2001 SAWG Workshop
9:00 a.m.
Process Improvements: Filling the Pipeline to WIPP, Belinda Niemi and James McCormick (Westinghouse TRU Solutions)

9:30 a.m.
Safety Issues with Free Surface Liquid Lithium Walls, Lee Cadwallader (INEEL)

10:00 a.m.
Break

10:30 a.m.
Chemistry and Physics Challenges in Spallation Neutron Source Safety Analyses, Carl Fields, Michael I. Harrington, M. Lee Hydey (Westinghouse SMS), and Robert Lowrie (UT-Battelle)

11:00 a.m.
Safety Analysis for Startup of High Explosive Synthesis Facility, Barry Hill (Pantex)

11:30 a.m.
Safety Assessment of MOX Fuel Fabrication Facility, Gary Kaplan (Duke Cogema Stone & Webster)

(11.l)
Integrated Safety Management Processes and Applications (Invited and Contributed), Session Co-Chairs: Art Francis (Bechtel Nevada) and Lorraine Segura (LANL)

(11.l)

Wednesday, June 20, 2001 • 12:30 p.m. - 2:00 p.m.

DOE Complex, Session Chair: Kevin O’Kula (Westinghouse SMS)

(Speakers)
John Gutteridge, D O E/N E-20
Michael Corradini, Univ of Wisconsin, Madison
Mel R. Buckner, Westinghouse SRC

Wednesday, June 20, 2001 • 1:30 p.m. - 5:00 p.m.
(11.h)
Computer Modeling and Experimental Benchmarks (Invited and Contributed), Session Co-Chairs: Al Wooten (Westinghouse SMS) and Bill Cowley (CH2M Hill, Hanford Group)

(11.h)

Development of New State-of-the Art Building Wake Models Using Computational Fluid Dynamics (CFD) and Comparison with Other Models, Louis F. Restrepo (OMICRON), invited

2:00 p.m.
An Experimental and Analytical Procedure to Calculate Wind Driven Leakage, Scott Lucas (INEEL)

2:30 p.m.
Leak Path Factor Calculations for Waste Tank, L. Mario Polizzi (Westinghouse SMS)

3:00 p.m.
Break

3:30 p.m.
Zone-Model vs. 3-D Field Fire Codes: A Basis for Valid Application to Facility Safety Analysis, Mark T. Leonard (Dycoda, LLC)

4:00 p.m.
Utilization of the National Institute of Standards and Technology Fire Dynamics Simulation Program in Fire Hazards Analysis, Luke Bartlein (LANL)

4:30 p.m.
Analysis of Structural Damage Caused by Turbulent Jet Explosions, Robert G. Colwell (RFETS)

(11.b)
Assessing Computational Tools and Software Upgrades (Invited and Contributed), Session Co-Chairs: Charles Martin and Chris Graham (DNFSB)

(11.b)

Overview of the Software Quality Assurance Subcommittee, Mike Lackner, Don Schilling (Honeywell FM & T, Kansas City), and Gary Eckert (DOE, Albuquerque), invited

2:00 p.m.
A DOE Computer Code Tool-Box: Issues and Opportunities, Dae Chung (DOE/NS), Kevin O’Kula (Westinghouse SMS), Patrick McClure (LANL)
2:30 p.m.
RSAC-6 - Calculates the Radiological Consequences of a Release of Radiactive Material to the Atmosphere, B.J. Schrader (INEEL)

3:00 p.m.
Break

3:30 p.m.
Current Activities to Enhance the MACCS2 Code at Sandia National Laboratories, Nathan E. Bixler (SNL)

4:00 p.m.
Use and Application of the ARCON 96 Dispersion Model at the Y-12 Complex, Danny A. Walker (Y-12), invited

(11.k)
Control Selection and Statistical Methodology (Contributed), Session Co-Chairs: Jim McCormick (Westinghouse SMS) and John Johnson (Bechtel BWXT Idaho)

(Hyatt Regency - Executive C)
1:30 p.m.
Defining Limits for Material at Risk During Spent Fuel Conditioning Operations in an Argon Hot Cell, Ira Charak (ANL)

2:00 p.m.
Pressure Monitoring of the DOE 3013 Containers at the Hanford Site, Kenneth Fein (Vista Engineering Technologies)

2:30 p.m.
INTEC Upgraded SAR/TSR Lessons Learned, Eugene E. Hochhalter (INEEL)

3:00 p.m.
Break

3:30 p.m.
Implementation of Statistical Methodology in Safety Analyses, L.A. Wooten (Westinghouse SMS)

4:00 p.m.
Use of Statistical Methodology in Safety Analysis: Explosion in a High Level Waste Evaporator, J.K. Norkus (Westinghouse SMS)

4:30 p.m.
Stochastic Consequence Analysis—Advantages and Disadvantages, Brit E. Hey (Fluor Fed Svc)

(11.f)
Worker Safety and Integration with the Safety Basis (Invited and Contributed), Session Chair: Patrick McClone (LANL)

(Hyatt Regency - Executive D)
1:30 p.m.
Deterministic Health Effects from Plutonium Inhalation, Vern L. Peterson (RFETS)

2:00 p.m.
DARHT: Integration of Authorization Basis Requirements and Worker Safety, Donald A. McClone (LANL)

2:30 p.m.
Hazard Threshold Criteria for Five Select Non-Nuclear Hazards, Robert L. Nitschke (INEEL)

3:00 p.m.
Break

3:30 p.m.
Direct Dose Consequences due to DOE-STD-1027 Threshold Values, Eugene E. Hochhalter (INEEL)

4:00 p.m.
Developing and Maintaining the DOE Safety Basis to Prepare TM-1-2 Fuel Debris for Dry Storage at an NRC Licensed Facility, Bentley J. Harwood and Doug Swanson (IN EEL), invited

4:30 p.m.
Crediting Tritium Deposition in Accident Analysis, Kevin R. O’Kula (Westinghouse SMS)

Thursday, June 21, 2001 • 7:30 a.m. - 10:00 a.m.

(11.i)
Criticality Safety of DOE Facilities (Invited and Contributed), Sponsored by NCSD; Cosponsored by NISD; Session Organizer: Kevin O’Kula (Westinghouse SMS); Session Co-Chairs: Tom McLaughlin (LANL) and Jerry McKamy (DOE/EH)

(Hyatt Regency - Executive B)
7:30 a.m.
Criticality Safety Practices at the ANL-W Fuel Conditioning Facility, R. M. Leil (ANL-Idaho)

8:00 a.m.
ORNL Criticality Safety Programs, Don Mueller (ORNL), invited

8:30 a.m.
Maximum Credible Overbatch of Pu Metal in 3013 Containers Stored at the Savannah River Site’s K-Area Storage Project, Samuel K. Skiles (Westinghouse SMS)

9:00 a.m.
Administrative Benefits of the “New” Criticality Safety Methodology at the Savannah River Site, Brad R. Kerr (Westinghouse SMS)

9:30 a.m.
Criticality Safety Design of the MCO for Shipping and Storing Spent Reactor Fuel, J.P. Estrellado, Jr., S.F. Kessler, and Hans Toffer (Fluor Fed Svc)

Thursday, June 21, 2001 • 8:00 a.m. - 10:00 a.m.

(11.c)
Environmental Restoration & Facility Transition/Disposition (Invited and Contributed), Session Co-Chairs: Jerry Hansen (Westinghouse SMS) and Bob Nitschke (INEEL)

(Hyatt Regency - Executive A)
8:00 a.m.
Nuclear Authorization of Category 2 and 3 Facilities, Patrice M. McEahern (Strategic Management Initiatives, Inc., RFETS), invited

8:40 a.m.
Hazard Classification of Environmental Restoration Sites, Guy E. Bishop III (DOE, Richland)
9:20 a.m.
Seven Years of Safety and Safety Basis Management of Disposition Facilities, Noel R. Kerr (Bechtel Hanford), invited

(11.n)
Risk Analysis and Risk Management (Invited and Contributed), Session Chair: Yvonne Alvarez (Pantex)

(Hyatt Regency - Executive C)
8:00 a.m.
Hanford Tank Farm Accident Risk Estimate: Role of Safety Analysis Results, Jonathan Young (PNNL)

8:30 a.m.
Analysis of the Mechanism and Likelihood of Overpressurizing DOE 3013 Containers at the Hanford Site, Robert M arusch (Fluor Fed Svc)

9:00 a.m.
Overview of Center for Risk Excellence, Mark Bollinger (DOE, Chicago), invited

9:30 a.m.
CH2M Hill's USQ Process at Hanford Site Tank Farms—Cost Savings Through Implementation Efficiencies, Jack Kalia (CH2M Hill, Richland)

Thursday, June 21, 2001 • 10:15 a.m. - 12:15 p.m.
Panel: Updating the Safety Basis: A Second Generation of Safety Documentation, Session Chair: David Renfro (UT-Batelle, ORNL)

(Hyatt Regency - Executive A and B)
Panelists:
Dae Chung, DOE/NNSA-D P
Doug Dearolph, DOE/NNSA-D P Y-12
Dick Englehart, DOE/EH
Michael Hitchler, Westinghouse SM S
Charles (Chip) M artin, DNF SB
Patrick M Clure, LAN L
Shirley O linger, DOE, Richland
David Pinkston, SAIC, Germantown

Thursday, June 21, 2001 • 12:15 p.m. - 12:30 p.m.
Closing Session, General Chair: Michael Hitchler

(Hyatt Regency - Executive A and B)
Closing Remarks
Best Paper Award(s)
EMBEDDED TOPICAL MEETING–2:
AESJ/ANS Joint Meeting on Safety Goals and Safety Culture
June 17-21, 2001 • Milwaukee, Wisconsin

Program Committee:

AESJ
Shunsuke Kondo, Co-Chair, University of Tokyo–Japan
Kiyoharu Abe, JAERI–Japan
Kiyoto Aizawa, JNC–Japan
Kazuo Furuta, University of Tokyo–Japan
Mitsumasa Hirano, NUPEC–Japan
Masao Hori, Nuclear Systems Associates–Japan
Kazuo Monta, NUPEC–Japan
Kenji Morimoto, KEPCO–Japan
Ken Muramatsu, JAERI–Japan
Akira O moto, TEPCO–Japan
Hiroshi Sekimoto, Tokyo Institute of Technology–Japan
Fumiya Tanabe, JAERI–Japan
Taketoshi Taniguchi, CRIEPI–Japan

ANS
Ed Fuller, Co-Chair, Associated Project Analysts
Eric Beckjord, Beckjord Consultants
Bob Budnitz, Future Resources Associated
Annick Carnino, IAEA
Bill Corcoran, N SRC
Tom Crimmins, Consultant
Bill Hannaman, Data Systems and Solutions
Carolyn Heising, Iowa State University
Alan Levin, U.S. N RC
Tom Lewis, Nuclear Management Company
Pete Planchon, AN L
Ted Quinn, MDM Engineering
Steve Shepherd, Southern California Edison
Monday, June 18, 2001
1:00 p.m.
Opening Plenary, Session Organizers: Shunsuke Kondo (Univ of Tokyo-Japan), Alan Levin (NRC). All invited. Chair: Edward D. Fuller (Assoc Project Analysts)

Regency C, D (Hyatt Regency Hotel)
1:00 p.m.
Panel Discussion
Invited Panelists:
Richard A. Meserve, Chair (NRC)
Shojiro Matsuura, Chair (Nucl Safety Commission-Japan)
Ryosuke Tsutsumi, Director (WANO-TC-Japan)
Alexander Gutsalov (Gosatomnadzor-Russia)
Harold Ray, Executive VP (Southern California Edison Co.)

Tuesday, June 19, 2001
8:30 a.m.

Regency D (Hyatt Regency Hotel)
8:30 a.m.
Papers:
Safety Goals Considered in the Design of LWR Containments, Akira Omoto (TEPCO-Japan)

Basic Consideration on Defining Safety Goals, T. Hakata (Nuclear Safety Commission-Japan), invited

Panel Discussion
Invited Panelists:
Joseph Murphy (NRC)
Brian Grimes (Consultant)
Jaejoo Ha (KAERI-Korea)
S. Kondo (Univ of Tokyo-Japan)

Tuesday, June 19, 2001
1:00 p.m.

Regency D (Hyatt Regency Hotel)
1:00 p.m.
Papers:
An Investigation Study on Practical Points of Safety Management, Naoko Hasegawa, Kenichi Takano, Ayako Hirose (CRIEPI-Japan)

Decreasing Ambiguity of the Safety Culture Concept, Shiichiro Inoue, Satoshi Hosoda, Takashi Suganuma (ISLR-Japan), Kazuo Monta, Akiyuki Kamada (NPEC-Japan), invited

A Methodology for Identifying Deficiencies in Safety Culture, George Apostolakis, Rick Wel (MIT)

Enhancing Safety Culture Through the Establishment of Safety Goals, Kenji Tatelwa, Koichi Miyata, Kimitoshi Yahagi, (TEPCO-Japan)

Panel Discussion
Invited Panelists:
William R. Corcoran (NSRC)
Stephen L. Rosen (South Texas Project, ret.)
Andrew C. Kadak (Kadak Assoc)
Graham Leitch (ACRS/NRC)
Vicki Bier (Univ of Wisconsin, Madison)

Wednesday, June 20, 2001
8:30 a.m.

Regency D (Hyatt Regency Hotel)
8:30 a.m.
Papers:
Lessons to Learn from Three Mile Island, Chernobyl, and Tokaimura and the New Era of the European Nuclear Industry, Frigyes Reisch (KTH-Sweden)

Extensive Efforts to Learn Lessons from Overseas Nuclear Power Plants, Nobuo Maki (Kansai Electric-Japan)

Shifting to a Coaching Culture Through a 360-Degree Assessment Process, Bruce A. Snow (Performance Concepts), Frank Maciuska (RG&E)

Utility's Activities for Better Safety Culture After the JCO Accident, Akira Omoto (TEPCO-Japan)

Panel Discussion
Invited Panelists:
K. Furuta (Univ of Tokyo-Japan)
A. Omoto (TEPCO-Japan)
K. Takano (CRIEPI-Japan)
Rick Wagner (Duke Eng)
Roy Anderson (Nuclear Management Co.)
PROFESSIONAL DEVELOPMENT WORKSHOP #1:

Keys to Career Success – Essential Skills for Life
(sponsored by the NAYGN)

Saturday, June 16, 2001 • 9:00 a.m. – 5:00 p.m.
Room: Executive C&D

PURPOSE OF WORKSHOP:
This workshop will provide you with the professional skills that you need to succeed and give you the tools to develop them. This dynamic workshop will incorporate elements of goal setting, how to achieve balance in your life to maintain your commitment to your professional life, and how to win at office politics. These are some of the essential skills needed to professionally excel in your career. Developing these skills will also provide your employer with a well rounded individual who will remain dedicated and be able to successfully manage any situation.

WHY FOCUS ON THESE SKILLS?

• Goal setting - Provides the process used to define how to get from an initial point to the end point without missing a step and how to do it in the most efficient manner.

• Balance - How to avoid burning out, and instead remaining a dedicated, motivated individual who is committed to success.

• Office Politics - Provides tools to successfully manage any situation through understanding the undercurrents and crafting your communications and actions to effectively attain your objectives.

WORKSHOP MODERATORS:

Dr. Carolyn Hines, President and co-owner, C.W. Hines and Associates, Inc.
Carolyn Hines is a popular keynoter and an internationally ranked speaker. She has developed and published several handbooks and manuals on Transformational Leadership, Career Development, Effective Communications, Teambuilding, Caring Competencies, Coaching and Counseling and Work Force Diversity. She holds three graduate degrees including a Doctorate in Counseling and Higher Education Administration from the College of William and Mary in Williamsburg, Virginia, and she has completed post-graduate work in Research Analysis, Training and Development. Dr. Hines is a licensed professional counselor and holds Diplomat status in the American Psychotherapy Association. In 1995, Dr. Hines was appointed to the position of Civilian Aide to the Secretary of the Army. She was reappointed to this position in 1998.

Mr. William Hines, Jr., Consultant and Trainer, C.W. Hines and Associates, Inc.
William Hines, Jr. completed his undergraduate education at Hampton University where he received a Bachelor of Science Degree in Business Management, and a Masters in Human Resources Management from George Washington University. Mr. Hines was also graduated from the Armed Forces Staff College in Norfolk and the Command and General Staff College. A decorated Vietnam Veteran (Bronze Star and Legion of Merit) and a retired Lieutenant Colonel, his outstanding military career included several successful command assignments in Europe and Vietnam. His final Pentagon Assignment was an Inspector General responsible for investigations that required highly technical and analytical skills. For his efforts, he received commendations for outstanding work conducting focus groups throughout the U.S., Europe, and Korea. As an organizational development specialist, he served for nine months as the administrator for a major hospital reorganization. Mr. Hines recently completed certification training in Non-Violent Conflict Resolution from the Martin Luther King Center in Atlanta, Georgia.
PROFESSIONAL DEVELOPMENT WORKSHOP #2:
Reducing Human Errors in Nuclear Environments
(A Human Engineering Approach)

Sunday, June 17, 2001 • 9:00 a.m. – 5:00 p.m.
Room: Lakeshore B

WORKSHOP ORGANIZER AND CHIEF INSTRUCTOR:

WORKSHOP SPONSORSHIP:
Human Factors Division (HFD) and Operations and Power Division (OPD).

MATERIALS PROVIDED:
Hard copy of PowerPoint™ Slide Show for note taking.

Workshop attendance is limited to the first forty (40) paid applicants. This is to provide for collegial discussion and individual attention.

WHAT WILL HAPPEN:
During this workshop we will look at mismatches in communication that lead to ineffective decision-making strategies and the gathering of imprecise information - leading to inherent design errors. An opportunity will be afforded the participants to better understand the mental process a human constructs in making errors, and how simple solutions can minimize this issue.

This workshop will provide the participants with a myriad of approaches to use immediately upon completion of this workshop. Participant-instructor interaction is the key element in this workshop to understanding human error.

WORKSHOP TOPICS WILL INCLUDE:
- How we construct decision-making and learning strategies that lead to specific outcomes.
- Designing systems based on designers' and users' decision-making strategies.
- Reducing inherent human design errors in systems.
- Reducing human errors in task related operations.
- Reducing human errors in written procedures.
- Reducing human errors in training.
- Simple applications and approaches for designing more efficient man-machine interfaces and systems.

WHO SHOULD ATTEND:
This workshop is for professionals whose current or near-term future duties involve:
- Designing man-machine interfaces
- Designing decision-making systems
- Designing advanced learning systems
- Procedure writing
- Training
- Project Management, Project Engineer, etc.

WHO SHOULD NOT ATTEND:
This workshop is not for people who want to continue thinking that:
- Hardware and software upgrades or new systems are the only solutions to reducing human errors.
- Designers are human; therefore, they will understand how to correct for human errors.
- Engineers are good communicators.
- New procedures and more training will correct the problem(s).
PROFESSIONAL DEVELOPMENT WORKSHOP #3:
Preparing for The Nuclear Engineering Professional Engineering Exam

Sunday, June 17, 2001 • 9:00 a.m. – 5:00 p.m.
Room: Lakeshore A

WORKSHOP ORGANIZER:
Dr. Robert Busch, Director, Nuclear Engineering Laboratory, University of New Mexico

PURPOSE OF WORKSHOP:
This course is designed for individuals who have passed the Fundamentals of Engineering Exam (formerly the EIT exam) and who are preparing for the Professional Engineering Exam (PE Exam) in Nuclear Engineering. Instructors will provide details on registration and how it differs from state to state, plus an overview of the examination formats. The six basic skill areas, neutronics, instrumentation and measurements, nuclear power shielding, nuclear materials and fuels, and radioactive waste will be discussed in details. For each skill area, the instructor will describe topics and the skills to be tested within each.

Examples of questions will be presented in depth, after which students will work other “typical” questions on their own. Instructors will provide assistance, then review solutions with the group. Students will be provided a sample exam and list of recommended resources for continued study.

WORKSHOP OUTLINE
8:30 a.m. - 9:00 a.m. Introduction–Robert Busch, University of New Mexico
9:00 a.m. - 10:00 a.m. Shielding–Charles Sparrow, Mississippi State University
   A. Description of subject matter
   B. Knowledge, skills and abilities expected
   C. Example of typical questions
10:05 a.m. - 11:00 a.m. Radioactive Waste Management–Dan Bullen, Iowa State University
11:10 a.m. - 12:05 p.m. Nuclear Power Skills - Alan Levin, U.S./NRC
12:05 p.m. - 1:15 p.m. Lunch (on your own)
1:15 p.m. - 2:00 p.m. Nuclear Materials and Fuels-Robert Busch, University of New Mexico
2:10 p.m. - 2:45 p.m. PRA and Probability Skills Area-T/B/A
2:55 p.m. - 3:50 p.m. Neutronics Skills - John Bennion, Idaho State University
4:00 p.m. - 4:55 p.m. Instrumentation and Measurement Skills Area-Steve Binney, Oregon State University
4:55 p.m. - 5:00 p.m. Wrap-up
PROFESSIONAL DEVELOPMENT WORKSHOP #4:

Root Cause Analysis (Getting to the Safety Culture and Business Process Lessons to be Learned)

Wednesday, June 20, 2001 • 8:30 a.m. – 5:00 p.m.
Room: Lakeshore A

WORKSHOP ORGANIZER AND CHIEF INSTRUCTOR:
Dr. Bill Corcoran, President, Nuclear Safety Review Concepts, Windsor CT 860-285-8779 firebird.one@alum.mit.edu

WORKSHOP SPONSORSHIP:
Professional Development Coordinating Committee, Mr. Ted Quinn, Chair

MATERIALS PROVIDED:
Hard copy of PowerPoint™ Slide Show for notetaking, copy of The Phoenix Handbook, the ultimate investigation manual for finding profit improvement in adverse experience (a $150.00 value)

WORKSHOP ATTENDANCE LIMITED TO THE FIRST THIRTY (30) PAID APPLICANTS TO PROVIDE FOR COLLEGIAL DISCUSSION AND INDIVIDUAL ATTENTION.

WHO SHOULD ATTEND:
This workshop is for professionals whose current or near-term future duties involve:
• sponsoring or conducting root cause analyses of adverse events or their precursors
• training event investigation teams
• assessing the effectiveness of event investigations
• managing the outcomes of event investigations
• managing or assessing corrective action programs
• defending the regulatory aspects of event investigations

WHO SHOULD NOT ATTEND:
This workshop is not for people who want to continue thinking that:
• Event investigation is a well-defined science about which nothing new can be learned.
• There is a single right way to do root cause analysis.
• For every consequential event there is a single root cause.
• My organization could not have a serious event any time soon.
• Event consequences are not controlled by business decisions.
• Event investigation should be done mainly to satisfy outside agencies.

WHAT WILL HAPPEN:
During this workshop we will journey with the instructor through a business outcome-oriented approach to event investigation organizational learning. We will share in paradigm, process, and product attributes that have been applied successfully in the contexts of nuclear power generation, fossil power generation, electric transmission and distribution, natural gas distribution, and manufacturing. We will participate in hands-on individual and group work in the actual application of bottom-line customer focused techniques that take full advantage of investigators’ abilities to do out-of-the box thinking.

This workshop will furnish the attendees with a spectrum of immediately applicable action items that will be in full compliance with most existing corrective action programs. Participant-instructor interaction will emphasize the modeling and emulation of proven investigator and management behaviors.

WORKSHOP TOPICS WILL INCLUDE:
• Lessons to be Learned from Recent Consequential Events
• The Business Incentives for Cost-effective Investigations
• The Crucial Infrastructure of Successful Event Investigation
• Advance Preparation for Effective Investigation
• Avoiding Fatal Investigation Errors
• Effective Event Investigation Team Formation, Development, and Leadership
• The Four Investigative Behavior Orientations and how to Manage Them
• Investigative Ethics
• Accommodating Diversity in the Team and its Customers
• Asking the Right Questions
• What to do Before Management Becomes Enlightened
• Actual Experience in the Investigation of Consequential Events and Precursors
• Using Event Investigation as a Window into the Culture
• Evaluating Event Investigation Effectiveness
• Evaluating Event Investigation Program Effectiveness
PROFESSIONAL DEVELOPMENT WORKSHOP #5:
Dry Spent Fuel Management – Lessons Learned – Workshop #5

Thursday, June 21, 2001 • 8:00 a.m. – 5:30 p.m.
Room: Lakeshore A

PURPOSE:
Provide an update on current technology for dry spent nuclear fuel management with a heavy emphasis on lessons learned from licensing, regulatory requirements, selection of equipment options, system implementation, operations, plant interfaces, and quality assurance. The course is aimed at commercial utility and D.O.E site operations, technical and management personnel who are considering, planning, or executing a dry spent nuclear fuel management program.

COURSE OUTLINE

<table>
<thead>
<tr>
<th>Lectures</th>
<th>Instructor</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction and Overview of Dry Spent Fuel Storage and Transportation Systems</td>
<td>Scott Dam</td>
<td>8:00 a.m.</td>
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<tr>
<td></td>
<td>JUPITER Corporation</td>
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<tr>
<td>System Selection Approaches</td>
<td>Brian Wakeman</td>
<td>9:00 a.m.</td>
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<td>Virginia Power</td>
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<tr>
<td>Fabrication Issues</td>
<td>Jim Becka</td>
<td>10:00 a.m</td>
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<td>Nuclear Management Co.</td>
<td></td>
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<tr>
<td>Quality Assurance Issues</td>
<td>Jim Gill</td>
<td>11:00 a.m</td>
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<td></td>
<td>Nuclear Management Co.</td>
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<tr>
<td>Lunch</td>
<td>On Own</td>
<td>12:00 p.m</td>
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<tr>
<td>Regulatory Issues</td>
<td>Rita Bowser</td>
<td>1:00 p.m.</td>
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<td>BNFL Fuel Solutions</td>
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<tr>
<td>Regulatory Issues – NRC Perspective</td>
<td>William Brach</td>
<td>2:00 p.m.</td>
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<td>NRC</td>
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<tr>
<td>Startup, Loading, and Decommissioning</td>
<td>John Broschak</td>
<td>3:00 p.m.</td>
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<td>Consumers Energy</td>
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<td>D.O.E Dry Spent Fuel Approaches</td>
<td>Ron Denney</td>
<td>4:00 p.m.</td>
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<td>INEEL</td>
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<tr>
<td>Summary</td>
<td>Scott Dam</td>
<td>5:00 – 5:30 p.m</td>
</tr>
<tr>
<td>Review, General Q &amp; A, Feedback and Evaluation</td>
<td>JUPITER Corporation</td>
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</tbody>
</table>

Note 1: Class time includes 40-minute lecture, 10 minute Q & A, 10-minute break.
Note 2: Participants are encouraged to attend a no-host dinner after class to continue dialog with instructors and participants.
PURPOSE:
The US Department of Energy Nuclear Criticality Safety Program (NCSP) is a comprehensive cross-cutting program that integrates the needs of criticality safety practitioners throughout the DOE complex. Session present current status of the NCSP elements, with reviews of recent accomplishments and discussions of near-term plans, discussions by DNFSB staffs, by End Users members (technical community). The presentations are primarily intended for DOE and contractor personnel, but because of the global application of the results of the NCSP, they will benefit anyone interested in an effective, well-organized criticality safety program. These sessions have been arranged through the courtesy of the ANS Headquarters staff.

SCHEDULE:
8:00 am - 8:30 am  
Introduction: NCSPMT and CSSG

8:30 am - 9:30 am  
DNFSB: Staff Discussions

9:30 am - 11:30 am  
CSSG: Nuclear Criticality Safety Program Elements Discussions

11:30 am - 12:30 pm  
Lunch

12:30 pm - 2:30 pm  
End Users Roundtable
  • Concerns about implementation of the 10 CFR 830 rule
  • Discussion on the DNFSB Tech-29 report
  • Sites needs

2:30 pm - 4:00 pm  
Open Roundtable CSSG/End Users/DNFSB Staff

Q & A Period
Committee Meetings

NATIONAL COMMITTEES

Accreditation Policies and Procedures
Tuesday, 4:00 p.m. - 6:00 p.m.
Room: Executive D

Board of Directors
Thursday, 8:00 a.m. - 5:00 p.m.
Room: Lakeshore B & C

Book Publishing Committee
Sunday, 11:00 a.m. - 12 noon
Room: Manager's Suite

Business Meeting
Monday, 4:00 p.m. - 5:00 p.m.
Room: Lakeshore A & B

Bylaws & Rules
Sunday, 1:30 p.m. - 4:00 p.m.
Room: Executive D

Executive Conference Review
Sunday, 1:00 p.m. - 3:00 p.m.
Room: Executive C

Finance
Tuesday, 4:00 p.m. - 7:00 p.m.
Room: Manager's Suite

Honors & Awards
Monday, 4:00 p.m. - 7:00 p.m.
Room: Lakeshore C

International
Tuesday, 4:00 p.m. - 7:00 p.m.
Room: Lakeshore A

Local Sections/Workshop
Sunday, 8:00 a.m. - 12 noon
Room: Lakeshore C

Meetings Proceedings/Transactions
Monday, 7:30 a.m. - 8:30 a.m.
Room: Executive C

Membership
Sunday, 11:00 a.m. - 1:00 p.m.
Room: 201-A

NEED
Sunday, 7:30 p.m. - 9:00 p.m.
Room: 201-D

Nuclear News Editorial Advisory
Sunday, 4:00 p.m. - 5:30 p.m.
Room: 203-A

Planning
Sunday, 2:00 p.m. - 6:00 p.m.
Room: 201-A

President's Meeting with Board of Directors
Sunday, 8:00 a.m. - 9:00 a.m.
Room: Regency D

President's Meeting with Committee Chairs
Sunday, 9:00 a.m. - 10:00 a.m.
Room: Regency D

President's Meeting with Division Chairs
Sunday, 10:00 a.m. - 12:00 p.m.
Room: Regency D

Professional Development Coordination
Wednesday, 4:00 p.m. - 6:00 p.m.
Room: 202-C

Professional Divisions
Tuesday, 4:00 p.m. - 7:00 p.m.
Room: Regency C

Professional Engineering Exam
• Business Meeting
Sunday, 3:00 p.m. - 6:00 p.m.
Room: 201-C

Professional Women in ANS
Monday, 11:30 a.m. - 1:00 p.m.
Room: Lakeshore C

Program (NPC)
Tuesday, 4:00 p.m. - 7:00 p.m.
Room: Lakeshore B
• Policies & Procedures/Quality Improvement (PPQI)
Sunday, 1:30 p.m. - 4:30 p.m.
Room: Manager's Suite
• Screening & International (NPC)
Monday, 4:00 p.m. - 6:00 p.m.
Room: Executive C

Public Information
Monday, 4:00 p.m. - 6:00 p.m.
Room: Regency A

Public Policy
Sunday, 4:00 p.m. - 6:00 p.m.
Room: 201-B

Publications Steering
Monday, 4:00 p.m. - 6:00 p.m.
Room: Executive D

Radwaste Solutions Editorial Advisory
Monday, 7:00 a.m. - 8:30 a.m.
Room: Executive B

Student Sections
Sunday, 11:00 a.m. - 1:00 p.m.
Room: Executive C

Technical Journals
Sunday, 1:00 p.m. - 3:00 p.m.
Room: 201-B

SPECIAL COMMITTEES

New Construction
Monday, 4:00 p.m. - 7:00 p.m.
Room: 201-B

Non-Proliferation
Monday, 5:00 p.m. - 7:00 p.m.
Room: 202-C

Nuclear Societies Cooperation
Monday, 4:00 p.m. - 6:00 p.m.
Room: 203-C

President's Special Committee on Workforce
Sunday, 12:00 p.m. - 1:30 p.m.
Room: Executive A

Site Cleanup & Restoration Standards
Tuesday, 4:00 p.m. - 5:30 p.m.
Room: 201-B

TOPICAL COMMITTEES

Physor 2002 Topical Meeting
Tuesday, 4:30 p.m. - 6:30 p.m.
Room: 202-C

OTHER COMMITTEES

CNF
Monday, 7:30 p.m. - 10:00 p.m.
Room: Lakeshore C

Eagle Alliance - Board of Directors
Sunday, 1:00 p.m. - 3:30 p.m.
Room: Executive B
Committee Meetings

NEDHO
Munday, 4:30 p.m. - 7:00 p.m.
Room: 201-A

President's Special Committee Workforce Issues
Sunday, 11:30 a.m. - 1:00 p.m.
Room: Executive A

Space Technical Working Group Executive Committee
Sunday, 10:00 a.m. - 11:30 a.m.
Room: 202-C

UWC 2001 Planning Committee
Sunday, 10:00 a.m. - 11:30 a.m.
Room: Executive D

DIVISION COMMITTEES

Accelerator Applications
• Executive
Sunday, 4:30 p.m. - 6:30 p.m.
Room: 201-D
• Membership & Program
Sunday, 1:30 p.m. - 3:30 p.m.
Room: 201-D

Biology & Medicine
• Committee of the Whole
Sunday, 4:00 p.m. - 5:30 p.m.
Room: 202-A

Decommissioning, Decontamination & Reutilization
• Committee Meeting
Sunday, 1:00 p.m. - 5:30 p.m.
Room: 203-B

Education & Training
• Alpha Nu Sigma Officers
Sunday, 11:00 a.m. - 12 noon
Room: 201-D
• Executive/Membership/ Honors & Awards
Sunday, 1:30 p.m. - 4:00 p.m.
Room: 202-A
• Program
Sunday, 10:30 a.m. - 12 noon
Room: 202-A
• University/Industry Relations
Sunday, 9:30 a.m. - 10:30 a.m.
Room: 202-A

Environmental Sciences
• Executive
Sunday, 10:00 a.m. - 2:30 p.m.
Room: 202-B
• Program
Sunday, 8:30 a.m. - 10:00 a.m.
Room: 202-B

Fuel Cycle & Waste Management
• Executive
Sunday, 3:30 p.m. - 5:30 p.m.
Room: 202-C
• Program
Sunday, 1:30 p.m. - 3:30 p.m.
Room: 202-C
• Technical Operating Committee
Sunday, 12 noon - 1:30 p.m.
Room: 202-C

Fusion Energy
• Executive
Sunday, 3:00 p.m. - 5:00 p.m.
Room: 202-B

Human Factors
• Executive
Monday, 5:30 p.m. - 8:30 p.m.
Room: 202-B
• Program
Monday, 4:30 p.m. - 5:30 p.m.
Room: 202-B

Isotopes & Radiation
• Executive
Sunday, 2:30 p.m. - 4:00 p.m.
Room: 203-A
• Joint Program Committee - IRD & B & M
Sunday, 1:30 p.m. - 2:30 p.m.
Room: 203-A

Materials Science & Technology
• Executive
Wednesday, 7:00 p.m. - 9:00 p.m.
Room: Executive D

Mathematics & Computation
• Benchmark Meeting
Sunday, 11:00 a.m. - 1:00 p.m.
Room: 203-E
• Executive
Sunday, 2:00 p.m. - 4:00 p.m.
Room: 203-E
• Program
Sunday, 1:00 p.m. - 2:00 p.m.
Room: 203-E

Nuclear Criticality Safety
• Education
Sunday, 10:00 a.m. - 11:00 a.m.
Room: 203-D
• Executive
Sunday, 3:00 p.m. - 5:30 p.m.
Room: 203-D
• Program
Sunday, 1:00 p.m. - 3:00 p.m.
Room: 203-D

Nuclear Installation Safety
• Executive
Monday, 5:00 p.m. - 8:00 p.m.
Room: 201-C
• Program
Sunday, 7:30 p.m. - 11:00 p.m.
Room: Manager's Suite

Operations & Power
• Executive
Sunday, 3:30 p.m. - 6:00 p.m.
Room: 203-C
• Program
Sunday, 1:00 p.m. - 3:30 p.m.
Room: 203-C

Radiation Protection & Shielding
• Executive
Monday, 6:00 p.m. - 8:00 p.m.
Room: Manager's Suite
• Program
Monday, 4:00 p.m. - 6:00 p.m.
Room: Manager's Suite

Reactor Physics
• Executive
Sunday, 4:00 p.m. - 6:00 p.m.
Room: 202-E
• Goals & Planning
Sunday, 12 noon - 2:00 p.m.
Room: 202-E
• Program
Sunday, 2:00 p.m. - 4:00 p.m.
Room: 202-E

Robotics & Remote Systems
• Executive
Sunday, 11:00 a.m. - 3:00 p.m.
Room: 202-D

Thermal Hydraulics
• Executive
Sunday, 5:00 p.m. - 7:00 p.m.
Room: 202-D
• Honors & Awards
  Tuesday, 5:00 p.m. - 7:00 p.m.
  Room: 202-E

• Program
  Sunday, 3:00 p.m. - 5:00 p.m.
  Room: 202-D

STANDARDS COMMITTEES

ANS 8.10
Wednesday, 6:00 p.m. - 7:00 p.m.
Room: Crystal

ANS 8.21
Monday, 7:30 a.m. - 8:30 a.m.
Room: Executive D

and

Tuesday, 7:30 a.m. - 8:30 a.m.
Room: Executive D

ANS 8.23
Saturday, 8:00 a.m. - 5:00 p.m.
Room: Marquette

ANS 8.26
Tuesday, 7:30 a.m. - 8:30 a.m.
Room: Manager’s Suite

ANS 19.3
Monday, 4:00 p.m. - 6:00 p.m.
Room: 203-B

ANS 19.6.1
Sunday, 8:00 a.m. - 5:00 p.m.
Room: Crystal

ANS 19.10
Sunday, 9:00 a.m. - 12:00 p.m.
Room: 201-B

Joint Benchmark Committee
Sunday, 11:00 a.m. - 1:00 p.m.
Room: 201-C

Reactor Physics Standards Committee
Sunday, 10:00 a.m. - 12:00 p.m.
Room: Executive B

Floor Plans: Hyatt Regency Milwaukee & Midwest Express Center

Hyatt Regency Milwaukee

Midwest Express Center
2001 Organization Members

A
Aare-Tessin
AECL
AIL Systems, Inc.
Altran Corporation
Alyn Corporation
American Electric Power Service Corp.
ANATECH Corporation
APTEC-NRC
Arizona Public Service Co.
The Atlantic Group

B
Batelle Memorial Institute/Pacific Northwest National Laboratory
Bechtel Power Corp.
Bigge Crane and Rigging Co.
BKW FMB Energy LTD
Black & Veatch
BNFL, Inc.
Brackett Green USA, Inc.
British Nuclear Fuels plc
British Nuclear Industry Forum
Burns & Roe Enterprises, Inc.

C
CAE Electronics Ltd.
Central Research Laboratories
Chiyoda Corporation
Clean Energy Technologies, Inc.
Cogema, Inc.
Commonwealth Edison
Constellation Edison Co. of NY, Inc.
CP&L and Florida Power-Progress Energy Companies

D
decom Engineering
Detroit Edison Company
Dominion Generation
DuBose National Energy Service
Duke Energy

E
eagle-Picher Industries, Inc.
Entergy Operations Inc.
EXCEL Services Corporation

F
Federation of Electric Power Companies of Japan
FENCO
Florida Power & Light Framatome Technologies
GE Nuclear Energy
General Atomics
GPU Nuclear Inc.
Hans Walischmiller GmbH
Illinois Power Company
Indiana Michigan Power Co.
Institute of Nuclear Safety Systems, Inc.
Israel Electric Corporation

K
Kansai Electric Power Co., Inc.
Kansas City Power & Light
Kernkraftwerk Leibstadt AG
Kinematics Inc.
Korea Atomic Industrial Forum, Inc.
Krsko Nuclear Power Plant

L
Lechler, Inc.
Linn High Therm GmbH

M
Mega-Tech Services, Inc.

N
Navarro Research & Engineering
Nebraska Public Power District
Niagara Mohawk Power
Nordostschwäizerische Kraftwerke AG
Northern States Power
Nuclear Inspection Systems
Nuclear Management Co., LLC
Nuclear Placement Services Inc.
NRE, Inc.
Numerical Applications, Inc.

O
Overly Manufacturing Company

P
Pacific Gas & Electric Co.
Pakistan Atomic Energy Commission
PaR Systems, Inc.
Parsons Infrastructure & Technology Group
Pennsylvania Power & Light Co.
Private Fuel Storage, LLC
Public Service Electric & Gas Co.
R
Brooks Associates, Inc.
Raytheon Nuclear Inc.
Reef Industries, Inc.
Remote Ocean Systems, Inc.
Research Engineers, Inc.

S
SA L’Energie de L’Ouest-Suisse
Sargent & Lundy
Science Applications International Corp.
SCIENTECH NES, Inc.
S. G. Pinney & Associates, Inc.
Siemens Power Corp.
Southern California Edison
Southern Nuclear Operating Co.
Stone & Webster Engineering Corp.

T
technical Associates
TradeTech LLC
TXU Electric

U
unistrut Corporation
United Controls International
U.S. Army Corps of Engineers
US EC Inc.

V
V. C. Summer Nuclear Station

W
Westinghouse Electric Corp.
Wright Industries, Inc.
Wyle Laboratories