NRRPT® NEWS

National Registry of Radiation Protection Technologists

Fall 2008 Edition

Incorporated April 12, 1976

INSIDE THIS ISSUE

CONTACTS

Dave Biela, Chairman of the Board
(716) 942-4423 (w)
(716) 942-2097 (fax)
dave.biela@wves.org

DeeDee McNeill, Executive Secretary
(509) 582-3500 (w)
(509) 582-3501 (fax)
nrrpt@nrrpt.org

Bob Farnam, Newsletter Editor
(573) 676-8784 (w)
(573) 676-4484 (fax)
refarnam@cal.ameren.com

Chairman's Message

Dave Biela

I want to welcome the candidates that passed the August exam: Robert H. Andrus, Jr., Joseph G. Archer, David K. Balmer, Gary W. Buckley, Harold K. Chacon, Nathan E. Chviek, James M. Coder, Robert J. Danforth, Karen O. Ely, Mark W. Fielding, Jason S. Foster, Collette M. Hall, George R. Hoffmeyer, Chin-Yuan G. Hwaung, James A. Lochotzki, Kelly B. Martin, Catherine M. Martin, Michael J. Mazzitello, Roderick J. McIntyre, Bret D. McLean, David H. Mullins, Martin J. Naughton, Kyle J. Peltier, Jeffrey T. White, and Jason S. Woodard. Also, welcome to the 3 additional candidates who passed the February 2008 exam: Duane Boone, Bradley T. Pleasants, Jr., and Bennett L. Wallace. Congratulations, I know the hard work that goes into preparing for this exam. Remember to take the opportunity to thank those that may have helped prepare you for the NRRPT exam and in the future do what you can to help others prepare. Again, congratulations.

In the last newsletter, I wrote about the summer NRRPT meeting that was being held in conjunction with the HPS meeting in Pittsburgh PA. I feel the meeting was a big success. There are two items of interest I want to discuss. Mr. Ralph Anderson from the Nuclear Energy Institute gave a very interesting presentation on the manpower crisis that will be facing our industry. According to Mr. Anderson's data we will lose approximately 65% of our work force in the next 10 years. The estimated new comers into the field over the same 10 years are only 33% at best. It is not hard to see, that even based on current needs, the industry as a whole will be in trouble. Now if you add all the new

reactors coming on line and the staff that will be needed for them it is easy to see the problems ahead. Representatives from the NRRPT will be working with Mr. Anderson and others to begin addressing this problem. This leads to the HPS leadership meeting that I attended.

At the Leadership meeting there were officers from the HPS, AAHP and ABHP. This group also recognized the future manpower issues and we all realize that we have to work together on a solution. Nancy Kirner from the AAHP discussed work underway to develop career paths within the sciences starting from elementary school and progressing through college and certification. Besides the need for recruitment into the field other topics on what is being done were discussed. Ms. McBurney discussed the creation of an internet web site that would include all types of calculations and useful information for individuals in our field of work. While there are web sites with different pieces of helpful information, this would be an attempt to consolidate the information into one location. More information will be provided as it comes available. Other topics discussed included the attempt for formal recognition by state and federal legislation of the different organizations represented at this meeting and the protection of their trade marks and titles.

While I was writing this article, I received the following information from the Center for Disease Control (CDC). The CDC is sponsoring a small (<20 people) meeting in Atlanta on February 10 and 11, 2009 to discuss ways to involve radiation professionals as volunteers in radiation emergency response. This includes health physicists, medical physicists, nuclear medicine professionals, technologists, and others. Our agenda is to share some success stories, discuss barriers, and identify ways we can promote involvement of radiation professionals in emergency response in a way that is tightly associated with the state public health and EMA organizations. We are also inviting AAPM, SNM, CRSO, CRCPD, and HPS to have a representative at the meeting. I would be very happy to explain more with a bit of history about this initiative and why NRRPT can be such a valuable partner. I am including this in the newsletter to show the respect that is out there for the NRRPT and our registrants.

Mark your calendar for the next NRRPT Board and Panel meeting that will be held in conjunction with the HPS winter meeting in San Antonio, TX from January 31 to February 3, 2009. Look for more data on the NRRPT web page (nrrpt.org) and on pages 9 and 10 of this issue.

Sincerely,
Dave Biela
NRRPT, Chairman of the Board

** Write an Article for the NRRPT Newsletter **

You'll receive an NRRPT logo shirt if your article is published

in the NRRPT® News

A Test for Light Leaks in Mylar Covered Scintillation Detectors (Part II)

By Jim Rolph, RRPT

In the previous newsletter I submitted an article suggesting a method to test Mylar® covered scintillation detectors for light leaks before going outdoors. As fate would have it and shortly after submitting the article my colleague and I discovered a recently purchased strobe light always failed the light leak test. It turned out the light intensity of the American DJ model S-81 mini strobe light was so intense the light would make it through the Mylar® even though the instrument would function perfectly outdoors.

We examined a few different possible solutions to overcome the problem. Our repair shop ended up trying four different window tinting films until one got the intensity to match the outdoor lighting conditions of a clear day. With this in mind, if you purchase a higher quality strobe light you may have to take a similar approach to make the strobe work for you.

Dave Lettau also provided additional tips learned over the past couple of years in the repair shop. Here are some of his tips:

- The strobe method for detecting light leaks doesn't work well if the probe background is greater than 500 cpm.
- Set the strobe to its fastest setting, the faster the better for detecting light leaks.
- Use the instrument's speaker listening for the rhythm of the strobe. If you don't have a speaker this method doesn't work.
- Digital instruments, where the clicks are NOT produced "real-time," may not work well.
- Ignore perceived extra clicks, or changes in background rate. Just listen for the strobe rhythm above background.
- If there isn't a constant click per flash, there isn't a light leak that matters.

This method works well for him on alpha/beta scintillation probes at approximately one (1) inch distance. For alpha only scintillation probes a one (1) foot distance works well.

Dave uses the strobe to isolate probe case grounding problems as well. He places the strobe in contact to the non-window side of the probe and if he gets a good rhythm response, he checks the case resistance and often finds he needs to improve the probe grounding by removing some paint from the detector probe housing or some other related grounding problem. Dave and I haven't tried, but I suspect this type of test would work well with other scintillation type detectors such for NaI detectors to locate poor detector grounds.

Dave and I hope others will find this tool useful in their repair of scintillation alpha and/or beta detectors and that your detectors become more dependable, and you will save some time and money.

Prescription for Success: UniTech Partners with SONGS To Reduce PCEs During Scheduled Outage

Located on 84 acres along the Pacific coast of California, the San Onofre Nuclear Generating Station (SONGS) provides nearly 20% of the electrical power used by residents of Southern California. Jointly owned by Southern California Edison (SCE), San Diego Gas & Electric and the cities of Riverside and Anaheim, the station brings power to more than 15 million people – enough to serve 2.75 million households.

Just months away from a scheduled refueling outage, SONGS lowered its goal to be consistent with high industry standards for personnel contamination events (PCEs). "To meet the goal, SONGS tried quickly to identify how to minimize personnel contamination events," said Dick Downard, Technical Accounts Manager, UniTech Services Group. Initially, SONGS looked to disposable protective clothing, in hopes that it would help reduce PCEs, but protective clothing was just one of the issues they were facing. During the fall 2006 outage, SONGS set a goal of having no more than 125 PCEs. At the end, it was faced with 227. Following that outage, SONGS staff committed themselves to addressing three key areas of improvement: worker behavior, work processes and protective clothing.

At this point, UniTech became involved. In January 2007, SONGS teamed up with UniTech to develop a customized program that would help SONGS staff address their goals for the next scheduled outage. "Our program had to go beyond just protective clothing," said Downard. The new program was designed to be a true partnership in which UniTech helped SONGS achieve long-term success. And, according to Downard, "SONGS was very open to new ways of doing things."

"First, we were able to share some of what we had learned from other plants' successes," said Tanya French, Assistant Technical Accounts Manager, UniTech Services Group. Since worker behavior was earmarked as an area for improvement, UniTech worked alongside SONGS to help develop a protective clothing prescription program. This included pre-outage training sessions, posters and broadcast e-mails to all employees that outlined proper ways to use UniTech garments.

"For example, we needed to communicate to employees that if you are going to be in a wet environment, you need to wear ProTech Plus coveralls and a CASI suit," said Downard. "Ultimately, we needed to empower the

employees to take ownership of the program." The SONGS prescription included ProTech Plus coveralls, hoods, shoe covers, and rubber gloves. ProTech Plus is a lightweight synthetic garment with outstanding strength and barrier performance.

The partnership is a complete lease and launder program in which UniTech works on-site to ensure that supplies are fully stocked and laid out for worker use.

As part of its service contract with SONGS, UniTech arranged to have three UniTech staff members and a Mobile Safety Store on site throughout the scheduled outage. "This provided us with the ability to quickly change processes or respond to the dynamic needs of an outage," said French, who led the UniTech on-site team. During the outage, SONGS was faced with contamination issues in clean areas. "We were able to provide product recommendations, including the use of UniTech's UltraWipe, a decon wiper with high liquid and oil absorption capacity." This instant supply of new materials was one of the keys to SONGS' success.

The UniTech Mobile Safety Store was also instrumental in providing just-in-time delivery of items and avoiding overnight deliveries. "The SONGS procurement staff didn't have to think about protective clothing," said Downard. "But this wasn't just about protective clothing," added French. "We partnered with SONGS in every area in which they needed to make improvements."

The goal of the 2007 outage was to have no more than 75 PCEs. With the SONGS/UniTech partnership in place, SONGS successfully finished a 53-day outage with just 58 PCEs (with only 3 attributable to protective clothing). According to Downard, "Our SONGS experience is one of the best examples of how UniTech's hybrid programs can help solve a problem.

Welcome New Members

Congratulations to the following additional individuals who successfully passed the NRRPT February 23, 2008 examination:

Duane Boone Bradley T. Pleasants, Jr. Bennett L. Wallace

Congratulations to the following individuals who successfully passed the NRRPT August 2, 2008 examination:

Robert H. Andrus, Jr
Joseph G. Archer
David K. Balmer
Gary W. Buckley
Harold K. Chacon
Nathan E. Chviek
James M. Coder
Robert J. Danforth
Karen O. Ely
Mark W. Fielding
Jason S. Foster
Collette M. Hall
George R. Hoffmeyer
Chin-Yuan G. Hwaung
James A. Lochotzki
Kelly B. Martin
Catherine M. Martin
Michael J. Mazzitello
Roderick J. McIntyre
Bret D. McLean
David H. Mullins
Martin J. Naughton
Kyle J. Peltier
Jeffrey T. White
Jason S. Woodard

New Members: If you do not have access to the "Members Only" portion of the website, please contact the Executive Secretary (nrrpt@nrrpt.org). Your email address must be on file in order for you to gain access.

Changes to Neutron Reference Fields for Instrument Calibration for DOE

By Jim Rolph, RRPT

The Department of Energy (DOE) published an amendment to 10 CFR 835 Occupational Radiation Protection on June 8, 2007. This amendment updated the dosimetric models and dose terms to be consistent with newer recommendations from the International Commission on Radiological Protection (ICRP). This amendment replaces the ICRP-26/30 (1977) models and dose terms with the ICRP-60/74 (1991) methodology. DOE Radiological Protection Programs are expected to implement the changes by 2010.

In radiation protection there are two types of measurement quantities defined for external radiation. They are protection quantities which are defined by the ICRP for dose quantities, and operational quantities which are defined by the International Commission on Radiation (ICRU) for calibrating reference fields for area and individual monitoring. One important concept is that protection quantities are not directly measurable, where as the ICRU developed operational quantities for conducting measurements of external radiation fields can be measured or calculated. The ICRU uses quality factors to account for differences in radiation quality based on linear energy transfer in water. The operational dose-equivalent quantities defined by the ICRU for physical measurements of radiation fields are:

- Ambient dose equivalent, H*(d);
- Directional dose equivalent, H'(d, Ω); and
- Personal dose equivalent, $H_p(d)$.

ICRP Report 51 describes these operational quantities. For workplace monitoring the ambient dose equivalent is used and its unit is the sievert (Sv). The purpose of this quantity is to characterize the potential irradiation of individuals in terms of a single dose equivalent quantity that would exist in a phantom representing the human body. Measurement of ambient dose equivalent requires that the radiation field be uniform over the dimensions of the instrument and that the instrument have an isotropic response. In the past the regulations provided appropriate fluence to dose conversions to be used. This most recent change to the regulations omitted the dose conversions. Therefore another has to be referenced to obtain them.

The table below is taken from the ISO 8529-1: 2001 standard. This standard provides direction for the methods of producing and characterizing the neutron reference radiations for calibrating neutron measuring dose meters. The table provides the factors necessary to convert neutron fluence into the ambient dose equivalent recommended for radiation protection purposes.
The standard points out that the source should be supplied with a certificate of its isotopic composition, and the source strength is to be calibrated by a reference laboratory such as National Institute of Standards and Technology before use.

The source strength is to be corrected for radioactive decay on a day-to-day basis and the sources should be recalibrated every five years.

The size of the room the source is used in will directly contribute to the magnitude of the correction required for room and air scattered neutrons. These effects are to be corrected and the uncertainty that results is required to be known.

ISO 8529-1:2001 Table 1-Reference neutron source for calibrating instruments

Source	T1/2 (years)	Fluence-average-energy (MeV)	Dose-equivalent-average-energy (MeV)	Specific Source Strength ($s^{-1}kg^{-1}$)	Ratio of photon to neutron dose equivalent rates	Spectrum averaged fluence-to-dose equivalent conversion coefficient ($pSv \cdot cm^2$)
(D_2O moderated) ^{252}Cf	2.65	0.55	2.1	2.1E15	0.18	105
(bare) ^{252}Cf	2.65	2.13	2.3	2.4E15	0.05	385

Calculated on the basis of the neutron spectra given in Annex A and the conversion coefficients given in ICRU Report 57.

The conversion coefficients from neutron to ambient dose equivalent for calibrating neutron survey meters for area and individual neutron monitoring is taken from the ISO 8529-3: 1998 standard. The conversion coefficient in the table below compares these values with the value current used at least at one national laboratory. The resulting change is also provided showing a 16-17 percent increase in the reported dose.

Spectrum average fluence to dose equivalent conversion ($pSv \cdot cm^2$)

Spectrum	Current (ICRP 26), NBS 633)	Revised (ICRP 74, ISO 8529-3 Table 2)	Ratio
Moderated ^{252}Cf	90	105	1.17
Bare ^{252}Cf	333	383	1.16

The Energy Facility Contractors Group (EFCOG) RP Subgroup formed a Neutron Quality Factor Task Team shortly after the rule was published. This team hopes to have a recommendation document out in the near future. Preliminary information is that this document may name tables from ICRP 74 and ICRU 57 as being allowable for deriving fluence to dose conversions. No changes in how photons instruments are being calibrated using the common use of R units is anticipated. We will have to wait for the publication of this document to see the actual recommendations and the overall effect. Refer to the following link to see what happens: http://efcog.org/wg/esh_rp/index.htm One thing is certain the reporting of neutron doses referenced to the above listed energies will increase. This awaited document will be important reading for many of us.

Other thoughts and considerations we need to be mindful of. NRC licensed facilities will be reporting lower doses compared to DOE. Radioactive shipments documents may read differently depending on whether the calibration of the instrument was done under the NRC or DOE rules. When NRC licensed facilities send their instruments to a National Laboratory for calibration, they may have to specify the calibration reference desired for their rules. For a radiation protection technologist this information may prove to be useful. To learn more refer to the referenced documents.

Continued on page 8

NR-1
(NUCLEAR RESEARCH SUBMARINE)
TO BE DEACTIVATED

** Attention NR-1 Current and Former Crew Members **

The NR-1 is scheduled to be deactivated at the end of this year after almost 40 years of service. Current and former crew members as well as those who have worked directly on the NR-1 are holding a reunion in Mystic, CT (close to the area where she is home based) on November 21 - 23, 2008. If you worked on the NR-1, you're cordially invited to attend this event and "bid a fond farewell to a great lady".

There was a recent article in the Day, New London, CT newspaper about the deactivation and service this unique vessel has performed, calling her the “the little sub that could”. She holds the distinction of being “the Navy’s only nuclear-powered, deep-diving ocean engineering and research submarine.

Although most of her work in the ocean depths involve assignments that the Navy does not discuss, some of the NR-1’s high profile missions include retrieving pieces of the space shuttle Challenger and the engines from the Egyptair Flight 990 when it crashed off the coast of New England in 1999. The NR-1 has searched for shipwrecks around the world, including an Israeli submarine that vanished in 1968.

With the ability to dive almost half a mile, this one-of-a-kind, 146 foot submarine also played an important role in oceanographic research.

For more information please e-mail degrooth@ct.metrocast.net. Your information will be forwarded to the Chief of the Boat and will be added to the master list for the reunion. Please specify whether or not you wish to receive a Reunion Invitation packet.

Continued from page 7

References:
10 CFR 835 *Occupational Radiation Protection* dated June 8, 2007
ICRP Publication 60, 1990 *Recommendations of the International Commission on Radiological Protection*
ICRP Publication 74, *Conversion Coefficients for use in Radiological Protection against External Radiation*
ISO 8529-1: 2001, *Reference Neutron Radiations - Part 1 :Characteristics and Methods of Production*
ISO 8529-2: 2000, R*eference Neutron Radiations - Part 2: Calibration Fundamentals of Radiation Protection Devices related to the Basic Quantities Characterizing the Radiation Field*
ISO 8529-3: 1998, *Reference Neutron Radiations - Part 3: Calibration of Area and Personal Dosimeters and Determination of their Response as a Function of Neutron Energy and Angle of Incidence*
ICRU Report 51: 1993, *Quantities and Units in Radiation Protection Dosimetry*

NRRPT Board & Panel Meeting

The NRRPT Board and Panel Meeting will be held January 31 - February 3, 2009 in conjunction with the HPS Midyear Meeting in San Antonio, TX. All NRRPT members are welcome and encourage to attend. For more information regarding the NRRPT Board and Panel Meeting, please contact DeeDee McNeill at nrrpt@nrrpt.org or 509-582-3500.

The Health Physics Society has arranged a special rate of $155 single or double at the LaQuinta Inn & Suites - San Antonio Convention Center, 303 Blum, San Antonio, Texas 78205. Please note that these rates do not include tax. Reserve your room by calling the LaQuinta central reservation service at 866-527-1498 or call the hotel directly at 210-222-9181. Make sure to mention the Health Physics Society meeting to get the group rate. Reserve early to ensure a room at the group rate. Once the block is sold out, rooms may not be available at the group rate. The cutoff date for reservations is 30 December 2008. Additional information can be downloaded from the HPS website located at www.hps.org.

See page 10 for the Preliminary Program information.

Congratulations!

Congratulations to our new NRRPT Fellow members: Dwaine Brown, Tim Kirkham and Steve Lancaster were recommended to receive Fellow status by our Awards Committee.

Congratulations to our new NRRPT Emeritus member: George B Walker was recommended to receive Emeritus status by our Awards Committee.

** PLEASE SUPPORT OUR NRRPT® SPONSORS! **

NRRPT Sustaining Dues

2009 sustaining dues have been mailed! Please submit to the Executive Secretary's office by October 31, 2008.

42nd Annual Midyear Meeting of the Health Physics Society January 31 - February 3, 2009 San Antonio, TX

Recent Advances in Planning and Response to Radiation Emergencies

Preliminary Program - Session Listing

Sunday:

8:15 AM - 12:15 PM	Plenary Session
1:30 - 3:30 PM	Medical Response Activities by Hospital and Emergency Medical Systems
1:30 - 5:30 PM	Special Session: Nevada Test Site Contributions to Radiological Emergency Response and Homeland Security
4:00 - 5:00	Military Response to Catastrophic Domestic Incidents

Monday:

8:30 - 10:15 AM	Radiation Hazards From Radiological Dispersal Devices & INDs
8:15 AM - 12:15 PM	Special Session: Radiological Emergency Planning and Public Health
10:45 AM - 12:15 PM	Cleanup of Areas Affected by Nuclear Weapons or Dispersal Devices
2:00 - 5:15 PM	Integration of Agencies and Resources & National Response Framework
2:00 - 5:00 PM	Advances in Instrumentation
1:30 - 2:00 PM	Poster Session

Tuesday:

8:30 AM - 12:15 PM	Training and Guidance for Professionals, First Responders, First Receivers and Members of the Public in Response to a Radiological Attack
8:15 AM - 12:15 PM	Special Session: Recent Developments in Radiological Incident Planning and Response by Federal Agencies
1:30 - 2:45 PM	Interdiction and Security of Radiological Materials and Border & Port Initiatives
1:30 - 2:45 PM	Population Screening and Monitoring
3:15 - 4:15 PM	Crisis Risk Communication
3:15 - 4:15 PM	Special Session: Advancements in Emergency Preparedness Regulations and Guidance

Southern California Edison

Bob Corbett, RPM
P.O. Box 128
San Clemente, CA 92672
(949) 368-9645
corbetrt@songs.sce.com

San Onofre Nuclear Generating Station is proud to have over 60 registered NRRPT members in our Health Physics, Training, Chemistry, Engineering, Operations, Oversight, and Maintenance organizations. We are especially proud that Kelli Gallion of our HP Planning group was a member of the Panel of Examiners, Board of Directors, and is currently the NRRPT Chairman.

San Onofre is a three unit site with two operating 1170 MWe Combustion Engineering reactors and one early Westinghouse unit in decommissioning. The station is located in Southern California on the Pacific Ocean and midway between San Diego and Los Angeles.

AmerenUE-Callaway Plant

Bob Farnam
P.O. Box 620
Fulton, MO 65251
(573) 676-8784
(573) 676-4484 (fax)
refarnam@cal.ameren.com
www.ameren.com

Among the nation's top utility companies in size and sales, Ameren is the parent of AmerenUE, based in St. Louis, MO, and AmerenCIPS, based in Springfield, IL. Ameren is also parent to several nonregulated trading, marketing, investment and energy-related subsidiaries. Ameren employees, totaling approximately 7,400, provide energy services to 1.5 million electric and 300,000 natural gas customers over 44,500 square miles in Illinois and Missouri.

Canberra Industries

Tammy Pattison
800 Research Pkwy
Meriden, CT 06450
(800) 243-3955
(203) 235-1347 (fax)
tpattison@canberra.com
www.canberra.com

Radiation measurement, detection and monitoring equipment. Alpha and gamma spectroscopy systems, portal monitors, personal contamination monitors, trucks, vehicle monitors, survey meters, personal dosimeters, specialty research HPGE detectors.

171 Grayson Rd.
Rock Hill, SC 29732
(803) 366-5131
frhamsc@frhamsafety.com

318 Hill Ave.
Nashville, TN. 37210
(615) 254-0841
frhamtn@frhamsafety.com

Incorporated in 1983, Frham Safety Products, Inc. continues its sole purpose of manufacturing and distributing products to the Nuclear Power Utilities, DOE, DOD, Naval facilities as well as several industrial accounts and related users of safety supplies and equipment.

From the creators of proven products such as the Totes Overshoe and the Frham Tex II, Frham continues their objective to provide products and services which meet or exceed the specifications set forth by customers and the industries that it serves. These revolutionary new concepts include Life Cycle Cost Management (LCCM), Mobile Outage System Trailer (MOST) and Certified Disposable Products (CDP).

- LCCM offers products through a systematic approach of life cycle pricing to include disposal at the purchase point.
- MOST provides onsite product storage stocked systematically specified by the customer for easy access and stringent inventory control.
- CDP consists of proven disposables for every application which includes standard and custom specifications to meet your disposable needs.

Among these services and products, Frham also supplies chemical, biological and radiological equipment which will support applications for domestic, biological, nuclear, radiological or high explosive incident sites. This equipment is able to sample, detect and identify chemical warfare agents and radiological materials as well as provide safe-barrier, personal protection from chemical warfare, biological warfare, radiological and TIC/TIM environments.

General Engineering Laboratories, LLC

Bob Wills
2040 Savage Road
Charleston, SC 29407
(843) 906-5929
(843) 766-1178 (fax)
robert.wills@gel.com
www.gel.com

GEL provides the nuclear industry with radiochemistry, bioassay and analytical chemistry support. GEL is a provider of 10CFR61, REMP and hazardous waste characterization to commercial nuclear reactor sites, DOE sites and DOD facilities throughout the US. For information regarding analytical services please contact Bob Wills.

Griffin Instruments

Joanne Glenn
977 Hamilton Lane
Kingston, TN 37763
865-335-2593
865-376-1313 (fax)
griffininst@comcast.net
www.griffin-instruments.com

Calibration, Repair, and Rental of radiological instrumentation.

Refurbished PCM-2s and PCM-1Bs for sale at less than half the price of new. 30 day warranty.

Check out our calibration and rental rates on the "Services" page of our web site.

HARVARD SCHOOL OF PUBLIC HEALTH

CENTER FOR CONTINUING PROFESSIONAL EDUCATION

Where theory informs practice and practice informs theory ®

The Center for Continuing Professional Education invites you to attend one of our Summer continuing education programs:

Management Skills for Emerging Leaders in Environmental Health and Safety
March 9–11, 2009

Occupational and Environmental Radiation Protection: Principles and Practices of Radiation Safety
April 27–30, 2009

Radiation Safety Officer Training for Laboratory Professionals
June 8–12, 2009

Radiological Emergency Planning: Terrorism, Security, and Communication
August 4–7, 2009

To register or for more information on any of our CE programs:
Visit: www.hsph.harvard.edu/ccpe,
Call: 617-384-8692 or
Email: contedu@hsph.harvard.edu

Louisiana Energy Services

Brenda Brooks
P.O. Box 1789
Eunice, NM 88231
(575) 394-0156
(575) 394-0175 (fax)
bbrooks@nefnm.com
www.nefnm.com

On June 23, 2006, LES made history when the Nuclear Regulatory Commission, for the first time, issued a license to construct and operate a gas centrifuge uranium enrichment plant to be known as the National Enrichment Facility, located in Lea County, New Mexico.

LES is owned by Urenco, an independent, global energy and technology group with plants in Germany, The Netherlands and the United Kingdom. LES will use the world's most advanced, energy-efficient and cost effective uranium enrichment technology developed by Urenco. The technology has been used in Europe for over 30 years. The National Enrichment Facility will be on-line in 2009, and will be the only facility of its kind in North America.

Our focus is on providing safe, cost effective and reliable uranium enrichment services for US power plants within a framework of high environmental, social and corporate responsibility standards.

Master-Lee Decon Services

Robert Burns
430 Miller Road
Medford, NJ 08055
(609) 654-6161
(609) 654-1404 (fax)
haggar@nothinbut.net

Master-Lee is a leading supplier of refueling, maintenance, inspection, operations and outage management services for PWR Nuclear Power Plants in the U.S. Market and has supported the major NSSS companies in the performance of similar tasks at BWR sites. Master-Lee also designs, fabricates and supplies specialty products, tools and parts in support of our various product lines. These capabilities are provided by our broad range of Product Lines: Refueling and Related Services; Pump and Motor Services; NDE – Eddy Current Testing Services; Specialized Reactor Services; Decontamination Services; Decommissioning Services; Engineered Products; and Technical Services.

MGP Instruments

Audrey Summers
5000 Highlands Parkway, Ste 150
Smyrna, GA 30082
(770) 432-2744
(770) 432-9179 (fax)
asummers@mgpi.com
www.mgpi.com

MGP Instruments designs, develops, markets and supports operational survey equipment and measurement systems. We are #1 in North America in electronic dosimetry, offering a broad spectrum of detection/protection devices and products for virtually any need. We are also recognized for our outstanding customer support.

RADeCO

Brad Lovendale
509 Norwich Avenue
Taftville, CT 06380
(860) 823-1220
(860) 823-1521 (fax)
www.radecoinc.com

For over 25 years, RADeCO has set the standard for air sampling in the nuclear industry. We supply the highest quality air sampling equipment, filter media, and sampling cartridges. We also provide a full range of calibration, repair service, and spare parts for all your air sampling and air flow measurement equipment. In addition to being an NRRPT Corporate Sponsor, RADeCO offers special discounts to the NRRPT membership.

Reef Industries, Inc.

Since 1957, Reef Industries has been manufacturing quality, tear resistant plastic laminates ideal to reduce radwaste disposal costs. Made of cross-laminated high-density polyethylene material, Reef Industries' products offer the greatest tensile strength to weight ratio and are unsurpassed in the industry. Our products are ruggedly durable, lightweight, easily handled and can be custom fabricated to meet your requirements.

Our patented laminates are manufactured using a UV stabilizing process, are fire retardant for safety applications and offer low contamination to protect critical equipment. Available in a range of weights, thickness' and special composites, these products are the ideal choice for a wide-range of applications including concrete curing, custom box liners, containment enclosures, bags, tubing, outdoor storage, shipping covers, secondary containment systems and decontamination pads.

Immediate shipment is available for stock and custom orders.

ri@reefindustries.com
www.reefindustries.com

STP Nuclear Operating Company

Bill Bullard, RPM
P.O. Box 289
Wadsworth, TX 77843
(361) 972-7130
wtbullard@stpegs.com
www.stpegs.com

More than fifty registered Radiation Protection Technologists are proud to work at the South Texas Project's two nuclear power plants. These plants, some of the world's newest, produce more than 2500 megawatts of electricity. The plants, and the team that operates them, set industry standards in safety, reliability and efficiency.

UniTech Services Group, Inc.

Gregg Johnstone
P.O. Box 289
Wadsworth, TX 77843
(413) 543-6911
(413) 543-2975 (fax)
gjohnstone@unitech.ws
www.UniTech.ws

UniTech Services Group is the largest protective garment service organization in the world. With 11 licensed plant locations in the U.S. and Europe, UniTech provides waterwash decontamination, protective clothing sales and leasing, respirator cleaning and leasing in addition to both onsite and offsite tool and metal decontamination services.

Calvert Cliffs Nuclear Power Plant

Constellation Nuclear, LLC, a member of the Constellation Energy Group, owns and operates the Calvert Cliffs Nuclear Power Plant and Nine Mile Point Units 1 and 2 and Ginna Unit 1. Constellation Nuclear was created to ensure CEG has a reliable, efficient and diversified fuel base for its merchant energy business.

Entergy -
Palisades Plant

Chris Plachta
27780 Blue Star Memorial Hwy
Covert, MI 49043
(616) 764-2199
christopher.plachta@nmcco.com

Nuclear Power Plant

F&J Specialty Products, Inc.

F&J is the premier manufacturer of traditional and microprocessor controlled air sampling systems, airflow calibrators, tritium collection systems and lightweight battery powered emergency response air samplers, including portable beta continuous air monitors.

F&J is the world's largest manufacturer of TEDA impregnated charcoal and silver zeolite cartridges for radioiodine collection. Product lines include radon detection products, filter media and personal air samplers.

Instruments comply with North American ANSI/UL or European Union safety standards. Contact: Frank Gavila (352) 680-1177

Technical Management Services, Inc.

Specialized short courses in radiological training...

www.tmscourses.com

Contact: Robin Rivard • rrivard@tmscourses.com
(860) 738-2440 • FAX (860) 738-9322

HI-Q Environmental Product Company

HI-Q Environmental Products Co. is ready to help with your stack sampling requirements: State and Federal nuclear regulatory agencies require a stack discharge sampling program as part of the licensing process. Radionuclides discharged to the air in the form of particulate and volatile compounds must be assayed. Therefore, nuclear facilities are required to follow standard protocol for sampling their effluent. Possible emission of radionuclides to the general public has to be monitored in a systematic and acceptable manner. In the U.S., the U.S. Environmental Protection Agency has the authority over such matters, and the current requirements and guidelines for sampling in nuclear stacks and ducts are laid down in ANSI N13.1 1999. Contact: Marc Held (858) 549-2820

RETN, Inc. of Westminster

Comprehensive NRRPT Exam Preparation courses: 9-day (90 hours) on-site or scheduled, 7-day (70 hours) tutorials (1-3 students). A learning experience, not just a review.

Internal Dosimetry, Radiochemistry Laboratory Techniques, and Gamma Spectroscopy courses; Radiochemistry Laboratory Audits and Assessments; Radiochemistry and HP instrumentation setup and procedures; Staff augmentation, long or short term. Contact: Rowena Argall (303) 438-9655

Server Solutions

Server Solutions, Inc. has been developing and hosting web-based applications since 1996. SSI specializes in applications using database back ends, allowing input and retrieval of data using a web browser. Technologies used include Windows 2000/2003 Servers, ColdFusion MX, MySQL and Microsoft Access databases. SSI's content management system provides a means for users to update web content without having to learn HTML or other web languages. Standard web page hosting and email services are also offered. Contact: Vince Bishop (850) 899-4242

2009 USA NRRPT Exam Dates

February 28, 2009

Deadline for application: December 12, 2009

August 2009 - To be determined

2008 Canadian NRRPT Exam Date

December 12, 2008

Deadline for application: November 14, 2008

Application Fee: $250
Retake Fee: $125
Late Fee: $50

** Exam applications may be downloaded from our web page **

www.NRRPT.org

Some of Our Available Merchandise

(Colors Vary)

Outerbanks Polo

Jerzee Polo

Short Sleeve Denim

Long Sleeve Denim

Devon & Jones Golf Shirt

Devon & Jones Oxford Shirt

Hat

There are several ways to order your NRRPT merchandise:

1) complete the form on Page 19 and fax or mail in;
2) go to the NRRPT website and click on the home page link;
3) click on the link below (if your viewing this newsletter online)

http://store.nrrpt.org/index.cfm/m/1/fuseaction/store2Catalog.categoryDetail/categoryID/1

NRRPT Merchandise Order Form

Logo Apparel

Available Styles & Prices

OuterBanks Polo — $23
Denim Long Sleeve — $21
Blue Fleece Vest — $37
Blue Nylon/Fleece Jacket — $49
Khaki/Navy Hat — $15
Devon & Jones Golf (Dill or Stone)— $33
Long Sleeve T-Shirt (Taupe)— $18
Jerzee Polo — $18
Denim Short Sleeve — $20
Khaki Nylon Vest — $40
Black Nylon/Microfiber Jacket — $59
Khaki/Black Hat — $15
Devon & Jones Oxford (Khaki)— $39

Quantity	Size	Description	Price	Amount
		Orders with less than 5 items — add $7.50 for shipping		
Canadian orders: please add an additional $5.00 for international shipping			**Total:**	

Book

"Problem Solving in Preparation for the NRRPT Exam"
by David Waite, Ph.D. and James Mayberry Ph.D.
$27 Each

Quanity	Price	Amount
	$27.00 ea	
	Total:	

Total Amount Enclosed:
$ _____

Canadian orders: please add an additional $5.00 per book for international shipping

Send order form with payment to:

NRRPT
P.O. Box 6974
Kennewick, WA 99336

or fax to: (509) 582-3501

Check, Money Order, Visa & MasterCard Accepted

Ship to: _____
_____
_____
_____

Visa or Mastercard
Card#:
Exp Date:
Billing Address:

NRRPT® NEWS
c/o Bob Farnam
P.O. Box 6974
Kennewick, WA 99336

CHANGE OF ADDRESS FORM:

NAME: _____

OLD ADDRESS: _____

_____

_____

NEW ADDRESS: _____

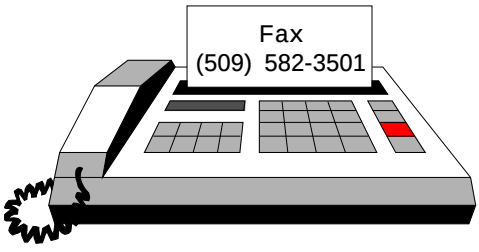
_____

_____

EFFECTIVE DATE: _____ NEW PHONE NUMBER: _____

EMAIL ADDRESS: _____

If you have moved, please complete this form so you don't miss out on any issues of the News.



Or mail to:

NRRPT
P.O. Box 6974
Kennewick, WA
99336