



WM2024 Superior Paper Award Winners

WMS established the "Superior Paper" recognition at WM2015 with the objective to recognize authors and co-authors for distinguished contributions to the advancement of radioactive waste and radioactive material management. 91 papers have been chosen for 2024.

24662 "Results from the Eurad Routes Work Package - Towards Future European Collaboration on Radioactive Waste Management"

Authors: Marianne Suignard, Francois Marsal, IRSN; Melanie Maitre, Virginie Wasselin, Andra; Marja Vuorio, COVRA; Ole Kastbjerg Nielsen, DEKOM; Marie Charlotte Bornhöft, DMT GmbH & Co. KG; Nadja Zeleznik, EIMV; Liz Harvey, Galson Sciences Ltd; Anastasia Savidou, NCSR; Chris De Bock, ONDRAF/NIRAS; Adrien Rooses, Orano; Iryna Kutina, SSTC NRS

24091 "Finite Element Modeling of the Hanford Lead Canister Coupon Replacement Weld Residual Stress"

Authors: Ben Jensen, C.J. Taylor Mason, Nicholas Klymyshyn, Pacific Northwest National Laboratory

24150 "The Scientific and Political History of the WIPP, the NTP, and the Central Characterization Program"

Authors: Michaela Trenidad, Ronald Lee, SIMCO-WIPP; Breklyn Davis, Steven Bakhtiar, Jenna Lente, SIMCO-CCP; David Martinez, Central Characterization Program

24151 "Drilling Rate Impact on the Performance Assessment of the Waste Isolation Pilot Plant"

Authors: Seth King, Sarah Brunell, Clifford Hansen, Todd Zeitler, Sandia National Laboratories; Ross Kirkes, Piru Associates, Inc.

24161 "AX-101 Retrieval and AX Farm Retrieval Lessons Learned"

Authors: Justin Olive, Bekah Hall, Elizha Judkins, Washington River Protection Solutions

24187 "Transfer of Unrecovered SNF to H-Tank Farms Sludge Batch 11 at SRS and Lessons Learned"

Authors: Nathaniel Fee, Tara Armstead, James Therrell, Savannah River Nuclear Solutions

24190 "PAR for the Course: Evaluation of Passive Autocatalytic Recombiner Technology in Savannah River Site Liquid Waste Tanks"

Authors: Sarah Bauske, Fred Angel, Timothy Baughman, Eric Barrowclough, Savannah River Mission Completion

24207 "Aluminum Solubility, Speciation, and Reactivity Under Low Water Conditions in Radioactive Tank Waste at Hanford"

Authors: Carolyn Pearce, Emily Nienhuis, Trenton Graham, Xin Zhang, Zheming Wang, Kevin Rosso, Gregory Schenter, Pacific Northwest National Laboratory; Mateusz Dembowski, Los Alamos National Laboratory; Andrew Stack, Larry Anovitz, Oak Ridge National Laboratory; Aurora Clark, University of Utah; Jacob Reynolds, Washington River Protection Solutions

24254 "Identifying Opportunities for Improving Feed Qualification During the Direct-Feed Low-Activity Waste Mission at Hanford"

Authors: Bryce Eaton, Julie Colby, Zabrina Smith, Washington River Protection Solutions

24273 "Managing Uncertainty: Using the High Efficiency Neutron Counter to Efficiently Characterize Downblended Plutonium at Savannah River Site K-Area"

Authors: Joe Harvill, SIMCO, LLC; Kevin Haar, Central Characterization Program; Robert Semon, Adam Gallegos, Jenna Lente, SIMCO-CCP; Daniel Remington, Sean Stanfield, William Mussman, William Searcy, Timothy Carlton, Mirion Technologies; Timothy Aucott, Savannah River Nuclear Solutions

24285 "Integration of AEGIS™ & Figure of Merit Evaluations of Calculated Efficiencies on the Mobile ISOCS Large Container Counter at TA-54 Los Alamos, NM"

Authors: Terry Roupp, Matthew Collins, Martin Garcia, Taylor Kurtz, William Mussman, Scott Price, Sean Stanfield, Mirion Technologies; Kevin Haar, Central Characterization Program; Joe Harvill, SIMCO, LLC; Jenna Lente, Robert Semon, SIMCO-CCP

24370 "Potential Radioisotope-Element Harvesting from Recycling of UNF"

Authors: Sven Bader, Peter Henry, Peter Henry, Orano Federal Services

24405 "In-situ Corrosion Study of Uranium Metal Encapsulated in Magnox Sludge: Joint Synchrotron X-ray and Neutron Imaging Analysis"

Authors: Philip Hutchinson, Antonios Banos, Thomas Scott, University of Bristol

24455 "Perspectives on Consent-Based Siting from an International Workshop on Siting of Radioactive Waste Facilities"

Authors: Bret Leslie, US Nuclear Waste Technical Review Board

24494 "Testing of Microchannels and Lab-Grown Stress Corrosion Cracks for Quantification of Aerosol Transmission"

Authors: Sam Durbin, Philip Jones, Dominic Fascitelli, Sandia National Laboratories

24505 "Impact of Near- and Far-Field Actinide Oxidation States on Hypothetical Releases at the Waste Isolation Pilot Plant (WIPP)"

Authors: Vann Bynum, Navarro Inc.; Michael Gross, MG Enterprises; John Thies, Navarro Carlsbad Technical Assistance Contract; Anderson Ward, US DOE

24507 “Exploring the Effects of Alpha-radiolysis on Chemical Conditions in a Deep Geological Repository”

Authors: Anderson Ward, US DOE; Michael Gross, MG Enterprises; John Thies, Navarro Carlsbad Technical Assistance Contract; Vann Bynum, Navarro Inc.; Punam Thakur, Oak Ridge National Laboratory

24541 “Operational Enhancements at the Salt Waste Processing Facility”

Authors: Maggie Clark, Nicholas DesRocher, Savannah River Mission Completion; Ryan Lentsch, General Atomics

24630 “ANSTO’s Synroc Technology Options for the Treatment of GEN IV Nuclear Reactor Wastes”

Authors: Dan Gregg, Rohan Holmes, Gerry Triani, ANSTO

24059 “Detecting Faults in Nuclear Waste Slurry Processing with In-line Probes: a Computational Study”

Authors: Steven Crouse, Georgia Institute of Technology; Rupanjali Gurprasad, Ronald Rousseau, Martha Grover, Georgia Institute of Technology

24061 “Development of an In-situ Beta Characterization Solution Using PIPS Detectors”

Authors: Vincent Tran, Yuta Nagai, Takuya Umano, Atsuo Suzuki, Helene Lefebvre, Mirion Technologies (Canberra) KK; Takayuki Koashi, The Japan Atomic Power Company

24072 “Development of Advanced Grout Formulations to Enhance Retention of Nitrate, Nitrite, Iodine, and Technetium**”

Authors: Rodney Skeen, David Swanberg, Washington River Protection Solutions; Weilnand Gong, Hui Xu, Ian Pegg, Catholic University of America; Innocent Joseph, AtkinsRéalis

24073 “Qualification of Expanded Low-Activity Waste Glass Compositions for Disposal in the Hanford Integrated Disposal Facility”

Authors: David Swanberg, Rodney Skeen, Kearn Lee, Washington River Protection Solutions; Innocent Joseph, Atkins; Ian Pegg, Catholic University of America; Matthew Asmussen, Sebastien Kerisit, Jim Neeway, Pacific Northwest National Laboratory; Isabelle Lab, Vitreous State Lab Catholic University

24118 “Fifty Years – The Evolution of Performance Assessments for Low-Level Waste Disposal Facilities”

Authors: Matthew Kozak, Sunil Mehta, INTERA, Inc.; Marcel Bergeron, Kearn Lee, Washington River Protection Solutions

24185 “A Non-Destructive Assay Suite for Sorting and Segregation of Radwaste Retrieved from CNL Whiteshell Standpipes and Bunkers”

Authors: Alan Simpson, PSC by Alpha Safety; Jacob Stirler, Pajarito Scientific Corporation; Steven Myers, Spectral Ops LLC

24332 “An Italian Case of Challenging Aqueous Waste Conditioning: from Characterization to Validation with Up-To-Date Acceptance Criteria”

Authors: Andrea Santi, Eros Mossini, Gabriele Magugliani, Francesco Galluccio, Elena Macerata, Marco Giola, Mario Mariani, Polytechnic University of Milan; Maurizio Forte, Rosella Rusconi, ARPA Lombardia; Davide Cori, Alessandro Fausti, Nucleco S.p.A.; Diego Gatta, Paolo Lotti, University of Milan

24384 “Keys Benefits of Geomelt® Treatment/Conditioning Regarding the Safety Case for Near Surface Disposal of TENORM”

Authors: François Dumortier, Xavier Arnold, waste2glass; Florent Tocino, EDF; Théo Montaigne, EDF SA; Julien Robert, Veolia Nuclear Solutions Europe; Pascal Sommaire, Veolia Research and Innovation

24393 “Interaction of Simulant Thermally Treated Intermediate Level Wastes with a High pH Cementitious Backfill”

Authors: Cristiano Padovani, Graham Kenyon, Adam Fuller, Stephen Swanton, Jacobs; Lorraine Field, Simon Kemp, British Geological Survey; James Schofield, University of Manchester

24421 “The Long-term Saturated Leaching of Cementitious Waste Forms and Applicability of Diffusion Models”

Authors: Alessandra Fujii Yamagata, Gary L. Smith, Matthew Asmussen, Pacific Northwest National Laboratory; Rodney Skeen, Washington River Protection Solutions

24478 “The use of X-Radiography Information with Gamma Spectroscopic Analysis of Waste Drums”

Authors: Xavier Ducoux, Mirion Technologies (Canberra) SAS; Patrick Chard, Mirion Technologies (Canberra UK); Sasha Philips, Mirion Technologies (Canberra); Alec Baldwin, Aldrine Estrella, VJ Technologies

24555 “Removal of Tritium from Spent Liquid Scintillation Cocktail”

Authors: Sung Paal Yim, Gasaek Laboratory; Cheo Kyung Lee, Handong Global University; Ki-Won Moon, Se Yup Lee, Korea Nuclear Engineering Co.

24567 “Revalidation of Radiological Fingerprints Across a Complex Nuclear Site: A Journey Towards Good Practice in Development and Management”

Authors: Natalie Sutherland, NRS; Richard Gunn, Cavendish Nuclear; James Doherty, Ellison Andrew, Dounreay; Vittoria Baldioli, Vittoria Baldioli

24587 “Development of Special Methods for Estimating Waste Concentrations Sent to Saltstone”

Authors: Steven Hommel, Savannah River Mission Completion

24772 “Ultra High Performance Grout: Encapsulation of HEPA Filters and Diffusion Testing”

Authors: Rodney Skeen, Jeanne Bernards, Ridha Malbrouki, Grace Chen, David Swanberg, Buddy Cunningham, Douglas Teachout, Washington River Protection Solutions; Ralph Nichols, Katie Hill, Savannah River National Laboratory; Holly VerMeulen, Savannah River National Laboratory / Battelle Savannah River Alliance

24553 “Transportation and Return to Storage of Aged Spent Fuel Canisters”

Authors: Brian Gutherman, Gutherman Technical Services, LLC

24027 “Update on DOE’s Atlas Railcar Project”

Authors: Kevin Connolly, Mike Schultze, Oak Ridge National Laboratory; Steven Maheras, Pacific Northwest National Laboratory; Scott Dam, Spectrum, Inc.; Patrick Schwab, US DOE

24074 "Three Mile Island Nuclear Station Site Infrastructure Evaluation"

Authors: Miriam Juckett, Steven Maheras, Pacific Northwest National Laboratory; Jeffrey Moore, Federal Railroad Administration; Kathy Langan, Langan & Associates Consulting Ltd; Wade DeHaas, PA DEP BRP; Erica Bickford, US DOE; Gerard Jackson, US DOE NE

24082 "Advances in the State of Knowledge in Waste Package Accident Performance for UK Geological Disposal"

Authors: Robert Carroll, Nuclear Waste Services

24089 "Duane Arnold Nuclear Power Plant Site Evaluation"

Authors: Miriam Juckett, Steven Maheras, Pacific Northwest National Laboratory; Mitch Arvidson, Council of State Governments -- Midwest; Virgil Peoples, Idaho National Laboratory; Gerard Jackson, US DOE NE

24159 "Using GIS and 360-Degree Video Surveys to Identify Microreactor Transport Risk Locations Along a Hypothetical Public Highway"

Authors: Micah Taylor, Brian Hom, Ben Jensen, Pacific Northwest National Laboratory

24173 "Describing an Essentially Unyielding Surface as Prescribed by 10 CFR Part 71 Transportation Regulations"

Authors: Antonio Rigato, Lucas Mackey, Pacific Northwest National Laboratory

24246 "Design Process for Developing a Nuclear Waste Container for Volume Manufacture"

Authors: Andrew Fowler, James Hill, Michael Wu, Eadon Consulting Ltd.

24425 "Mitigation and Repair Coatings for SNF Canisters: Thermal and Outgassing Behaviors"

Authors: Andrew Knight, Brendan Nation, Tyler McCready, Sandia National Laboratories

24448 "Automated Hazardous Material Transport and Storage"

Authors: Aaron Torgesen, Richard Kovalcik, Matthew Hammond, Beth Boardman, Gregory Ford, Nathan McLeish, Los Alamos National Laboratory; Chantal Morales, New Mexico State University

24557 "Acceptance Testing of Remote Closure Platforms for Closure of DOE Standard Canisters"

Authors: Nathan Hofmeister, Daniel Thomas, D. Devin Imholte, Sam Trost, Idaho National Laboratory

24582 "Safe Transportation of Low Melter in Support of Hanford Cleanup"

Authors: Paul Townson, AtkinsRealis US Nuclear; Mikaela Matkowski, Atkins; William Young, Washington River Protection Solutions

24654 "An Ideal Package for Transporting HALEU, The OPTIMUS®-L Package"

Authors: Steven Sisley, Edward Ketusky, Janet Bivens, NAC International

24035 "Demonstration of the Ultrasonic Treatment of Contaminated Components and Hot Spots for Dose Rate Reduction in Decommissioning Applications"

Authors: Lane Waddell, Martin Brandauer, EPRI; Mark Lam, Canadian Nuclear Laboratories

24047 "Revisions to MARSSIM (Multi-Agency Radiation Survey and Site Investigation Manual)"

Authors: Kathryn Snead, David Stuenkel, US EPA; Gerald Faló, Defense Centers for Public Health-Aberdeen; Amanda Anderson, US DOE; Rateb (Boby) Abu Eid, Cynthia Barr, US NRC

24060 "Development of Inspection Manual for Decommissioning Phase and Decommissioning Phase"

Authors: Jeongken Lee, Yoon-Ji Lee, Haiyong Jung, Jinyong Park, Korea Institute of Nuclear Safety

24069 "Destruction of Fluorescein Dye in a Reactor Pool"

Authors: Stephen Liebenow, EnergySolutions; Larry Brede, UCOR

24081 "FLYT: An Integrated Software System for Nuclear Decommissioning and Waste Package Management"

Authors: Rosie Lester, Pete Rodgers, Createc Ltd

24110 "Attempts to Estimate the Amount of Contamination by Cs and Sr in Cracked Concrete Considering Realistic Contamination Conditions"

Authors: Kazuo Yamada, National Institute for Environmental Studies; Yasumasa Tojo, Hokkaido University; Haruka Aihara, Yoshikazu Koma, Japan Atomic Energy Agency; Go Igarashi, Nagoya University; Yoshifumi Hosokawa, Taiheiyō Cement Corporation; Hideyuki Hokora, Sayuri Tomita, Kazutoshi Shibuya, Taiheiyō Consultant Co., Ltd; Ippei Maruyama, University of Tokyo

24271 "Development of a Long Reach Modular Robotic Deployment System for Through Wall and Vertical Access Ports"

Authors: James Hill, Eadon Consulting Ltd.; Nicholas Clarke, Sellafield Ltd

24309 "Effectiveness of Fused LASSO for Prediction of Distribution of Radioactive Materials in Reactor Buildings"

Authors: Susumu Yamada, Masahiko Machida, Japan Atomic Energy Agency; Toru Yoshida, Yukihiro Hasegawa, Research Organization for Information Science and Technology

24438 "Determination of Airborne Release Fractions for Fixative Technologies under Impact Stress for D&D Activities"

Authors: Mellissa Komninakis, Joseph Sinicrope, Applied Research Center - FIU; Bryan Torres, Nicholas Espinal, Florida International University; James Nicholson, Savannah River National Laboratory

24440 "Development of a Portable, Large-Volume CdZnTe Imaging Spectrometer for Detection of Concealed Mercury via Prompt Gamma-ray Activation Analysis"

Authors: Christopher Meert, Steven Brown, Matthew Petryk, Michael Streicher, Feng Zhang, Ryan Parsons, James Mason, Willy Kaye, H3D, Inc.; Charles Klunder, Peter Redman, Roujia Wang, Catherine Ballard, H3D, Inc./ University of Michigan; Junwoo Bae, Igor Jovanovic, University of Michigan

24447 "Site Constrained: Evaluation of D&D Impacts on Mission Critical Waste Management"

Authors: Brant Hancock, Reginald Gaylord, Lawrence Livermore National Laboratory

24503 “Electrochemical Performance of an Epoxy/Polyurea Coating System for the Protection of Degraded Concrete Infrastructures at DOE-EM Sites”

Authors: Dwayne McDaniel, Mayren Echeverria Boan, Leonel Lagos, Applied Research Center - FIU; Douglas Baptiste, Florida International University

24551 “K-Basin Demolition Progress – Road to Cocooning the Last Nuclear Reactor on the Hanford Site”

Authors: Corey McLean, Central Plateau Cleanup Company (CPCCo)

24037 “Leveraging PRISM® to Assess Contaminant Migration Pathways at a Complex Geologic Site, Washington DC”

Authors: Ryan Samuels, Junaid Sadeque, AECOM

24038 “Applying State-of-the-Practice Tools to Determine the Presence and Transport of PFAS at a Former Air Force Base”

Authors: Ryan Samuels, AECOM

24107 “Monitoring Subsurface Plumes in the Vadose Zone at the Hanford Site Using Time-Lapse Surface Electrical Resistivity”

Authors: Judy Robinson, Tim Johnson, Jon Thomle, Piyooch Jaysaval, Rob Mackley, Pacific Northwest National Laboratory; Kelsey Peta, Gram Northwest LLC; Joaquin Cambeiro, Rutgers- Newark University

24146 “Reduction and Sequestration Remediation Technologies Utilizing Phosphate for Hanford Site Saturated Zones”

Authors: Hilary Emerson, Jim Szecsody, Amanda Lawter, Christopher Bagwell, Andy Plymale, Jacqueline Hager, Nancy Escobedo, Guohui Wang, Inci Demirkanli, Katherine Muller, Nicolas Huerta, Charles Resch, Rob Mackley, Pacific Northwest National Laboratory; Kaycee Bailey, US DOE, Richland Field Office

24320 “Simulation-informed Radionuclide Plume Monitoring”

Authors: Haruko Wainwright, Massachusetts Institute of Technology; Satyarth Praveen, Zexuan Xu, Lawrence Berkeley National Laboratory; Hansell Gonzalez- Raymat, Carol Eddy-Dilek, Savannah River National Laboratory

24538 “Soil Washing: Sustainable Cost-Effective Treatment for Per and Polyfluoroalkyl Substances”

Authors: Nathan Nagle, Joseph Quinnan, Julia Vidonish Aspinall, Olivia Mathews, ARCADIS US, Inc.; Colin Morrell, TUQ4

24564 “Where did That Water go? – Determining the Groundwater Impacts of Dust Suppression Water Applied During Demolition”

Authors: Randal Fox, Elyse Frohling, Central Plateau Cleanup Company (CPCCo); Chris Haas, FRAME Technical Services, LLC; Mart Oostrom, INTERA, Inc.

24600 “Assessing Effects of Climate Change on Legacy Waste at the Enewetak Atoll”

Authors: Rajiv Prasad, Bruce Napier, Tracy Ikenberry, Saikat Ghosh, Male Rajage Premathilake, Taiping Wang, Tarang Khangaonkar, Sourav Taraphdar, Lai-Yung (Ruby) Leung, Pacific Northwest National Laboratory

24602 “4D Electrical Resistivity Tomography Monitoring of Vadose Zone Soil Flushing at the Hanford 100-K Area Reactor

Facility”

Authors: Tim Johnson, Jon Thomle, Rob Mackley, Jonah Bartrand, Martin Pratt, Tycko Franklin, Patrick Royer, Judy Robinson, Pacific Northwest National Laboratory; Jeremy Lynn, Central Plateau Cleanup Company (CPCCo); Emily Macdonald, TerraGraphics

24603 “ALTEMS: Long-term Performance Monitoring of the SRNL F-Area Basin 3 Cap Using Autonomous 4D Electrical Resistivity Difference Tomography”

Authors:

Judy Robinson, Pacific Northwest National Laboratory; Thomas Danielson, Hansell Gonzalez-Raymat, Carol Eddy-Dilek, Savannah River National Laboratory; Jeffrey Thibault, Savannah River Nuclear Solutions

24619 “Positive Impacts from Decades of Consistent Communication at Former DOE Pinellas Plant”

Authors: Melissa Lutz, US DOE LM; Julian Caballero, RSI EnTech, LLC

24621 “Uranium Mill Tailings Radiation Control Act Cover Performance After Nearly 20 Years of Service”

Authors: Morgan Williams, RSI, Contractor to DOE LM; William Likos, Nicholas Stefani, Geological Engineering, University of Wisconsin-Madison; Mark Fuhrmann, Nuclear Regulatory Commission, retired; William Waugh, RSI EnTech, LLC; Alex Michaud, Craig Benson, University of Wisconsin, Madison

24624 “Soil Water Balance Model Selection and Benchmark Testing for Evaluating Uranium Mill Tailings Disposal Cell Evapotranspiration Covers”

Authors: Inci Demirkanli, Rebecka Bence, Mark Rockhold, Christian Johnson, Pacific Northwest National Laboratory; Adam Mangel, Haley and Aldrich, Inc.; Michael Morse, RSI EnTech, LLC; David Holbrook, RSI EnTech, US DOE LM Contractor; Angelita Denny, US DOE LM; Craig Benson, University of Wisconsin, Madison

24627 “Transition to Sustainability: A Pivot from Evaporative Treatment of Groundwater at the Former Shiprock, NM Site”

Authors: Joni Tallbull, Mark Kautsky, US DOE; Elizabeth Duquette, Anthony Farinacci, RSI EnTech, LLC

24633 “Planning for Forever: Continual Improvement in Long-term Stewardship; Methodologies, Challenges, and Successes”

Authors: Jonathan Damiano, US DOE LM; Jonathon Graziano, RSI EnTech, LLC

24204 “Describing the Approach for Site Restoration and End State Planning at the Nuclear Power Demonstration Site”

Authors: Courtney Power, Canadian Nuclear Laboratories

24099 “Update on Savannah River Site H-Canyon Exhaust Tunnel Erosion Analysis**”

Authors: William Wells, Nickolas Trisnadi, Andrew Priest, Stephen Harris, Larry Deschaine, Daniel Odell, Savannah River National Laboratory; Jane Carter, Saiying Bowers, Savannah River Nuclear Solutions

24105 “Borehole Disposal of Radioactive Waste in Israel - Characterization Program and Borehole”

Authors: Noa Balaban, Ofra Klein-BenDavid, Gilboa Pe'er, NRCN; Rani Calvo, Geological Survey of Israel

24115 "Work Cell Development for Legacy Waste Cleanup in Oak Ridge"

Authors: Matheus Leao Moreira, Hortencio Gomez, Jessica Solis, Maliha Amir, Raminder Wah, University of Illinois, Chicago; Venugopal Varma, Ajit Bhat, Dustin Ottinger, Oak Ridge National Laboratory; Sabri Cetin, University of Illinois

24244 "Wavelet Fingerprinting of Corrosion in Nuclear Storage Containers"

Authors: Justin Ruthstrom, Jonathan Gigax, Steven Lukow, Los Alamos National Laboratory; Lukas Peterson, ThankGod Nwokocha, Andrei Zagrai, Thomas Burleigh, New Mexico Institute of Mining and Technology

24289 "Technical Approach Overview of the 2023 Updated Hanford Site Composite Analysis"

Authors: Will Nichols, Trevor Budge, Christopher Farrow, Ryan Nell, Mart Oostrom, Kimberly Ralston-Hooper, Benjing Sun, INTERA, Inc.

24290 "Automated Inspection of Criticality Control Overpacks for Surplus Plutonium Disposition"

Authors: Tanner Goins, Camille Kudrna, Michael Tomlin, Nick Spivey, Corey Hopper, Michael Brown, Savannah River National Laboratory

24310 "Consistent Measurements in Safeguards: Electric Field Variation in CdZnTe Detectors and Mitigating Techniques"

Authors: Michael Streicher, H3D, Inc.

24373 "Modelling a Dropped Package Scenario for a Deep Vertical Borehole Disposal Concept for UK Vitrified High-Level Waste"

Authors: Karl Travis, Luke Golding, Fergus Gibb, University of Sheffield; Charles Lord, Czero Inc.

24476 "From 7% to <1%: Noise Drop-off in a Large Sensor Network at Hanford"

Authors: Heather Sabella, Brett Simpson, Anastasia Bernat, Nathan Anderson, Jace Olsen, Hongfei Hou, Eugene Morrey, Pacific Northwest National Laboratory; Jason Reno, Washington River Protection Solutions

24496 "A Powered Hip-Knee-Ankle Exoskeleton for Reducing Tank Farm Worker Injury Potential"

Authors: Jared Li, IHMC; Owen Winship, Gwendolyn Bryan, Florida Institute for Human and Machine Cognition

24648 "Membrane-free Removal of Cerium and Zirconium Hydroxide Precipitates by Continuous Ultrasonic Filtration"

Authors: Jim Coons, Audrey Roman, Keri Campbell, Los Alamos National Laboratory

24307 "GAME ON! Addressing the Nuclear Skills Shortage Through an Interactive Radioactivity Card Game for School Pupils"

Authors: Sarah Lu, Los Alamos National Laboratory; Shaun Hemming, Jamie Purkis, University of Southampton

24128 "Incorporating Lessons Learned from Nuclear Waste Management and Decommissioning in SMR Design"

Authors: Aaron Erim, World Nuclear Association; Arne

Larsson, Cyclife Sweden; Michel Pieraccini, EDF DP2D; Douglas Kerr, Jacobs; Aaron Erim, Henri Zaccai, World Nuclear Association

24318 "Concept of Operations for Advanced Reactor Spent Nuclear Fuel Management"

Authors: Gordon Petersen, Ursula Carvajal, Andrew Newman, Idaho National Laboratory; Mike Billone, Argonne National Laboratory; Riley Cumberland, Oak Ridge National Laboratory; Ricardo Torres, Brady Hanson, Pacific Northwest National Laboratory; Edward Matteo, Laura Price, Sandia National Laboratories

24540 "Special Considerations for the Removal and Disposal of Microreactor Experiments"

Authors: Kristina Spencer, Evans Kitcher, Mitchell Woolf, Andrew Smith, James King, Nicholas Smith, Idaho National Laboratory; Brett Welty, Blaine Creek Engineering; Jared Harper, TerraPower, LLC