

NRRPT NEWS

OFFICIAL NEWSLETTER of the National Registry of Radiation Protection Technologists

August 2022

Incorporated April 12, 1976

Chairman's Message



Greetings fellow RRPTs!

Welcome to fall! I hope that all of you had a wonderful summer of enjoying the warm weather doing some hiking, bicycling, camping or simply relaxing and enjoying the sun. As the temperatures start to drop and the leaves start to change color hopefully we can get out and enjoy all of the beauty that the change of seasons has to offer.

Unfortunately, we lost one of our own last year. Peter Darnell was a member of the Exam Panel bringing an extraordinary amount of experience as well as a wonderful can do attitude. He was also a very

frequent contributor to the newsletter writing many great articles and giving us humorous movie reviews. Pete was a wonderful human being with a great sense of humor. We will miss him greatly at each and every meeting! Fair winds and following seas Pete.

We had our winter meeting in Key West, FL January 29th - February 1st. We were still a little down on our attendance due not everyone being able to travel quite yet but we did get some folks that attended virtually and that was awesome. I will say production did not suffer at all as quite a bit of work was done over the meeting. The full agenda of committee meetings was held using a combination of in person and virtual meetings. The Exam Panel was very efficient reviewing administered tests, preparing and reviewing the new exams and writing new questions. Dave Wirkus and Scott Engeman also found time to conduct some Exam Panel member training. We are always looking for new Exam Panel members so if you would like to have a ton of fun doing some really interesting work, please contact me or Dave Wirkus for more information.

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Contacts

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Todd Davidson (636) 448-8633 (cell) t-davidson@sbcglobal.net



We also held our annual meeting July 16th – 19th in Spokane, Washington with the annual HPS meeting. Attendance was very good and it was awesome to see lots of old friends again. Just like in Key West earlier in the year the Board of Directors and the Exam Panel did a tremendous amount of work including putting exams together and writing new questions. This time we had the pleasure of conducting all the Registry business in person for the first time since 2020. We also had a night out to enjoy some good food and great company. I am sure that there will be a couple pictures to be found somewhere in this newsletter.

Speaking of exams, I have the great privilege of welcoming the new 31 new Registrants that passed the February 2022! Congratulations and welcome to each and every one of you! Adding the 31 new Registrants brings the NRRPT to 5,866 strong and we are getting ever close to having 6000 Registrants!

If you would like to learn about the history of the Linear No-Threshold Model, the Health Physics Society has put out a 22 video series that can be found at <u>The History of the Linear No-Threshold Model (hps.org)</u>. The videos are free to watch and CHPs can get 10 CEU for watching them.

I always enjoy hearing from the Registrants so feel free to give me a call at (505) 667-7440 or email me at rickras@lanl.gov.

Respectfully,
Rick Rasmussen
NRRPT, Chairman of the Board



Decommissioning San Onofre Nuclear Generating Station

Thanks to Kelli Gallion-Sholler for providing the following articles about nuclear waste and nuclear decommissioning, which were approved for sharing with the registry by Kelli's employer.

Momentum Building to Solve Nation's Spent Nuclear Fuel Disposal Dilemma ENERGIZED by Edison Writer John Dobken

Momentum Building to Solve Nation's Spent Nuclear Fuel Disposal Dilemma | Energized by Edison

With Nuclear Waste, Science Matters
Guest editorial by Dr. James Conca

With Nuclear Waste, Science Matters | SONGS (songscommunity.com)

Welcome New NRRPT Members

Congratulations to the following individuals who successfully passed the **NRRPT** Examination on August 14 2021:

Austin L. Ball Corey Dubil Theodore R. Rivard
Logan T. Beebe Paul B. Duke Mackenzie Z. Tracy
Daren M. Christensen Julia L. Edelbrock Kristopher P. Weitlauf

Daniel S. Dodge Levi Hilstad

Congratulations to the following individuals who successfully passed the **NRRPT** Canadian Examination on August 16 2021:

Scott D. Francis Barrett Kingsborough Alan Tung

Congratulations to the following individuals who successfully passed the **NRRPT** Canadian Examination on November 8, 2021:

Jason G. Fournier Craig A. Lessard Nathan J. Smith

Kristie Toman

Congratulations to the following individuals who successfully passed the **NRRPT** Examination on February 19, 2022:

Jessica D. Beason Kelly R. Elliott Ryan T. McKenzie Travis N. Bennett John D. Garan Taylor D. McLean William S. Bierer Aaron M. Jiles Cheyenna D. Pike Kevin Boyle Kaitlin Johnson Christopher J. Poloisky Clarence M. Jones Aaron K. Buchanan Joshua G. Reyes Matthew M. Conrady Keith R. Lassman Alden Ryno Matthew Simon Allison W. Cunningham Joseph L. Le May Dong C. Lim Stoney Springer Daphne Delphia James P. Sullivan Shane E. Drey Anthony Mahood Ben G. Tolman Travis Eaton Jasmine L. Mapes **Brandon Wigginton**

In Memoriam: Peter A. Darnell

1962-2021

by the Cincinnati Radiation Society; photos courtesy of Candace Darnell

Pete Darnell, BS, CHP, RRPT, worked for the National Institute for Occupational Safety and Health (NIOSH) Division of Compensation Analysis and Support as a health physicist (HP) from January 2003 until his retirement in 2020. Before working for

NIOSH, he was an HP, nuclear safety subject-matter expert, industrial specialist, and facility representative for the Department of Energy (1994–2003). From 1987 to 1994, he was involved in commercial nuclear, medical, research, and consulting. Pete also served as a NIOSH subject-matter expert for National Special Security Events (NSSE) and an electrician's mate, submarine and radiological control monitor for the US Navy from 1981 to 1987.

Pete was a member of the Health Physics Society (HPS), American Academy of Health Physics, Cincinnati Radiation Society (CRS), and National Registry of Radiation Protection Technologists (NRRPT).

Pete's wife, Candy Darnell, shared that "Pete was born 9 April 1962 and passed after a bout with COVID-19 on 25 March 2021. He was a Navy veteran, Fellow of the HPS, member of the CRS, member of the NRRPT, former scoutmaster, and just fun to be around."



Wade C. Morris: "I met Pete through working on the NIOSH Dose Reconstruction Project. He was a NIOSH HP that was always gracious and understanding with me (not having an HP background). While also serving the CRS and attending meetings, Pete and I would always talk about travel and playing music, which I found out he did enthusiastically at his church. After Pete's retirement from NIOSH, he invited me to his house to trade CRS files and also offered me his many HP reference books and files to help further my understanding and career. His insight and guidance were always appreciated and meant a lot to me. He will be missed."

Tim Taulbee: "I first met Pete in 1998 when he worked for the Department of Energy (DOE) at Fernald. I had just started at NIOSH and Pete arranged for a colleague and me to attend and obtain Radiation Worker II training in preparation and support of a Health Hazard Evaluation we were conducting at another DOE site. In the early 2000s,

Pete joined the Division of Compensation Analysis and Support at NIOSH and we began working together. We worked together for many years both at NIOSH and within the CRS, where Pete served as president in 2008. I served as CRS president in 2011, during which time Pete was on the CRS Board of Directors. In 2016, Pete served as the HPS Homeland Security Section president. Throughout his career, Pete made significant contributions to both CRS and HPS. His work was finally recognized when he received the Fellow of the Health Physics Society Award in 2018. One of my fondest memories about Pete and his wife Candy is their love of travel (specifically cruises) and fine dining. I always knew at an HPS annual meeting that Pete would be game to join me for dinner at one of the finer restaurants such as Ruth's Chris or a Morton's Steakhouse."

Michelle Kovach: Pete was always a funny and kind man. He (and his wife Candy) always had me rolling with laughter. Pete and I started with the Panel of Examiners the same time. We both had to submit our biographies for the Newsletter. He showed up my boring bio by his wit and humor. Pete was one of the hardest workers on the Panel. When we changed the exam blueprint, he worked overtime when much of the others left to ensure there were enough questions in the exam bank. It is not often that we can



A cigar box guitar made by Peter

call our colleagues friends or family members. Pete was definitely both! I will miss his movie reviews, his friendship, but mostly I will miss him.

Todd Davidson: Pete was very generous: with his time, his humor, and very much with sharing his intelligence and experience. For those of us who worked closely with him, he was vocal about how he and our group worked hard for the practitioners in our registry. Pete was a great collaborator, and would work with others on the board and panel to create exam questions especially for those objectives that required more questions.

Brilliant scientist. Great colleague. Great friend. Great man.

For anyone else in the registry that would like to share personal experiences with Pete, please feel free to contact us and we will add the comments to future Newsletters. Thanks for your help!

NRRPT Night-Out in Key West, FL January 30, 2022

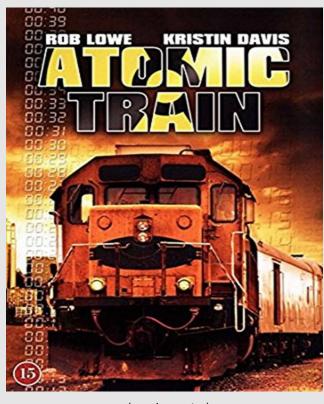
*** Thank you to our generous NRRPT Night-Out sponsor—Envirachem ***

Chris Bryson





RAD MOVIE REVIEWS!



Drum roll please... And the best nuclear comedy goes to... Atomic Train (1999)!

It has it all – bad physics, highly morphed terrain, unrealistic nuclear security, and an impossible explosion of a nuclear weapon! A movie full of laughs!

In the movie, the train travels downhill for 300 miles into Denver. In reality, a train winds its way up the mountains for 250 miles to reach Denver.

In the movie an air brake failure causes the train to over speed and eventually crash. In reality, an air leak causes train brakes to fail closed, stopping the train. Let's just forget that nearly every car on a train has hand brakes.

In the movie firefighters don't need no stinking manifests! In reality they would already have a hazardous materials transport manifest. So, I guess there's no way to make all the metallic sodium and other hazmat explode.

(movie poster)

Then there's the real kicker. The fire cooks-off the hidden nuclear missile! Really, it can happen – it does in this movie! First, you have to accept that our government would transport a Russian-made nuclear missile on a commercial train. Then you have to accept that they'd allow the operator to surround the missile with hazmat.



And then, you have to accept that the National Transportation Safety Board is the only security around. You can't make this level of stupidity.



(video screen grab)

(video screen grab)

The silver lining? Our hero finds his family in the FEMA Camp in Kansas! How convenient! This stinker stars Rob Lowe and Kirsten Davis.

The late Pete Darnell, RRPT, CHP, amateur movie critic

NRRPT Night-Out in Spokane, WA

July 17, 2022

*** Thank you to our generous NRRPT

Night-Out sponsors—Envirachem (Laura Davidson), Ameriphysics (Tom Hansen), Frham Safety Products (Trip McGarity—not pictured) and UniTech Services Group (Gregg Johnstone—not pictured) ***









Scott Engeman, Karen Barcal & Dave Wirkus

25 Years + as an NRRPT

The following members were registered 1983—1989

1002				
1983				
BARCOMB, DAVID W.				
BARNES, JAMES G., CHP				
BARROW, JOHN C.				
BLACK, TIM W.				
BLAIES, DAVID M.				
BROWN, JOHN C.				
CAMPOLONGO, PETER P.				
CARRILLO, EDWARD				
CELLETTI, MICHAEL A.				
DAVIS, CHARLES E.				
DERBY, JOHN L.				
DICK, DARYL				
DUTOI, DEAN A.				
ELDER, E. C.				
HEFFNER, ROBERT A.				
HILL, JR., WILLIAM A.				
HUBER, NORMAN I.				
JOHNSTONE, ROBIN B.				
JONES, GARRY D.				
KOLLE, GARY M.				
KULIK, EDWARD J.				
LONG, DONALD C.				
MADIGAN, PAUL M.				
MERCHANT, DALE J.				
MOORE, RUSSELL P.				
MORGAN, RICHARD L.				
NAYLOR, GERALDINE				
NESTOR, EUGENE R.				
NORDMAN, WILLARD P.				
OLSON, JR., HAROLD S.				
ORR, JOSEPH A.				
OSETEK, PAUL A.				
PEARSON, MICHAEL W., CHP				
PIERCE, JAMES C.				
REESE, ARTHUR C.				
RIDDLEMOSER, ROGER P.				
RISING, JR., WILLIAM A.				
SALLADAY, JOHN L.				
SCHOENIG, RICHARD A.				
SOUZA, STEVEN R.				
STEINER, GREGORY W.				
STERBENZ, KENNETH W.				
WILES, JONATHAN C.				

YARBOROUGH, JOHN E.

ANDERSON, CHARLES K.

ALLEN, JERRY L.

1984

ASHLEY, THOMAS A. BORTZ, GARY N. BREVIG, RONALD L. BURGESS, GARY W. CARLSON, ROBERT W. CARR, THOMAS D. CATES, GREGORY W. **CULVER, DAVID A.** DAVIS, GREGORY S. DEASON, HAROLD W. DIBENEDETTO, WILLIAM J. DICKSON, BARRY B. **DIERKS, DEANN D., CHP** DOOLEY, DAVID A., CHP EWALD, THOMAS D. GREENFELD, ROBERT J. HADLOCK, DENNIS J., CHP HOLMES, ROBERT D. HOOPER, RONALD O. **HUTCHINS, LESTER C.** JOHNSON, RODNEY C. KELLOCK, LYNN R. KNIGHT, JR., CECIL D. KOFRON, JOEL KRIPPEL, MARK S LEE, DAVID R. MACK, MICHAEL L. MAIXNER, ROBERT D. **MALINOWSKI, GERALD** MARINUS, JR., JAMES C. MCMAHON, MARK MILLER, CRAIG A. MILLER, MITZI G. MILLS, JOSEPH F. MOORE, JOHN D. OBERHOLZER, JOHN F. OLIVER, ROBERT W. O'SHAUGHNESSY, CAROL F. PAGE, LAWRENCE A. PAYNTER, ARTHUR F. PROPST, CHARLES L. **PUCKET, JR., DWAINE R.** RADDATZ, MICHAEL G. RATIGAN, JAMES D., CHP RIMA, STEVEN D. SAWYER, PAUL M. SCHIRMER, RICHARD E.

SCHMITT, DANIEL J.

SMITH, DANN C., CHP SMITH, WILLIAM E. SOLINI, JOHN A. SOWDER, C. LYNN STAFFORD, THOMAS A. STILL, JOSEPH J. TRIPP, RICKY A. VERNON, LORNE H. WEAVER, III, J. ELLSWORTH WILLIAMS, RICHARD D. WOLFE, FREDDIE R. YOUNG, GARY W. ZADROGA, KEVIN T. ZENDEK, SR., JOHN J. 1985 ALDRICH, DONALD G. BATES, JR., JAMES R. BENSON, MICHAEL E. BERNHARDT, ROY K. **BOGARD, JAMES S., CHP** BROWN, RICHARD M. BRUNKOW, WARD G. CALL, ROBIN D. COOPER, MARK L. COX, WILLIAM E. CROLL, RICHARD F. **DEFAZIO. THOMAS J.** FISH, BIRNEY R. GARCIA, RICHARD A. **GILBREATH, TOMMYE SUE** GROVE, THOMAS M. HARRINGTON, ROBERT R. HARRIS, RALTON J. HARVERSON, JOSEPH M. HOLMES, MARK L. **HURLOCKER, JOHN** KIRK-SCHWEITZER, ANN R. LAGARDE, GORDON L. LAMBERT, MICHAEL W. LANCASTER, RAYMOND E. LUBESKI, RUTH A. MARKLEY, ANTHONY E. MEDLEY, DUANE W. **NEWKIRK, PHILLIP D.** OETKEN, JOHN E. OTT, RANDALL W.

PARKHURST, GLENN O.

PEOPLES, WILLIAM C.

PHILLIPS, GALE A. REDLOW, JR., ALBERT H. ROBERTS, RAYMOND P. RUSSELL, JOHN R. SCOTT, WILLIAM J. SEALS, GREGORY S. SIMS, HARRY C. SMELCER, WILLIAM F. STEARNS, MARK S. WILLS, ROBERT P. 1986 ADLER, TODD R. ANNILLO, ARTHUR W. ARMSTRONG, JR., WILLIAM H. **AUSTIN, TIMOTHY A.** BALL. KEITH F. BARRY, JAMES F., CHP **BASTIAN, C. THOMAS, CHP BIELA, DAVID BISTODEAU, DUANE V.** BOOTH, WILLIAM D. BROOKS, JACK L. **BROOKS, MARY E. BROWN, MARCUS B. BUZZELLI, GEORGE CAMPBELL, FREDERICK** CHAMBERS, STEPHEN G. CHILTON, GARY L. CHRISTENSEN, ALAN R. **CLANCY, JAMES** COCHRANE, GARY D. CRELLA, ANTHONY R. DARMAN, JOSEPH J. DESANTO, JR., ANTHONY L. DOODY, KEVIN R., CHP **DULGERIAN, KORKEAN** EHRHARDT, H. S. ELKES. BURNS K. **EMERY, ROBERT J., CHP** FINE, RONALD L. **GANDER, THOMAS E.** GATTO, EDWARD M. GILE, JOHN A. GRAHAM, IAN S. GRIM, KENNETH R. HALL, SHANNON J.

HAWK, RICHARD A.

HELMS, MARLIN E.

HOOD, FLOYD M. IRWIN, III, WILLIAM E. JACOBSEN, JOE D. JONES. HOBERT W. JORDAN, WILLIAM L. **KEENEY, NEIL, CHP KOLONOSKI, DAVID** LANDSMAN, STEVEN D. LANG, KENNETH LAVERA, RONALD, CHP LEBDA, JOHN T., CHP LEDUC, MICHAEL J. LEFFLER. THOMAS I. LYONS, CRAIG L. MACCHIARULO, JOSEPH MADSON, DANIEL P. MANLEY, SCOTT R. MCCORMACK, MARK H. MCDONALD, CHARLES M. MCDONALD, JAMES D. MCHUGH, WILLIAM J., CHP MCLEOD, WADE MITCHELL, DENNIS R. MOZZOR, MATTY H. NEFF, JOHN J. O'DOU, DIXIE J. PADOVANI, DENIS M. PAPENDORF, JOHN D. PETROFF, DALE M. PFEFFER, MICHAEL F. PODGURSKI, CRAIG J., CHP PROFFITT, MICHAEL R. RENO, RAYFORD R. REOCH, DALE M. ROLPH, RONALD G. ROOK, ALAN H. ROUSE, LEWIS A. ROY, ROBERT L. SAUNDERS, PAUL D. SHUMAN, JOSEPH P. SMITH, SCOTT SORG, STACEY A. STEWARD, JOHN B., CHP THOMAS, ALAN G. **UPCHURCH, CRAIG E.** VALENTINE, GRANT D. 1987

ALLSEP, TIMOTHY V.
ANDERSON, DEE
BARSS, DANIEL M.
BISHOP, VINCE
BRUGMAN, DONALD G.
CAMPESI, GIAN-JOSEPH

CAPEHART, PHILLIP G.

COBURN, DWAYNE E.
COLLINS, KEVIN JAMES
COWLEY, JANET L.
DANIELSON, EDWIN A.
DAVIDSON, MICHAEL S., CHP
ELDRIDGE, DEBRA A.
FEJER, CHRISTY
FERGUSON, DENNIS E.
FOBAIR, RALPH A.
GALLAGHER, CHARLES T.
GARINGER, STEPHEN R.
GERINGER, JAMES P.
GERSTNER, MICHAEL J.
GONZALEZ, PEDRO L.
GRUSECKI, LORI J.

GRUSECKI, LORI J.
GUIDO, JOSEPH S.
HELMEN, CRAIG E.
HILLMAN, DEBRA J., CHP
HOLTHAUS, JAMES J.
JERVEY, RICHARD A.
JOHNSON, ALLAN M.
KANIA, DAVID LEE
KLOSSNER, JOHN S.
KUHL, DANIEL H.
LAFLIN, STEVE T.
LAUBER, RUSSELL G.
LEUENBERGER, RONALD D.
LIZBINSKI, LOUIS A.
LOZINSKI, DENNIS M.

MOTHENA, PAUL A.
NELSEN, LINDSAY A., CHP
NOLAN, LARRY M.
PERSKY, PATRICIA M.
PFEFFER, ELLIS J.
POWELL, ROBERT S.
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SMITH, JEFFREY C.
SOLLENBERGER, TIMOTHY D.

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MILNER, JOHN D.

MITCHELL, BRAD

MORRILL, GARY T.

SPRUCINSKI, PH.D, DR. JOHN P.
STOCKWELL, CHARLEEN T.
VIERKANDT, WILLIAM R.

WALTER, PHILLIP B. WRIGHT, EDWIN L.

ZEITER, DAVID E. 1988

ALBERT, JR., RAYMOND C.
ALLEN, GEORGE C.
ANDRIE, BRADLEY S.
BLOW, MARCY A.
BRACKIN, THOMAS L.

CHAWAGA, DAVID J. CHRISTENSEN, MICHAEL R. CORDS, RANDAL A.

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IVIOISAN, ALAIN C.

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POSIK, JUDITH A.

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VERGON, TERRY R.
WHITE, GARY L.
WHITMAN, ROBERT M.
WILLIAMS. COLETTE A.

1989

AIRTH, JAMES P. ANDERSON, DAVID L.

ARMAGNO, ANTHONY (TONY)

F.

BABYAK, JOHN R.
BALL, GARY A.
BARE, ROBERT G.
BECKER, WILLIAM E.
BERGERON, JR., GERALD A.

BILICSKA, MICHAEL D.
BLEAU, JEFFREY P.
BRAGG, JANE P.
BRAUN, JANELLE S.
BREUER, MARK A.

BROWN, ROBERT W. BRYANT, DANIEL J.

BULLARD, WILLIAM T.
BULT. JAMES A.

BUNGARD, JAMES P CABRERA, LORENZO

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CHETE, JEFFREY TODD CLEMENS, GARY L. COBURN, RICHARD L.

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DARNELL, PETER A., CHP

DAUTEL, LAWRENCE H.
DAVIS, CLAY M.
DAVIS, LEONARD F.

DAVIS, MICHAEL W. DAWSON, BRIAN S.

DEAN, JEFFERY A.
DELIZZA, PHILIP J.

DENNERLEIN, SCOTT W.

DODGE, BRIAN P.

DURINGER, MARY LOU

EAST, JAMES E.
EHRICHS, MARK G.
EMERSON, CARL C.
EMMITT, ROBERT W.

ENGELHARD, SAMUEL A. ENGLETT, FRANK M.

FARR, MISTY M.
FISCHER, ROBERT J.
FLEMING, KENNETH N.

FLEMING, MICHAEL T. FLOREY, LYNN R. GARCIA, MANUEL E. GASS. DAVID

GAVIGAN, TIMOTHY P. GILL, JEFFREY W. GILLIS, LEWIS O.

GO, TONY

GORDON, GREGORY A. GOSSEN, DOUGLAS G. GRANT, JR., ROBERT H. **GURN, THOMAS R.**

HAMILTON, JR., RUBEN K. HANSEN, CURTIS J. HARRIS, JAMES A. HARRIS, WILLIE O., CHP HASLETT, JEANNE M.

HAYHURST, JAMES J. HAYS, ROBERT D.

HOLCOMB, STEPHEN B. HOLMAN, E. C. (SKIP)

HOPKINS, III, JOHN H. HORN, LINDA C. **HUGHES, LESLIE C.** HURLA, GERALD W.

JACOBS, CARL D. JENSEN, VERNON R. JOHNSON, JAMES E.

HURLEY, JOSEPH P.

JULIUS, CHARLES R.

JUZA, ROBERT P. KEITH, DAVID D. KELLER, JOE E.

KENT, DAVID B., CHP KURTZ, TIMOTHY M.

LALONE, BILL

LAUTT, GLORIA A. LAWYER, DENNIS R.

LANDECHE, DAVID A.

LENT, DAVID L. LINCOLN, MICHELE K.

LITTLE, DOHN V. LOEFFLER, DONALD J.

LOMNICKI, VICTOR G. LUND, RICHARD M.

LUNSFORD, MICHAEL W.

LUTHIGER, PETER J. MADISON, MICHAEL MARLER, MICHAEL L.

MAROTZ, MICHAEL A. MARTIN, DAVID C.

MCDONALD, JR., ROBERT E.

MCDONALD, TERRY J. MCGEE, DONALD

MCLENDON, RONALD C. MEDAKOVICH, MILAN MEDENCIY, CHARLES M.

MERRELL, KEVIN P. MERRIKEN, RICHARD A. MEYER, JR., WILLIAM J.

MILLER, BRUCE E. MILLER, DUANE C. MOORE, BASCOM M

MORGAN, MICHAEL J. MUMPER, JEFFREY A.

MUNZENMAIER, DAVID L.

NEAL, JR., HENRY B. NEWLIN, DAVID A. ODIEN, KENNETH J. O'DONNELL, THOMAS J.

PAULHARDT, JR., WERNER K. PAYNE, FRANK R.

PEDERSON, KEVIN R. PERRY, DOUGLAS C.

PIERCE, JACK L. RAFFEL, DUANE A. RAWN, GORDON R. RELLER, MARK H. **ROTH, RICHARD**

ROTKVIC, EDWARD M. **RUNGE, WILLIAM F.**

RYAN, RAYMOND J. SANDERS, STEVEN R. SCARBORO, MICHAEL G.

SCHAREIN, KIRK A. SCHEPERS, JOHN M. SCHERMAN, JOHN R.

SEARS, JOSEPH T. SHOWALTER, DAVID S. SHRIVER, KATHRYN R.

SKILES, RANDALL W. SLATEN, BETTY M. SMITH, CURTIS D. SMITH, ROBERT J. STEWART, ARTHUR J. STEWART, ROBERT S. STOKES, ROBERT C. STONE, CRAIG B. STRUEMPH, GEORGE M. STUTZMAN, TERRY L. TARASCHI, VINCENT T.

TESSMER, DEBORAH A. VIOLA, DENNIS A. WEBER, TIMOTHY J. WEIS, WILLIAM E.

WELCH, KEITH B. WELLMAN, DAVID M. WHALLEY, JOHN J.

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WILLAFORD, DANA M. WILLIAMS, M. WAYNE

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Please contact the Executive Secretary if you have a "Greater than 25 Years as an RRPT" story to share!

Executive Secretary—DeeDee McNeill—nrrpt@nrrpt.org

If you'd like to join the Panel of Examiners please contact one of the following:

Exam Panel Chairman—Dave Wirkus—wirkdl63@gmail.com

Executive Secretary—DeeDee McNeill—nrrpt@nrrpt.org

Exam Achievement Award

By Kelli Gallion-Sholler, Awards Committee Chairman

The NRRPT Exam Achievement Award is given to the individual with the highest score on each scheduled NRRPT examination for becoming a Registered Radiation Protection Technologist. In addition to a letter of recognition, the individual receives a complimentary "high scorer" membership plaque and is featured in an article in the NRRPT Newsletter. It is a great accomplishment to pass the exam and even a greater feat to achieve the highest score.

Congratulations to our high scorers!

High Scorer—February 19, 2022 Examination Brandon Wigginton



I oversee the radiation safety program at Mississippi State University, and achieving the NRRPT has given myself and my program a great boost in credibility. I prepared for the exam primarily by using DataChem software. I used the DataChem questions as a baseline to find out which areas I needed to focus on. I then used various internet resources and some of the recommended texts such as Cember and the official NRRPT problem solving prep book. One thing I found extremely helpful was talking over the subject matter with coworkers – explaining the material to them helped me get a better grasp of it. I also applied as much of my studying as I could to real-world situations, RAM, and equipment that we have on campus.

High Scorer—August 14, 2021 Examination

Logan Beebe



Logan Beebe was the high scorer for the NRRPT exam that was proctored in August 2021. Logan is a Senior Health Physics Technician for Hanford Washington's Central Plateau Cleanup Company (CPCCo). He has been in the industry for a total of ten years (he has worked off and on since 2007). When he took the exam, he was working at the Plutonium Finishing Plant (PFP) stabilization project. The site was stabilized, and work demobilized in February 2022. At that time, Logan went to work (and now works) for the 324 Building Disposition Project. This project is removing the facility and excavating the underground soils to restore a portion of the Columbia River corridor.

Logan attended the NRRPT Online Review Class taught by Thomas E. Johnson, PhD, CHP, NRRPT. This course included more than 40 hours of class instruction as well as three mock exams. In addition to the course, Logan studied an additional twenty hours. His study materials included the textbook and workbooks provided by the class but also included Hanford's fundamental and site-specific handbooks.

Logan decided to take the exam for the challenge and to enhance his career. He would like to advance into other portions of the radiological industry. These include Radiological Engineering, Radiological Planning, and Dosimetry.

Congratulations Logan!

Respectively,

Michelle Kovach NRRPT Board Member

What NRRPT Means to Ryan Murdock

Introduction:

Ryan Murdock is a Technical Service Project Manager at Waste Control Specialists LLC (WCS). Ryan was nominated and elected to serve on the NRRPT Board of Directors in January of 2019. Ryan has a Bachelor of Science degree in Health Physics. He has experience in Decontamination and Demolition, Department of Energy, the Commercial Nuclear Power industry as well as extensive experience in private industry Radioactive Material Handling and compliance. Ryan is currently pursuing his CHP. As a Technical Service Project Manager, Ryan manages all radioactive and hazardous waste being shipped to the WCS site in Andrews, Texas. Different categories of waste of include RCRA, CERCLA, TSCA, low-level radioactive waste, and radioactive lowlevel mixed waste to meet WCS' Waste Acceptance Criteria for compliance. He works closely with DOE and TCEQ/NRC regulators to make sure all waste received or shipped from WCS is within local, state and federal regulations. Ryan was born and raised in Knoxville, Tennessee. His career has taken him from Tennessee to New Jersey, then from Texas to Michigan and back home to Knoxville.

What is the NRRPT:

The need for the NRRPT evolved out of the nuclear industry's desire for responsible and competent radiation protection technologists. The NRRPT was established in 1976 through the sponsorship of the Health Physics Society and the American Board of Health Physics. The objective of the NRRPT is to encourage and promote the education and training of radiation protection technologists and, by so doing, promote and advance the science of health physics. To do this, the NRRPT has established a credentialing exam. This, criteria based, 150 question exam covers broad-based radiation protection knowledge of accelerators, university health physics programs, medical health physics, power reactors, government radiological facilities, radioactive waste disposal, transportation of radioactive material, fundamentals, and regulatory requirements. The NRRPT has been endorsed in various ways by several organizations. The Institute for Nuclear Power Operations (INPO) and the Department of Energy (DOE) have openly recommended that nuclear facilities encourage their personnel to seek NRRPT Registration. The Nuclear

Regulatory Commission (NRC) provides support by having a staff member assigned to the NRRPT Panel of Examiners. HPS members established the NRRPT and the majority of NRRPT Board of Directors and Panel Members are active members of the HPS national and local chapters. Nuclear facilities (i.e., power plants, government facilities, universities, medical facilities, and military services) provide incentives for personnel to seek and maintain registration. The NRRPT is ACE accredited, and 30 college credits can be awarded for passing the NRRPT examination.

How it has helped me:

I can say without a doubt I would not be where I am today in the profession without the knowledge and help from the NRRPT. Not only has the organization prepared me through different disciplines to have a better understanding of Health Physics in general. The friendships, mentors, and colleagues you meet along the way will greatly help you establish yourself as a professional within our community. Not only does the registry provided leadership through its discipline but quite a few of the professionals in the registry hold key positions throughout the country. Members of the board, panel, and registry are employed from DOE, NRC, EPA, VA. ACOE, hospitals and Universities throughout the country just to name a few. We are scattered throughout multiple disciplines holding key positions from CEO, Presidents, Directors to Technicians. The registry was built on fundamentals. Fundamentals are steppingstones to being able to recognize a concern to being able to make an informed decision in an immediate response. Without these you can rely on theory and research but understanding real life operations and having a hands-on approach will better prepare you for different aspects of Health Physics. Not all, but a lot of people in the NRRPT started out as a technician and grew into different roles. Supervisors, Managers, Directors or some other form of senior management. But not all, some just use the fundamentals to help them establish themselves as SME's or trainers within the discipline. One of the benefits of an organization as large as us is having the ability of multiple disciplines to reach out to. Not everyone is an expert or SME in a particular discipline. I find myself on multiple occasions using the registry as a toolbox or the expertise from the registry for real time functionality within our profession.

NRRPT BLAST FROM THE PAST!

Good evening Mr. and Mrs. NRRPT, from border to border and coast to coast and all the ships at sea. Let's go back in time...

The Date: September 30, 1999

<u>The Event:</u> Two procedural deviations causing a prompt criticality accident.

<u>The Place:</u> JCO Fuel Fabrication Plant in Tokaimura, Ibarakin prefecture, Japan – in the middle of the city!

<u>The Cause:</u> Underlying the entire accident was a general effort in the company to work more efficiently – allowing operations personnel to cut corners to save time. Also, and more interesting, throughout the organization, there was poor understanding of what affected criticality. No one knew that uranium solution in storage tanks could go supercritical if the geometry changed when moving it to other

vessels. In fact, JCO and the regulatory authority believed that a criticality was not a credible event. This led to ineffective procedures and equipment design and, poor work plans.

<u>The Setup:</u> The accident occurred in the Fuel Conversion Test Building. Equipment in the building produced uranium dioxide powder or uranyl nitrate solution. This building was used only for special projects and authorized for uranium enrichments up to 20%. JCO was processing U fuel (for the Joyo experimental breeder reactor at the Japan Nuclear Cycle Development

Institute) at the time of the accident. The operation was to convert about 16.8 kg of U to 370 g/l uranyl nitrate for the manufacture of reactor fuel. JCO used batches of solution to comply with criticality controls.

NORTH KOREA

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Three operators began the task on 29 September and they deviated from procedures twice. First, they used the dissolution vessel instead of stainless-steel buckets to transfer solution. This saved about an hour. Second, they transferred the U nitrate solution into a precipitation vessel instead of storage columns. The vessel had stirring capabilities and provided a more uniform solution plus, the columns had stopcocks less than a foot from the floor making it harder to fill solution containers. They ran 4 batches, transferred the solution to a 5-liter flask and dumped it into the precipitation vessel.

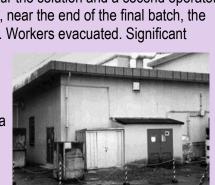
On 30 September, three operators began dissolving the final three batches of solution. One operator stood on the stairs to pour the solution and a second operator stood on the floor to hold a funnel. At 10:35 am, near the end of the final batch, the

local gamma alarms sounded and they sounded in two nearby commercial fuel buildings. Workers evacuated. Significant photon dose rates were detected at the muster point and JCO suspected a criticality

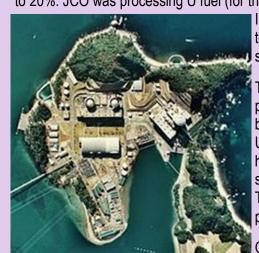
accident had occurred. They moved the muster point to a low background area.

<u>The Accident:</u> The criticality continued for about 20 hours. A little over 4 hours into the event the dose rate at the nearest residence was about 5 mSv/hour. The city evacuated a 350-meter area around the plant. At 12 hours, people within a boundary of 10 kilometers were advised to stay indoors because of airborne fission products.

In the wee hours of October 1st, 17 hours post incident, JCO tried to drain the cooling water jacket of the process vessel to reduce reactivity and shut down the criticality. It didn't work – power dropped by only a factor of four. JCO operators went back in and



Fuel Conversion Test Building (US NRC)



JCO Site (Google Maps)



Hisashi Ouchi age 35 (BBC)

forced argon gas through the system. The criticality stopped at around 20 hours post incident. Later, using a rubber hose, JCO added boric acid to the precipitation vessel to prevent any further criticalities.

<u>The Aftermath:</u> While there were no monitors near the event, fission product analysis showed a total yield of 2.5×10^{18} fissions. Simulations placed the prompt criticality yield at about 4×10^{16} fissions.

Hisashi Ouchi and Masato Shinohara were the closest workers. Ouchi received 16 - 20 Gray equivalent (GEq) and died 82 days later. Shinohara received 6 - 10 GEq and died 210 days later. A third operator at a desk nearby received 1 - 4.5 GEq and spent 3 months in the hospital before release.

24 JCO recovery workers had a maximum of 48 mSv estimated dose.

104 JCO workers involved in other countermeasures had a maximum of 8 mSv estimated dose.

96 co-located JCO workers and 7 non-JCO workers received estimated doses between < 5 and 20 mSv.

207 members of the general public received estimated doses. Of these, 1 was 24 mSv, 4 had between 10 – 15 mSv, 15 had between 5 – 10 mSv, and, 180 had < 5 mSv.

100 rem = 1 Sy

100 rad - 1 Gy

The late Peter Darnell, RRPT, CHP, after-the-fact reporter

NRRPT Fee Increase Information

Please note the information listed below is about increases in fees and annual dues for the NRRPT. But if you act now, you can pay annual dues for the next several years and save \$30 each year! Yay!

The National Registry of Radiation Protection Technologists (NRRPT) has not increased dues since 2012. In keeping up with the cost of business, the registry has determined an increase in annual dues, taking the exam, and retaking the exam are necessary. This increase will be effective October 1, 2022. If you would like to prepay your dues prior to October 1, 2022, the current lower rate will apply.

The rates will be as follows:

	Current Rate	Rate as of October 1
Annual Dues (per year)	\$45.00	\$75.00
Initial Exam	\$250.00	\$300.00
Retake Exam	\$125.00	\$175.00

The increase will provide updates to the NRRPT website, more effective exam proctoring, and ability to provide more substantiative articles in the NRRPT newsletter (including paying contributors for the articles).

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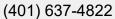
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