Radiation Safety Information Computational Center

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Nothing so needs reforming as other people's habits. – Mark Twain

CHANGES TO THE RSICC CODE AND DATA COLLECTION

CCC-506/GALE86

RSICC recently updated the NRC code, GALE86, to work on PC Windows, Linux and Mac platforms. The original GALE86 was released in 1986 to work on a CDC platform. GALE is a computerized mathematical model for calculating the release of radioactive material in gaseous and liquid effluents from boiling water reactors (BWRs) and pressurized water reactors (PWRs). The calculations are based on data generated from operating reactors, field tests, laboratory tests, and plant-specific design considerations incorporated to reduce the quantity of radioactive materials that may be released to the environment. GALE calculates expected releases based on 1) standardized coolant activities derived from ANS Standards 18.1 Working Group recommendations, 2) release and transport mechanisms that result in the appearance of radioactive material in liquid and gaseous waste streams, 3) plant-specific design features used to reduce the quantities of radioactive materials ultimately released to the environs, and 4) information received on the operation of nuclear power plants.

Included in the GALE86 package is documentation, source code, readme files, pre-compiled Windows and Linux executables, and sample test input. Modified Fortran IV; PC Linux/Windows, MAC (C00506MNYCP02).

DLC-SINBAD 2012.12

The OECD Nuclear Energy Agency Data Bank, Issy les-Moulineaux, France and ORNL Radiation Safety Information Computational Center (RSICC), Oak Ridge, Tennessee, USA, contributed an updated version of this electronic database, which was developed to store a variety of radiation shielding benchmark data so that users can easily retrieve and incorporate the data into their calculations. This release of SINBAD includes a large set of 46 fission shielding benchmarks, 29 fusion neutronics shielding benchmarks, and 23 accelerator shielding benchmarks. The experimental results are distributed in tabular ASCII form that can easily be exported to different computer environments for further use. The SINBAD 2012.12 revision includes the modified documentation for the Berp Ball Measurements (Sandia National Laboratory) and the addition of the Kansas State University Skyshine Benchmark Simulations provided by Oak Ridge National Laboratory. PC, UNIX Workstations, MAC (D00237MNYCP02).

DLC-261/VITENDF70.BOLIB

The ENEA-Bologna Nuclear Data Group, Bologna, Italy through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France has released VITENDF70.BOLIB, a multi-group coupled (199 neutron groups + 42 photon groups) pseudo-problem-independent cross section library in AMPX format for nuclear fission applications. VITENDF70.BOLIB is based on the ENDF/B-VII.0 evaluated nuclear data library and it was processed, through the NJOY-99.259 nuclear data processing system (including the NEA049 patch) and the ENEA-Bologna 2007 Revision of the SCAMPI nuclear data processing system, in the VITAMIN-B6 energy group structure using the same methodology and calculation procedures. The same approach was also followed to get the VITJEFF311.BOLIB library, twin library of VITENDF70.BOLIB, based on the JEFF-3.1.1 OECD-NEA Data Bank evaluated nuclear data library.

The VITENDF70.BOLIB package is transmitted on CD and includes documentation and data files. The package requires 444 Mbytes of disk space. PC Windows and Linux (D00261PCX8600).

PSR-351/PREPRO2012

The Nuclear Data Center at the International Atomic Energy Agency, Vienna, Austria, contributed a newly frozen version of the pre-processing code system for data in ENDF/B format. PREPRO 2012 is a modular set of computer codes, each of which reads evaluated nuclear data in the ENDF/B format, processes the data and outputs it in the ENDF/B format. Each code performs one or more independent operations on the data. The codes are named "the pre-processing" codes, because they are designed to pre-process ENDF/B data, for later, further processing for use in applications. These codes are designed to operate on virtually any type of computer with the included capability of optimization on any given computer. They can process datasets in any ENDF/B format, ENDF/B-I through ENDF/B-VII.

The package is transmitted on a CD which contains the referenced documents in electronic form and compressed system files containing source files, executables for Linux, MacOS X, and Windows systems, sample input and output, and information files. Fortran 77; Linux, MacOSX , Unix, Windows and VMS (P00351MNYCP06).

SCALE 6.1.2 UPDATE

An update is available for SCALE 6.1 and SCALE 6.1.1 to provide enhanced performance in the areas detailed below. This comprehensive update includes enhancements previously released as SCALE 6.1.1.

Capabilities improved with SCALE 6.1.2 include:

- ORIGEN irradiation and decay capabilities
- Parallel branch calculations with TRITON
- Critical spectrum calculations with NEWT
- Implicit sensitivity calculations with TSUNAMI
- Minor bug fixes

Issues previously addressed with SCALE 6.1.1 include:

- CENTRM calculations with small number densities
- Enhancements in lattice physics capabilities
- Enhancements in MAVRIC/Monaco
- ORIGEN data
- Minor bug fixes

The SCALE 6.1.2 Update will be distributed by RSICC as a 4th DVD in all Scale 6.1 packages mailed after March 11, 2013. For details on obtaining the Update if you already have the Scale 6.1 package see: http://scale.ornl.gov/downloads_scale6-1.shtml.

This update is recommended for all users of SCALE 6.1 and 6.1.1.

ANS STANDARDS SERVICE AWARDS

Patricia A. Schroeder
Standards Administrator, ANS
In recognition of eight years of exemplary service to the ANS Standards Committees, in which she provided thorough and accurate administrative services that were critical to the efficient functioning of the many committees, the retention of ANSI accreditation for the Society, and sound management decisions. (This award was previously presented at an earlier ANS Standards Committee Meeting.)

Elizabeth Briggs Johnson
(posthumously)
In recognition of her pioneering work in the conduct of criticality experiments and the collection and dissemination of associated data and for significant contributions as a founding member, and quarter-century participant and secretary, in ANS's nuclear safety standards program. (This award will be presented during the 2013 ANS Annual Meeting in Atlanta, GA.)

Nuclear Standards News, July-August 1996, per Marilyn Weber:
Elizabeth "Libby" Johnson, retired from ORNL, passed away at her home on October 10 [1996] following a lengthy illness. Mrs. Johnson held a Bachelor of Science degree from Western Kentucky

University and a Master of Science degree in physics from Vanderbilt University. She worked on the Manhattan Project in 1945. She began her career at ORNL with Union Carbide Nuclear Division in 1946 and retired from the Laboratory as a member of the development staff in the Instrument and Controls Division on October 1, 1994. She was a charter member of the American Nuclear Society and served the organization in many capacities. She was secretary to the initial Executive Committee of the Nuclear Criticality Safety Division and, later, its chair. She was a member of several committees: Local Sections, Nominating, Publications Steering, Professional Divisions, and ANS Professional Women. She also served on the Standards Committee as a member and secretary of both the N16 Consensus Committee and Subcommittee ANS-8, each since 1967. In addition, she participated in several writing groups to develop standards on nuclear criticality safety. She also participated in international standards activities through membership on the nuclear Technical Advisory Group (NTAG) of ANSI, and was a member of the U.S. delegation to ISO/TC 85 and to its Subcommittee 5. She was elected a Fellow of ANS in 1982. Mrs. Johnson was appointed by the U.S. Nuclear Regulatory Commission as an administrative judge on the Atomic Safety and Licensing Board Panel, a position she held from 1975 to her retirement.

SCIENCE EDUCATION PROGRAMS AT OAK RIDGE NATIONAL LABORATORY

Looking for an internship or post graduate opportunity at Oak Ridge National Laboratory? The Science Education Programs at Oak Ridge National Laboratory provide paid opportunities for undergraduates, grad students, recent graduates, and faculty to participate in high-quality research alongside world-class scientists to solve real-world problems. Opportunities are available for internships and co-ops, research appointments, and sabbaticals.

You can access all available opportunities through the website at http://www.orau.org/ornl. The Talent and Opportunity System allows you to create a profile, and then answer only 5 or 6 questions for each program or job posting for which you apply.

All levels of participants from undergraduates to faculty are encouraged to publish research papers with their mentors. Please browse through the Research Profiles on the different participants and their research experiences at the right hand side of the bottom of the web site listed above. Also, there is a video of research participants at ORNL sharing their thoughts on how access to world-class research facilities and staff has catapulted their careers in science and technology. You can find it on YouTube at http://ow.ly/2EQLz.

CONFERENCES, COURSES, SYMPOSIA

RSICC attempts to keep its users and contributors advised of conferences, courses, and symposia in the field of radiation protection, transport, and shielding through this section of the newsletter. Should you be involved in the planning/organization of such events, feel free to send your announcements and calls for papers via email to arwoodjw@ornl.gov with "conferences" in the subject line by the 20th of each month. Please include the announcement in its native format as an attachment to the message. Please provide a website address for the event if one is available.

Every attempt is made to ensure that the links provided in the Conference and Calendar sections of this newsletter are correct; however, if the links become unavailable, please call the point of contact for the event.

TRAINING COURSES

LANL 2013 MCNP CLASS SCHEDULE

Date	Course Name and Description	Location	Cost
March 25-29, 2013	**Criticality Calculations with MCNP6** Registration is open to all. Non-U.S. citizens must register by 1/21/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
April 1-5, 2013	**Variance Reduction with MCNP6** Registration is open to all. Non-U.S. citizens must register by 1/28/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
June 3-7, 2013	**Introduction to MCNP6** Registration is open to all. Non-U.S. citizens must register by 4/1/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
June 10-14, 2013	**Introduction to MCNP6** Registration is open to all. Non-U.S. citizens must register by 4/8/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
August 5-9, 2013	**Criticality Calculations with MCNP6** Registration is open to all. Non-U.S. citizens must register by 6/3/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
August 12-16, 2013	**Variance Reduction with MCNP6** Registration is open to all. Non-U.S. citizens must register by 6/10/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
October 7-11, 2013	**Introduction to MCNP6** Registration is open to all. Non-U.S. citizens must register by 8/5/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*

*Early payment discount: A discount of $300 per student is given when the registration payment is received in full at least 4 weeks prior to the start of class.

Introductory classes are for those who have little or no experience with MCNP. This class surveys the features of MCNP so the beginning user will be introduced to the capabilities of the program, and will have hands-on experience at running the code to solve simple problems. Course topics include Basic Geometry, Source Definitions, Output (Tallies), Advanced Geometry (repeated structures specifications), Variance Reduction Techniques, Statistical Analysis, Criticality, Plotting of Geometry and Tallies, and Neutron / Photon / Electron Physics.

Intermediate workshops cover the entire spectrum of MCNP/MCNPX, but proceed at a much faster pace and are more in-depth than the introductory classes. These workshops are open to new users; the first day of class is a review of basics. However, the intermediate workshops are targeted toward more experienced users and are more problem solving than lecture classes. Intermediate workshops feature flexible course content, skip topics of least interest to the participants, and provide significantly more depth than introductory classes.

Advanced classes- Variance Reduction and Criticality are for people with MCNP experience who want to extend their knowledge and gain depth of understanding. Most areas of MCNP operation will be discussed in detail, with emphasis on Advanced Geometry, Advanced Variance Reduction Techniques, and other advanced features of the program. Time will be available to discuss approaches to specific problems of interest to participants. Classes on specific topics are offered when there is sufficient interest.

Note: While MCNP supports a number of platforms, LANL class computers are Windows based. More information about the MCNP courses at LANL is available on their website at https://laws.lanl.gov/vhosts/mcnp.lanl.gov/classes/classinformation.shtml.

MCNPX and Visual Editor Training

Classes are taught using the most recent (beta) version of the Visual Editor Code. All class attendees must have a valid MCNP/MCNPX RSICC license. Bring proof of receipt (letter or email) to the class.

Visual Editor Classes 2013		
April 8-12, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Washington, DC
April 15-19, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Columbus, OH
April 22-26, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	San Antonio, TX
April 29-May 3, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Las Vegas, NV

June 10-14, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Barcelona, Spain
June 24-28, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Barcelona, Spain
July 15-19, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Livermore, CA
July 22-26, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Anaheim, CA
July 29-August 2, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Livermore, CA
August 19-23, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Las Vegas, NV
August 26-30, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Albuquerque, NM
September 3-6, 2013	**Advanced MCNPX Visual Editor** with emphasis on solving user problems.	Myrtle Beach, SC
September 16-20, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor.	Myrtle Beach, SC
September 23-27, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Myrtle Beach, SC

PENELOPE Class 2013		
May 6-9, 2013	**Introduction to PENELOPE** *(VEC is pleased to offer PENELOPE training taught by Frances Salvat, the primary author of the code)*	Las Vegas, NV

The introductory workshops combine teaching on MCNP basics and how to create MCNP input files using the Visual Editor. The intermediate Visual Editor workshops focus on more advanced topics such as tallies and variance reduction using the Visual Editor.

Exercises will focus on creating input files and visualizing output data with the Visual Editor. Attendees are encouraged to bring their own input files for viewing and modifying in the Visual Editor; this is particularly important for the intermediate workshop.

The course description and registration information can be found at http://www.mcnpvised.com/index.html.

MCNPX Classes 2013		
March 11-15, 2013	**MCNP/MCNPX Intermediate Workshop** *(The NEA handles registration for this class.)*	Paris, France
May 13-17, 2013	**MCNP/MCNPX Intermediate Workshop**	Pleasanton, CA
June 17-21, 2013	**MCNP/MCNPX Intermediate Workshop** *(The NEA handles registration for this class.)*	Barcelona, Spain
September 9-13, 2013	**MCNP/MCNPX Intermediate Workshop**	Washington, DC

The MCNPX team at Los Alamos National Laboratory offers interactive workshops for training users in the capabilities of MCNPX at the intermediate level.

The list of workshops is tentative, as workshops may be added, removed, or modified throughout the year, depending on user interests. Workshops with fewer than 12 registrants on the early registration date are subject to cancellation or rescheduling.

In order to process non-U.S. citizens by the class date, non-U.S. citizens must register at least 6 weeks prior to the start of the training class. All non-U.S. citizens who reside in countries listed in the U.S. Code of Federal Regulations, Title 10, Part 810.8, are required to register at least 8 weeks prior to the start of the training class. These participants must be processed by the DOE and should not make travel arrangements until approval from DOE has been obtained.

Additional information about the courses can be found at the website, http://mcnpx.lanl.gov/. To register send an email to Randy Schwarz at randyschwarz@mcnpvised.com, indicating the workshop of interest to you.

OECD Nuclear Energy Agency-Data Bank Training Courses

March 18-22, 2013	**Training Course on Analytical Benchmarks**: Case Studies in Neutron Transport Theory	NEA, Paris, France
May 21-24, 2013	**Depletion Calculations Using VESTA 2.1.5**	NEA, Paris, France
May 27-31, 2013	**SCALE/KENO Criticality Safety Calculations Schedule**	NEA, Paris, France
June 3-7, 2013	**SCALE/TSUNAMI Sensitivity and Uncertainty Calculations**	NEA, Paris, France

June 10-13, 2013	**PHITS Monte-Carlo Particle and Heavy Ion Transport Code System**	NEA, Paris, France
July 2-5, 2013	**PENELOPE**	University of Barcelona, Spain
October 16-18, 2013	**EASY, the European Activation System**	NEA, Paris, France
November 4-8, 2013	**TRIPOLI 4**	NEA, Paris, France

These workshops combine teaching by the authors on program physics, along with instructions on how to use the software. The courses include a large number of practical exercises. Note that the number of participants to the courses is limited. Priority is given to nationals from NEA Data Bank member countries. Class sizes are limited and courses may be cancelled if minimum enrollment is not obtained one month prior to course. Course fees are refundable up to one month before each class. After one month, course fees will not be refunded. Note that all attendees must be registered users. Registration information is available at: http://www.oecd-nea.org/dbprog/trainingcourses.htm.

RESRAD FAMILY OF CODES

RESRAD Training Courses

Argonne National Laboratory will conduct a series of training courses on the use of RESRAD family of risk assessment codes from March 12-22, 2013. A total of 65 CECs has been approved by the AAHP for these training courses. The latest version of RESRAD codes will be used. For additional information and registration, please go online at http://web.ead.anl.gov/resrad/training/. Any questions please send email to: RESRAD@anl.gov.

scale

Spring 2013 Training Courses

Date	Title	Location	Cost
April 8–12, 2013	**SCALE Criticality and Shielding Course** *Basic criticality calculations with KENO-VI; Shielding analysis with automated variance reduction using MAVRIC; Criticality accident alarm system analysis*	ORNL Oak Ridge, TN, USA	$2000
April 15–19, 2013	**SCALE Sensitivity and Uncertainty Calculations Course** *TSUNAMI: 1D, 2D, and 3D k_{eff} sensitivity/uncertainty analysis; 2D generalized sensitivity analysis for lattice physics; reactivity sensitivity analysis; advanced S/U methods for code and data validation using trending analysis and data assimilation (data adjustment) techniques; k_{eff} burnup credit validation*	ORNL Oak Ridge, TN, USA	$2000

April 22–26, 2013	**SCALE Lattice Physics and Depletion Course** *2D lattice physics calculations; 1D, 2D, and 3D depletion calculations; resonance self-shielding techniques including Monte Carlo Dancoff factors for non-uniform lattices; generation of libraries for ORIGEN-ARP*	ORNL Oak Ridge, TN, USA	$2000
April 29 – May 1, 2013	**SCALE/ORIGEN Activation and Decay Calculations Course** *Isotopic depletion/decay and source term characterization using ORIGEN/ORIGEN-ARP*	ORNL Oak Ridge, TN, USA	$1500
May 27–31, 2013	**SCALE/Criticality Safety Calculations Course** *Introductory through advanced criticality calculations using KENO Va and KENO-VI; resonance self-shielding techniques*	NEA Data Bank, Issy-les-Moulineaux, France	€2000
June 3–7, 2013	**SCALE/Sensitivity and Uncertainty Calculations Course** *TSUNAMI: 1D, 2D, and 3D k_{eff} sensitivity/uncertainty analysis; 2D generalized sensitivity analysis for lattice physics; reactivity sensitivity analysis; advanced S/U methods for code and data validation using trending analysis and data assimilation (data adjustment) techniques; k_{eff} burnup credit validation*	*NEA Data Bank, Issy-les-Moulineaux, France*	*€2000*

Please register at least 40 days before the start of the desired course. For more information, including course descriptions, discounts, registration deadlines, and online registration, please visit http://scale.ornl.gov/training.shtml.

CONFERENCES

International Congress on Advances in Nuclear Power Plants

The 2013 International Congress on Advances in Nuclear Power Plants (ICAPP 2013) will be held on April 14-18, 2013, at the Lotte Hotel Jeju in Jeju Island, South Korea. This congress will bring together international experts of the nuclear industry involved in the operation, development, building, regulation, and research related to nuclear power plants. The program will cover the full spectrum of nuclear power plant issues from design, deployment and construction of plants to research and development of future designs and advanced systems.

For up-to-date information about this conference, visit their website at http://www.icapp2013.org/.

European Safeguards Research Development Association Annual Meeting

The 35th European Safeguards Research and Development Association (ESARDA) annual meeting will be a symposium on Safeguards and Nuclear Non-Proliferation, held at the Congrescentrum Oud St. Jan in Bruges, Belgium on May 27-30, 2013. The symposium will be preceded by meetings of the ESARDA Working Groups on May 27, 2013.

The symposium will be an opportunity for research organizations, safeguards authorities, and nuclear operators to exchange information on new aspects of international safeguards and non-proliferation, as well as recent developments in nuclear safeguards and non-proliferation related research activities and their implications for the safeguards community.

The symposium is anticipated to include a number of contributions from internationally-renowned authorities in the field.

For up-to-date information about this conference, visit their website at http://esarda.jrc.ec.europa.eu/index.php?option=com_content&view=article&id=70&Itemid=238. (Registration: http://esarda.sckcen.be/en/Registrationfee)

25th Symposium on Fusion Engineering (SOFE25)

The Symposium on Fusion Engineering (SOFE) is a biennial event organized and sponsored by the Fusion Technology Committee (FTC) of the IEEE Nuclear & Plasma Sciences Society and is to be held June 10-14, 2013 in San Francisco, CA. The Symposium covers engineering and scientific advances in both inertial confinement and magnetic confinement fusion, with attendees from major fusion energy research centers worldwide. For up-to-date information about this conference, visit their website at http://sofe2013.org/.

48th Tennessee Industries Week

Tennessee Industries Week (TIW) began over forty years ago as a small short course program with instructors from the College of Engineering at The University of Tennessee, and attendees primarily from

industry in Tennessee. Through the years, it has grown in scope and importance. The instructional staff is still composed mostly of UT professors but now also involves industry and government experts from throughout the U.S. and the world. Attendees also come from around the world. The emphasis is on putting knowledge to work and the atmosphere is organized but casual. Instructors present carefully planned lectures and demonstrations, and dialogues between instructors and attendees are encouraged in order to maximize benefits.

For up-to-date information about this conference, visit their website at http://www.engr.utk.edu/nuclear/TIW.html.

GLOBAL 2013: International Nuclear Fuel Cycle Conference

The GLOBAL 2013 International Nuclear Fuel Cycle Conference will be held September 29—October 3, 2013 in Salt Lake City, UT.

The conference is a forum for the discussion of the scientific, technical, social and regulatory aspects of the nuclear fuel cycle. Relevant topics include global utilization of nuclear energy, current fuel cycle technologies, advanced reactors, advance fuel cycles, nuclear nonproliferation and public acceptance.

For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_158 .

SNA & MC 2013

Joint International Conference on Supercomputing in Nuclear Applications & Monte Carlo

The Joint International Conference on Supercomputing in Nuclear Applications & Monte Carlo will be held on October 27-31, 2013, at the Cité des Sciences et de L'Industrie de la Villette in Paris, France.

The conference aims to highlight renewed strategy and simulation paradigms, and to identify future conceptual and technological breakthroughs. The objective is to increase the predictive capacity of the calculation tools designed and developed by teams of engineers and researchers all over the globe. The idea is to improve the performances accordingly in terms of calculation time, usability and maintainability. All these factors are indeed crucial for the central question of the role of a global nuclear application economy, including safety, optimizations, and costs.

For up-to-date information about this conference, visit their website at https://www.sfen.fr/SNA-and-MC-2013.

2013 CALENDAR

April

2013 International Congress on Advances in Nuclear Power Plants (ICAPP 2013), April 14-18, 2013, Jeju Island, South Korea. For up-to-date information about this conference, visit their website at http://www.icapp2013.org/.

2013 International High-Level Radioactive Waste Management (2013 IHLRWM), April 28-May 2, 2013, Albuquerque, NM. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/c_2.

May

International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2013), May 5-9, 2013, Sun Valley, ID. For up-to-date information about this conference, visit their website at http://www.mc2013.org/.

35th European Safeguards Research and Development Association (ESARDA), May 27-30, 2013, Bruges, Belgium. For up-to-date information about this conference, visit their website at http://esarda.jrc.ec.europa.eu/index.php?option=com_content&view=article&id=70&Itemid=238.

June

Society of Nuclear Medicine and Molecular Imaging (SNMMI) Annual Meeting, June 8-12, 2013 Vancouver, BC, Canada. For up-to-date information about this conference, visit their website at http://interactive.snm.org/index.cfm?PageID=5934.

American Nuclear Society (ANS) Annual Meeting, June 16-20, 2013 Atlanta, GA. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_80.

25th Symposium on Fusion Engineering (SOFE25), June 10-14, 2013 San Francisco, CA. For up-to-date information about this conference, visit their website at http://sofe2013.org/.

July

Institute of Nuclear Materials Management (INMM) 54th Annual Meeting, July 14-18, 2013, Palm Desert, CA. For up-to-date information about this conference, visit their website at http://www.inmm.org/Meeting_Home.htm.

August

Utility Working Conference and Vendor Technology Expo, August 11-14, 2013, Hollywood, FL**.** For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_142.

48th Tennessee Industries Week, August 12-16, 2013, The University of Tennessee Main Campus, Knoxville, TN**.** For up-to-date information about this conference, visit their website at http://www.engr.utk.edu/nuclear/TIW.html .

September

2013 LWR Fuel Performance Meeting/Top Fuel, September 15-19, 2013, Charlotte, NC. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_142.

International Topical Meeting on Probabilistic Safety Assessment and Analysis (PSA 2013), September 22-26, 2013, Columbia, SC. For up-to-date information about this conference, visit their website at http://psa2013.org/.

Global 2013: International Nuclear Fuel Cycle Conference, September 29-October 3, 2013, Salt Lake City, UT. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_158 .

October

Joint International Conference on Supercomputing in Nuclear Applications & Monte Carlo, October 27-31, 2013, Paris, France. For up-to-date information about this conference, visit their website at https://www.sfen.fr/SNA-and-MC-2013.