

NRRPT® NEWS

National Registry of Radiation Protection Technologists

Fall 2006 Edition

Incorporated April 12, 1976

INSIDE THIS ISSUE

Chairman's Message	1
Efficient Distribution of Counting Time	3
Arthur F. Humm Award	5
Bio on our Panel Member	6
US DOL High-Growth Job Training Initiative Grant	7
Welcome New Members	8
2007 Sustaining Dues	8
NRRPT Members Receive HPS "Fellow" Award	8
NRRPT Board Meeting Photos	9
PEP Courses	10
Sponsors	12
More From Our Chairman	18
Merchandise Order Form	19

CONTACTS

Kelli Gallion, Chairman of the Board
 (949) 368-6994 (w)
 (949) 368-7754 (fax)
 galliok@songs.sce.com

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



Kelli Gallion

We celebrated our **30th Anniversary** during the 66th Board of Directors & Panel of Examiners meeting which was held June 24-27 in Providence, RI.

Eddie Benfield, Awards Committee Chairman, presented the Arthur F. Humm Award to the vastly deserving **John J. Molner** during the **NRRPT Night Out** trip held in

Newport, Rhode Island at the Kempanaar's Clambake Club. Congratulations John!!! (see page 5)

The Awards Committee awarded **Jamie E. Coffey** a Don Marshall Scholarship Award. Jamie has been registered since 2004 and currently works at Sandia National Laboratories with Enercon Services. Jamie is currently enrolled at the University of New Mexico-Albuquerque in the Nuclear Engineering Department where he is pursuing his degree.

The Registration Maintenance Committee recommends that the registration maintenance process be automated to allow the registry the ability to submit registration documents online. To ensure adequate security of this process, members would use their **NRRPT** ID number and a pass protected password to access the registration forms online.

Welcome New Exam Panel Members!! Lisa McAuley and John Olson have been appointed to the Panel of Examiners. Their terms begin January 1, 2007 and end January 1, 2011.

Officer Elections: Your 2007 Board of Director Officers are as follows: Kelly Neal (Secretary-Treasurer), Dave Biela (Vice Chairman), and I as Chairman.

The next Board and Panel Mid-Year meeting will be held in conjunction with the HPS Mid-Year Topical Meeting January 21-24, 2007 in Knoxville, TN. The Meeting's topic is Decontamination, Decommissioning, and Environmental Cleanup. For more information please visit <http://hps.org/newsandevents/meetings/meeting12.html>. Remember, all members are invited to attend the **NRRT** Board of Directors meeting.

Congratulations to our newest 17 members who successfully passed the exam on August 12th! See page 8 for listing.

Joy, Happiness, and Health.....All these and many more are my wishes for you! Happy Thanksgiving!



Kelli Gallion
NRRT, Chairman of the Board

New Fee Prices

Future Canadian NRRT Exam Dates

February 26, 2007

Deadline for application: December 15,
2006

August 2007 Exam Date - TBD

Application Fee: \$250

Retake Fee: \$125

*Late Fee: \$50

A special Canadian Exam will be held at Ontario Power Generation's Whitby site on 2007 February 26

Future USA NRRT Exam Dates

February 10, 2007

Deadline for application: December 15,
2006

August 11, 2007

Deadline for application: June 15, 2007

Application Fee: \$250

Retake Fee: \$125

*Late Fee: \$50

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

www.NRRT.org

To arrange for additional Canadian exam sites/dates, please contact the **NRRT** office.

Efficient Distribution of Counting Time

Augustinus Ong
Dartmouth College

The purpose of this paper is to reacquaint ourselves with and to show how to apply simple equations from health physics' radio-analytical notes in order to calculate the efficient distribution of counting time in counting measurements. This calculation is important because the background counts can have an important effect on the counting statistics and on the net sample counting time.

Measurements of emissions from a radioactive sample must consider the background ionizing radiation. The standard practice is to take the background measurement and then subtracted the result from the total counts to yield the net sample activity. Keep in mind that statistical variations are applicable to both the radioactive sample counting and the background counting.

Theory:

Let the activity A of a sample be expressed as the number of counts n per time:

$$A = n / t$$

The error of measurement q in the measurement is thus

$$q = K (\text{SQRT } n) = K (\text{SQRT } A \times t), \text{ where } K \text{ is the parameter of the error.}$$

In addition, the error Q in the measurement of rate is

$$Q = q / t = K (\text{SQRT } A \times t) / t = K (\text{SQRT } A / t)$$

Therefore, the error Q of measurement of rate also applies to the background counting error $Q(b)$:

$$Q(b) = K [\text{SQRT } A(b) / t(b)], \text{ where } A(b) \text{ is the background activity and } t(b) \text{ is the counting time.}$$

How can the background counting variations during the measurement of a radioactive sample be determined? A simple way is to find out what is the additional error compounded by the background counting.

Let the sample activity $A(s) = A(\text{total}) - A(\text{background}) = A(T) - A(b)$, where the measurement of the $A(s)$ involves the error of the difference of $A(T)$ and $A(b)$.

Note also that when two observations are made, then the error $y(s)$ of the difference of the two counting determinations (the total activity and the background activity) is:

$$y(s) = \text{SQRT} [Q(T)^{**2} + Q(b)^{**2}] \text{ and}$$

$$y(s) = K \text{ SQRT} [A(T) / t(T) + A(b) / t(b)],$$

where $t(T)$ is time for counting sample + background and $t(b)$ is time to count background.

EXAMPLE 1:

A radioactive sample is counted for 10 minutes that results in 50 counts per minute. The background is counted for 5 minutes that results in 10 counts per minute. So what is the probable error of measurement?

$$\text{Let } A(T) / t(T) = 50 \text{ counts/min} / 10 \text{ min} = 5 \text{ counts} / \text{min}^{**2}$$

$$A(b) / t(b) = 10 \text{ counts/min} / 5 \text{ min} = 2 \text{ counts} / \text{min}^{**2}$$

Use the equation and plug in the values:

$$y(s) = K \text{ SQRT } [A(T) / t(T) + A(b) / t(b)]$$

$$y(s) = 0.6745 \times \text{SQRT } [5 + 2] = 1.8 \text{ counts/min}$$

where, data of "Probable Error" from the "Gaussian Summation Probability of Error" statistical table gives $K = 0.6745$

Thus, after solving the above equations, the radioactive sample activity $A(s) = 3 \pm 1.8 \text{ counts/min}$

How can we minimize the error when the activity of a sample is low as compared to that of the background? We now have to determine an efficient distribution of counting time between counting the sample and the background. To do this, we have to differentiate the equation

$$y(s) = K \text{ SQRT } [A(T) / t(T) + A(b) / t(b)]$$

with respect to $t(T)$ and then set $y(s) / d t(T)$ equal to zero

The resultant differential equation yields

$$A(b) / t(b)^{**2} - A(T) / t(b)^{**2} = 0$$

and

$$t(T) / t(b) = \text{SQRT } [A(T) / A(b)]$$

EXAMPLE 2:

A sample has an activity of 10,000 counts/min and the background has 1,000 counts/min. What is the efficient distribution of counting times for the sample and the background?

$$\text{Let } A(T) / A(b) = 10,000 \text{ counts/min} - 1,000 \text{ counts/min} = 10$$

$$\text{and, } t(T) / t(b) = \text{SQRT } [A(T) / A(b)] = \text{SQRT } [10,000 / 1,000] = 3.2$$

Therefore, the most efficient distribution of counting time with minimum counting error, the sample should be counted for 3.2 minutes and the background for 1 minute.

Arthur F. Humm, Jr. Award Presented to John Molner



Humm Award Presented to John Molner

It is with great pride that I get to announce the latest recipient of the Arthur F. Humm, Jr. Award given by the National Registry of Radiation Protection Technologist (NRRPT) during the 30th anniversary of the Registry. John Molner has been an asset to the Registry in many respects and I will expound on those later, but let me tell you a little about the man for whom this award is named.

Arthur F. Humm, Jr. was the original Chairman of the Exam Panel and in conjunction with the first Chairman of the Board of Director's, Don Marshall, they put together a vision that would allow individuals in the field of radiation safety to display their knowledge on the subject through testing of various subjects directly related to radiation safety and its application in the field and laboratory. Their development of the first exam was completed within one year of the initial meeting of the Board of Directors and Panel of Examiners. The dedication by Arthur F. Humm, Jr. to undertake and complete such a monumental task has been an inspiration to those who have followed in his footsteps within the Registry. With that dedication to the Registry let me describe some of the attributes of the latest recipient of the Arthur F. Humm, Jr. Award.

John has been involved in radiation safety since 1972. His first exposure, no pun intended, was through the United States Navy aboard the U.S.S. Tinosa as a Lead Engineering Laboratory Technician. His honorable discharge from the military led him into the field of commercial nuclear power as a Senior Health Physics technician and Site Coordinator for four years. From there, John joined PSE&G as a Senior Radiation Protection Supervisor at Hope Creek urging others technicians in the field of radiation protection to join the ranks of the Registry just like he did in 1982 with his initial registration by successfully passing the exam. But these accomplishments alone are not why John Molner was awarded the Arthur F. Humm, Jr. Award, let me tell you of his accomplishment for the Registry.

John has served in some capacity with the Registry for 23 years and I have outlined those years to the Registry below:

Member, Board of Directors (1983-1988, 1993-1999, 2004-2006)
Vice Chairman, Panel of Examiners (1989-1992)
Chairman, Panel of Examiners (1993-1999)
Vice Chairman, Board of Directors (1999-2000)
Chairman, Board of Directors (2001-2003)
Chairman, Executive Committee (2004-2006)

His services to the Registry have had major impact on the lives and futures of those individuals that have become members of the Registry since 1989. John was instrumental during his tenure as the Vice Chairman of the Panel of Examiners in obtaining American Council of Education's (ACE) Program on Non-collegiate Sponsored Instruction (PONSI) college credit recommendations. These college-level credits have been used by numerous members of the Registry to advance their education in pursuit of their Associates and Baccalaureate degrees in fields related directly to radiation and its safety. To date, approximately 150 Registered Radiation Protection Technologists have obtained their BS degrees using this ACE recommendation. In addition, during John's tenure as the Chairman of the Board of Directors, he challenged the Panel of Examiners to develop additional questions for the exam bank in order to have at least four separate exams with no questions being repeated in any of those exams. Some would say that he is a tough cookie, but John pitched in even during Panel of Examiner meetings to help in the development of those additional questions. Lastly, John has assisted the current Chairman, Kelli Gallion, in expanding the Registry to the north with our Canadian neighbors. This is just a beginning in what I believe to be an explosion of new registered members to the Registry especially with the rebirth of nuclear power on the horizon and the possible expansion of the Registry to other countries around the globe.

Please join me in congratulating John J. Molner as the latest recipient of the Arthur F. Humm, Jr. Award and I am truly proud to know and be associated with such a man as this and one who has sacrificed for the advancement of the Registry.

Eddie Benfield
NRRPT, Awards Committee Chairman

**** BIO ON OUR EXAM PANEL MEMBER ****
Auggie Ong

Augustinus Ong, M.P.H., is the Radiation Safety Officer at Dartmouth College and an Adjunct Faculty member in the Radiologic Technology degree program at Lebanon College in Lebanon, NH. He has been involved in various radiation safety programs for over ten years and has also published brief technical review articles and research papers.



In 1993, Auggie became a Registered Radiation Protection Technologist and has been a member of the NRRPT Panel of Examiners since 1999. Auggie has also been a key contributor to the NRRPT Newsletter.

In his spare time, he teaches astronomy and chemistry to children at the Montshire Museum in Norwich, VT.

US DOL High-Growth Job Training Initiative Grant for RP Technician Education Supporting the Nuclear Utility Industry

Dr. William Miller, University of Missouri - Columbia

In response to the nuclear energy industry's need for well-trained radiation protection technicians, the US Department of Labor (DOL) Employment and Training Administration awarded a \$2.3 million grant to the University of Missouri-Columbia (MU) as part of the President's High-Growth Job Training Initiative (HGJTI) for the energy sector (nuclear, coal, oil, and natural gas). National manpower studies of nuclear industry staffing needs have cited that, with an aging existing workforce, a significant shortfall in available personnel to fill radiation protection jobs will occur, starting within the next five years. The DOL grant to MU is designed to specifically address this manpower shortfall.

MU and its curriculum development partner in the DOL grant — the Linn State Technical College's Advanced Technology Center (LSTC/ATC; Mexico, MO) — received the DOL funding to establish the Center of Excellence for Radiation Protection Technology Education and Training. The primary near-term goal of the Center is to develop a standardized, industry driven curriculum for an Associates of Applied Science Degree in Nuclear Technology. The curriculum — which is based on industry standards (INPO ACAD and Department of Energy criteria) and ABET continuous improvement principles — will be disseminated to community colleges throughout the country. These programs will begin accepting students in the Fall 2007.

Dr. William Miller is working closely with Drs. David Jonassen and Rose Marra in MU's School of Information Science and Learning Technologies to create a coordinated set of educational materials to enhance student learning. One of the objectives of the curriculum development process is to address the educational needs of diverse learners (e.g. women, minorities, veterans), who are currently underrepresented in RP technician jobs.

The curriculum being developed is based on a model degree program implemented by LSTC/ATC. Under funding from a US DOE Innovations in Nuclear Infrastructure and Education grant to the Midwest Nuclear Science and Engineering Consortium, LSTC/ATC developed and implemented their two-year degree in collaboration with AmerenUE's Callaway Nuclear Plant and the University of Missouri-Columbia. LSTC/ATC graduated its first cohort of RP students during the summer 2006.

Four community colleges are working with MU and LSTC/ATC under DOL funding to receive and test the curriculum prior to further national dissemination. These schools and their nuclear utility partners are:

Central Virginia Community College (AREVA Framatome ANP)
Hill College (Texas Utilities Power / Comanche Peak)
Miracosta Community College (Southern California Edison / San Onofre)
Estrella Mountain Community College (Arizona Public Service Company / Palo Verde)

The US Institute for a Competitive Workforce (Washington, DC; formerly the Center for Workforce Preparation) is also collaborating in the DOL grant to assist participating schools with local workforce relations and economic development initiatives.

A unique feature of the degree program being constructed is a paid internship at a nuclear facility in order for students to gain invaluable professional development perspectives to reinforce their classroom education. Each of the

community college's nuclear utility partners, along with Bartlett Nuclear (a major employer of RP technicians for the nuclear industry), have committed funds for student internships as part of the industry matching funds required under the DOL HJGTI program.

With the vital role that RP technicians play in the nuclear power industry, the DOL grant to MU and its partners is creating the educational capacity to produce Associates degreed RP technicians in the United States.

"A pipeline of skilled radiation protection technicians will be crucial to the nuclear energy sector's growth," said Emily Stover DeRocco, assistant secretary of labor for employment and training. "The program the University of Missouri is developing with its private-sector partners will prepare up to 200 workers throughout the country for jobs in this critical field."

Dr. Miller is a Professor of Nuclear Engineering at the University of Missouri – Columbia, a Research Associate at the Missouri University Research Reactor (MURR) Center and the Principle Investigator for the DOL grant.

Welcome New Members

Congratulations to the following individuals who successfully passed the
NRRPT August 12, 2006 examination:

Larry D. Brantley
Charlotte M. Brown
Albert E. Castagnacci
Albert J. Fisher
Kristine M. Gehring-Ohrablo
Jeffrey S. Gividen

Joshua P. Hill
Terry J. Leatham
Scott Luke
David J. Merrick
David J. Myerez
Paul L. Nelson

Daniel L. Perry
Michael S. Rightler
James I. Satterfield
Frank M. Schipono
June L. Scott

New Members: If you do not have access to the private side of the web page please contact the Executive Secretary (nrrpt@nrrpt.org). She must have your email address on file in order for you to gain access.

2007 Sustaining Dues

The 2007 sustaining notice was mailed the first week in October. If you haven't paid your 2007 annual dues, please submit to the Executive Secretary's office as soon as possible!

NRRPT Members Receive HPS "Fellow" Award

This award honors senior members of the Health Physics Society who have made significant administrative, education, and/or scientific contributions to the profession of health physics.

James T. (Tom) Voss
Larry O. Waggoner

CONGRATUATIONS!

Photos from the NRRPT Board & Panel Meeting in Providence, RI



Several of our Board & Panel Members



Our NRRPT 30-Year Anniversary Celebration at
Kempanaar's Clambake, June 25, 2006

Special thanks to our **NRRPT** sponsors for helping make our celebration extra special!!

Sponsors:

- Bartlett Services
- Dade Moeller Technical Services
- FRHAM Safety Products
- RADeCO

PEP Courses To be provided by the NRRPT

At the 2007 HPS Mid-Year Meeting, the NRRPT will provide two PEP courses for your enrichment.

PEP #1 – NRC Requirements for Laboratory Activities

NRC requirements for laboratory activities involved in 10CFR61 waste classification, Radiological Environmental Monitoring, and Radiological Effluent Technical Specifications.

This session will review 10CFR61.55 and the NRC BTP for waste classification as it applies to the utilization of laboratory data to determine waste disposal classification:

- Review methods to provide verification of radionuclide data. We will take a look at the hard to detect radionuclides used for waste classification and what you need to know about laboratory methods.
- Review lower limits of Detection as required by the NRC / MDA / Critical Level used for analytical counting calculations.
- Review Regulatory Guide 4.15 (Quality assurance for Radiological Monitoring Programs, Normal Operations - Effluent Streams and the Environment. We will review how it applies to laboratory performance.
- Review QA requirements as noted in 10CFR50 Appendix B, 10CFR
- MARLAP: What is it, When do you use it, and Who is required to use

Robert Wills, RRPT, Manager of Nuclear Power programs for General Engineering Laboratories will present this session

PEP #2 – Basic Whole Body Counting and Internal Dosimetry for the HP Technician

This course will cover the basics of a whole body counter and then will go into the basics of internal dosimetry. A Stand-up type whole body counter will be briefly described; the artifacts that are found in a typical Whole body counter spectrum and errors associated with the spectra. Inputs into Internal dosimetry calculations will be outlined (no calculations will be performed) and the uses/misuses of the same. The use of Transuranics and Hard-to-Detect radionuclides will also be covered. Human relations as it applies to internal dose and body counting will also be discussed.

Course will be provided by Tim Kirkham, NRRPT, and Program Manager for ENSR

NRRPT® News

Each course costs \$40.00 if advanced registration is received prior to January 5, 2007. After that time the cost will be \$50.00. Questions about each course should be directed to:

Tim Kirkham
ENSR
(317) 297-6200 x 305
tkirkham@ensr.aecom.com

Send Registration to:

NRRPT
P.O. Box 6974
Kennewick, WA 99336
509-582-3500
509-582-3501 (fax)

PEP Course Registration Form

Name: _____ Company/Affiliation: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

PEP #1 _____ PEP #2 _____

Total Cost \$ _____

Credit Card: VISA or MasterCard (circle one)

Number: _____

Exp Date: _____

Print Name: _____

Signature: _____

Bartlett Nuclear, Inc.

Paul Lovendale
60 Industrial Park Road
Plymouth, MA 02360
(508) 746-6464 Ext 305
(508) 830-3616 (fax)
paull@bartlettinc.com
www.bartlettinc.com

Bartlett Nuclear, Inc. has over 20 years experience providing health physics, decontamination, mechanical maintenance, janitorial and other staff augmentation services to the commercial nuclear industry and Department of Energy facilities. Bartlett provides decommissioning and decontamination services and equipment, including remote monitoring systems, strippable coatings, liquid decontamination processes, and scaffolding.

Pacific Gas and Electric Co. Diablo Canyon

Robert E. Hite
Box 56
Avila Beach, CA 93424
(805) 545-4591
(805) 545-3459 (fax)
REHY@PGE.com
www.pge.com

Diablo Canyon is located on California's central coast on some of the most picturesque and pristine coastline in the world. Diablo Canyon generates enough electricity to meet the needs of over 2 million homes.

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.



CHESAPEAKE NUCLEAR SERVICES, INC.
A J. STEWART BLAND COMPANY

MARSSIM Implementation
Decontamination & Decommissioning
Radiological Surveys
Radiation Protection Program Management
Licensing and Regulatory Interface
Dose Modeling
Effluent and Environmental Modeling
Health Physics Staff Augmentation
NRRPT and CHP Prep Courses
Radiological Training

MARSS-Responder Wireless Radionuclide
Characterization and Response

headquartered near the Nation's Capital

Contact: Mike Davidson
(410) 421-5454
mdavidson@chesnuc.com
www.chesnuc.com

Dade Moeller Technical Services

Arthur Desrosiers
52 Deer Jump Hill
W. Barnstable, MA 02668
(508) 443-0225
(508) 362-1417 (fax)
adesrosiers@moellerinc.com
www.moellerinc.com

Dade Moeller & Associates is an award-winning, employee-owned small business specializing in occupational and environmental health sciences. Dr. Dade Moeller founded our Company in 1994 to provide health physics, industrial hygiene, and safety support to government and commercial nuclear facilities. Our reputation for understanding worker safety concerns in radiological environments is unsurpassed, and government, business, and labor leaders have recognized and commended our work. Our staff includes more full-time Certified Health Physicists (28) than any other private organization in the U.S. We also employ Certified Industrial Hygienists, Certified Safety Professionals, and staff with environmental and safety certifications and licenses. Our staff is very active in national and international organizations for protecting worker and public health and has an outstanding professional reputation. Dade Moeller Technical Services, LLC has been formed to perform full-scope radiological field operations or deploy trained, qualified, and competent health physics technicians, supported by experienced managers and supervisors.

Detroit Edison Fermi 2

George Piccard
6400 N. Dixie Hwy
Newport, MI 48182
(734) 586-1825
(734) 586-1883 (fax)
higginsh@dteenergy.com
www.dteenergy.com

Detroit Edison operates the Fermi 2 Nuclear Power Plant located in Monroe, MI along the shores of Lake Erie. Fermi is a 1200 MW power plant supplying electricity to the metropolitan Detroit area. Fermi's USA Supplier of the Year TLD lab provides dosimetry services to USA facilities and other non-power plant entities.

Duke Power Company

Larry Haynes
526 S. Church Street, Box 1006, MS-EC07F
Charlotte, NC 28201
(704) 382-4481
(704) 382-3797 (fax)
lehaynes@duke-energy.com
www.dukepower.com

Duke Power provides safe, reliable and economical power to the Carolinas. We deliver electricity to more than 2 million customers—balancing the region's growing electricity needs with care for the environment and the communities we serve. We currently operate seven reactors and are proud to support the **NRRPT**.

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.

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

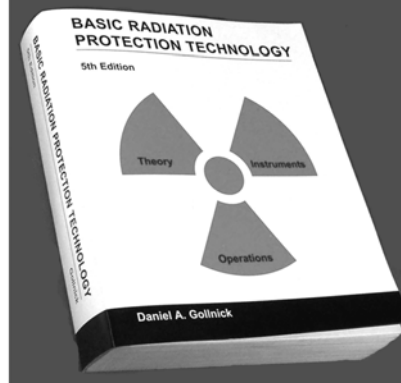
MGP Instruments designs, develops, markets and supports operational survey equipment and measurement systems. We are #1 in North America in electronic dosimetry, offering a broad spectrum of detection/protection devices and products for virtually any need. We are also recognized for our outstanding customer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

Now Available! The Gollnick Book

Fifth Edition, 2006

www.pacificrad.com

(626) 798-8100



Pacific Radiation Corporation
2945 Stonehill Drive
Altadena, CA 91001

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.

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.

Contact: Ed Roach (410) 495-4191

Chase Environmental Group, Inc.

Chase maintains a staff of professionals with years of experience in providing radioactive and mixed waste disposal solutions. Chase also offers comprehensive remediation and decommissioning services

Contact: John O'Neil (877) 382-2124

General Engineering Laboratories, LLC

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 Robert Wills (843) 556-8171.

**Nuclear Management Company
Palisades Plant**

Chris Plachta
27780 Blue Star Memorial Hwy
Covert, MI 49043
(616)764-2199
(616)764-2435 (fax)

Nuclear Power Plant

Harvard School of Public Health

Harvard School of Public Health, Center for Continuing Professional Education's upcoming programs: Occupational and Environmental Radiation Protection – Basic Principles in Safety, April 24-27, 2006; Radiation Safety Officer Training for Laboratory Professionals, spring 2006; Comprehensive Industrial Hygiene - Practical Applications of Basic Principles, June 19 – 23, 2006; Radiological Emergency Planning: Terrorism, Security and Communication, August 8 – 11, 2006. For more information or to register, please visit our website at www.hsph.harvard.edu/ccpe or call us at 617-384-8692.

RAD-Ware, Inc.

RAD-Ware, Inc., a woman-owned small business, is a professional consultancy, providing safe, quality, *Radiation Protection* - training (ABHP & ABIH approved), software, and services - for individuals, medical facilities, universities, commercial and government agencies. On-site training & project quotes available upon request. Our services are available, both nationally and internationally. Our CHP has more than 15 years in field operations, with more than 50 years combined experience, and we are proud of what we do!
Contact: Dixie J. Wells-O'Dou (702) 645-9313

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

MJW Corporation, Inc.

The MJW Corporation is a professional consulting firm specializing in radiological and health physics for private industry, governmental agencies and educational institutions. The company expertise is divided into the general areas of Health Physics (Radiation Protection), Radiological Engineering, Decontamination and Decommissioning Services, Regulatory Support and Health Physics Consulting Services. Contact: David A. Dooley (716) 631-8291

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



Technical Management Services, Inc.

**Specialized short courses in
radiological training...**

www.tmscourses.com

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

UniTech Services Group, Inc.

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.

Contact: Gregg Johnstone (413) 543-6911

More From Our Chairman

I had the opportunity to attend the NEI Health Physics Forum in San Diego, California, July 23-26, 2006. I found the meeting to be of great interest and informational. My personal favorite topic was the presentation regarding new reactor operating licenses. NRC representatives discussed that there are plans for 27 new units to be built. Yes, 27! The NRC has already received Early Site Permit (ESP) Applications from 4 utilities. (Source: www.nrc.gov/reactors/new-licensing/esp.) It shouldn't then come to you as a surprise that the NRC is reorganizing its Office of Nuclear Reactor Regulation (NRR) to create an Office of New Reactors (NRO) to ensure effective oversight of operating nuclear power plants and prepare for the industry's interest in licensing and building new nuclear power plants in the near term. The Office of New Reactors is expected to be established by January 2007. The NRC is expecting several applications for new nuclear power plants in late 2007 and early 2008, with initial construction activities soon thereafter. (Source: www.nrc.gov/reading-rm/doc-collections/news/2006/06-096.)

It is not new news that the industry is facing a large percentage of retirements over the next several years, and with 27 new plants ahead of us, there is a huge demand for future Radiation Protection Technicians. At the NEI Meeting, Bruce Meffert, the Nuclear Technology Instructor at Linn State Technical College Advanced Technology Center, was recognized for his efforts in developing an Associate of Applied Science Degree Program in Nuclear Technology. The mission of the Nuclear Technology program is a highly technical program designed to provide students with the opportunity to develop the technical expertise, math and analytical

skills as well as the interpersonal skills required to begin successful careers as nuclear operations technicians and radiological protection technicians. The Program is designed for graduates to work at Nuclear power facilities, radioactive waste handling facilities, Radiopharmaceutical companies, Universities and National laboratories, Medical facilities and U.S. DOE sites. For more information, please visit www.linnstate.edu or contact admissions at 573-897-5000.

The Linn State Technical College program is providing the platform for establishing Centers of Excellence for Radiation Protection Technology Education and Training in Missouri, California, Virginia, Arizona and Texas. For more information, see the article by Dr. William Miller.

Very nicely stated:

"[N]ow, very quietly, nuclear power is on its way back in the U.S. and around the world. And—it must be said—that's a good thing. ... In a world threatened by warming, an emission-free power source is desperately important. Solar and wind power cannot even begin to fill the need. And after 50 years of experience with nuclear power, the risks are no longer great enough to justify opposing it. ... [N]uclear power is about to start increasing rather than decreasing, and the evidence—today's evidence, not that of 25 years ago—is persuasive that the world will be better off."

—Fortune (Excerpt: NEI.org)

"Nuclear Power Is Back—Not A Moment Too Soon"

May 30, 2005

Sincerely,
Kelli Gallion

NRRPT Merchandise Order Form

Logo Apparel

Available Styles & Prices

- | | |
|--|--|
| <p>OuterBanks Polo — \$23</p> <p>Denim Long Sleeve — \$21</p> <p>Blue Fleece Vest — \$37</p> <p>Blue Nylon/Fleece Jacket — \$49</p> <p>Khaki/Navy Hat — \$15</p> <p>Devon & Jones Golf (Dill or Stone) — \$33</p> <p>30th Anniversary (Khaki w/black trim) — \$30</p> | <p>Jerzee Polo — \$18</p> <p>Denim Short Sleeve — \$20</p> <p>Khaki Nylon Vest — \$40</p> <p>Black Nylon/Microfiber Jacket — \$59</p> <p>Khaki/Black Hat — \$15</p> <p>Devon & Jones Oxford (Khaki) — \$39</p> |
|--|--|

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

Quantity	Price	Amount	Total Amount Enclosed: \$ _____
	\$27.00 ea		
	Total:		

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

Send order form with
payment to:

*Check, Money Order,
 Visa & MasterCard
 Accepted*

NRRPT
 P.O. Box 6974
 Kennewick, WA 99336

Ship to: _____

or fax to: (509) 582-3501

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: _____

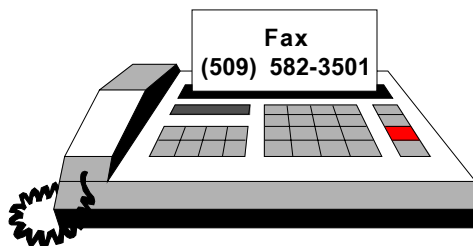
OLD ADDRESS: _____

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