# TABLE OF CONTENTS

**Volume 1**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactive Waste Packaging of Treated Waste at Kozloduy NPP Site</td>
<td>1</td>
</tr>
<tr>
<td>Genchev, Gencho</td>
<td></td>
</tr>
<tr>
<td>Sorption-Membrane Technique for Processing Wastewater of Kursk NPP,</td>
<td>12</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
</tr>
<tr>
<td>Cherkasov, Alexander; Gelis, Vladimir; Kozlitin, Evgeny; Milyutin,</td>
<td></td>
</tr>
<tr>
<td>Vitaly; Slepokon, Yury</td>
<td></td>
</tr>
<tr>
<td>Do It Together...or Wait: Radioactive Waste Management in the</td>
<td>18</td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
</tr>
<tr>
<td>Codée, H.D.K.; Verhoeef, E.V.</td>
<td></td>
</tr>
<tr>
<td>Responding to Changes in the Decommissioning Plans for Demolition of</td>
<td>29</td>
</tr>
<tr>
<td>a Former Active Handling Building at UKAEA Winfrith</td>
<td></td>
</tr>
<tr>
<td>Brown, Nick; Cornell, Rowland; Parkinson, Steve; Staples, Andy</td>
<td></td>
</tr>
<tr>
<td>Applying a Modified Triad Approach to Investigate Wastewater Lines</td>
<td>41</td>
</tr>
<tr>
<td>Blanchard, Stephen; Jacobsen, Kimberly; Pawlowicz, Richard; Scholfield, John; Urizar, Lara</td>
<td></td>
</tr>
<tr>
<td>Evaluating Land Use Scenarios in Environmental Cleanup Decisions</td>
<td>54</td>
</tr>
<tr>
<td>Allison, Tim; Kamboj, Sunita; LePoire, David; Mo, Tin; Yu, Charley</td>
<td></td>
</tr>
<tr>
<td>Recovery of Noble Metals and Technetium from Nuclear Waste</td>
<td>66</td>
</tr>
<tr>
<td>Han, Yoon Ju; Jung, Chong Hun; Lee, Byung Chul; Lee, Eil Hee; Moon,</td>
<td></td>
</tr>
<tr>
<td>Jei Kwon</td>
<td></td>
</tr>
<tr>
<td>Improved Process Used to Treat Aqueous Mixed Waste Results in Cost</td>
<td>75</td>
</tr>
<tr>
<td>Savings and Improved Worker Safety</td>
<td></td>
</tr>
<tr>
<td>Belcher, Kenneth; Bray, William; Herman, John; Hodge, Devin; Preuss,</td>
<td></td>
</tr>
<tr>
<td>Donald; Rock, Cynthia</td>
<td></td>
</tr>
<tr>
<td>FEMOS - Advanced Neutron Monitor System for Waste Management</td>
<td>87</td>
</tr>
<tr>
<td>Simon, Gerald G.; Sokcic-Kostic, Marina</td>
<td></td>
</tr>
<tr>
<td>Treatment and Disposal of Uranium and Thorium Metal Chips from the</td>
<td>96</td>
</tr>
<tr>
<td>US DOE</td>
<td></td>
</tr>
<tr>
<td>Crocker, Ben; Grondin, Richard; Yarbrough, Tom</td>
<td></td>
</tr>
<tr>
<td>CATT - A Project on Co-operation and Technology Transfer on Long-term</td>
<td>105</td>
</tr>
<tr>
<td>Radioactive Waste Management for EU Member States with Small Nuclear Programmes</td>
<td></td>
</tr>
<tr>
<td>Lindberg, Claes; Mathieson, John</td>
<td></td>
</tr>
<tr>
<td>ReVK - A Tool for the Fulfillment of Requirements from National Rules</td>
<td>112</td>
</tr>
<tr>
<td>for Tracking and Documentation of Radioactive Residual Material and</td>
<td></td>
</tr>
<tr>
<td>Radioactive Waste</td>
<td></td>
</tr>
<tr>
<td>Gruender, Detlef; Hager, Manfred; Hartmann, Burkhard</td>
<td></td>
</tr>
<tr>
<td>Operational Experience with an Imaging Passive/Active Neutron System</td>
<td>122</td>
</tr>
<tr>
<td>(IPAN) in a Mature Production Application to Perform WIPP Certified</td>
<td></td>
</tr>
<tr>
<td>Non-destructive Assays</td>
<td></td>
</tr>
<tr>
<td>Carlton, Tim; Harvill, Joe; Peterson, Tom; Simpson, Alan; West, John</td>
<td></td>
</tr>
<tr>
<td>Innovations in the Assay of Un-segregated Multi-isotopic Grade TRU</td>
<td>128</td>
</tr>
<tr>
<td>Waste Boxes with SuperHENC and FRAM Technology</td>
<td></td>
</tr>
<tr>
<td>Abdurrahman, Naeem; Barber, Steve; Simpson, Alan</td>
<td></td>
</tr>
<tr>
<td>Minimizing Glovebox Glove Breaches, Part III: Deriving Service</td>
<td>143</td>
</tr>
<tr>
<td>Lifetimes</td>
<td></td>
</tr>
<tr>
<td>Cournoyer, Michael; Maddrell, Ewan; Schreiber, Stephen; Wilson,</td>
<td></td>
</tr>
<tr>
<td>Kennard</td>
<td></td>
</tr>
</tbody>
</table>
Classification of the Inventory of Spent Sealed Sources at INSHAS Storage
Facility .......................................................... 154
Abdel Geleel, Mohamed; Cochran, J.R.; El-Adham, Karim; Mahmoud, N.S.

Treatment of Decommissioning Waste at Forschungszentrum Karlsruhe ............... 163
Graf, Anja; Luis, Valencia

Delivering Regulatory Consents for Decommissioning and Restoration of the
Dounreay Nuclear Licensed Site ............................................................................. 171
Crawford, Ron; Zyda, Paul

Process Modeling and Analysis for Radioactive Solid Waste Management at Los
Alamos ....................................................................................................................... 181
Gonzalez-Lujan, Johnell; Kornreich, Drew; Parker, Robert

Environmental Regulation of the Nuclear Industry in England and Wales in an Era
of Accelerated Decommissioning and Restructuring ............................................. 196
Parker, Ian; Weedon, Chris

Transport of Oak Ridge Reservation Legacy High Moisture Low Level Waste:
Overcoming the Challenge ....................................................................................... 206
Cannon, Larry; Loveless, Scott

Progress Towards New Radioactive Waste Disposal Capacity in Texas .................. 211
Eriksson, Leif; Kunihiro, Dean; Skov, Jeff

Proposed Amendments to 40 CFR Part 197, The US EPA’s Standards for Yucca
Mountain, Nevada ...................................................................................................... 221
Clark, Ray

Innovative Approaches to Large Component Packaging ........................................... 231
Freitag, Al; Hooper, Matthew; Posivak, Ed

Thermal Treatment of EDTA Solutions .................................................................... 242
Denne, Bob

Subsurface Planar Vitrification Treatment of Problematic TRU Wastes: Status of a
Technology Demonstration Program ..................................................................... 250
Morse, Mary; Thompson, Leo

Constructing Acceptable RWM Approaches: The Politics of Participation .......... 261
Bombaerts, Gunter; Laes, Erik

Peculiarities of the High-Level Concrete-Encased Radwaste Repository
Disposition at the Radwaste Disposal Site of the Russian Research Center
“Kurchatov Institute” .............................................................................................. 276
Cherkasov, Alexander; Gorodetsky, Gennady; Ivanov, Oleg; Lemus, Alexey;
Ponomarev-Stepnov, Nikolai; Semenov, Sergey; Shisha, Anatoly; Stepanov, Viacheslav; Volkov,
Victor; Zverkov, Yury

Progress in Solidification of Radioactive Waste Resins Using Specific Cement ........ 287
Li, Junfeng; Wang, Jianlong; Ye, Yucai

The Treatment of Mixed Waste with GeoMelt In-Container Vitrification (ICV) .... 294
Campbell, Brett; Finucane, Kevin

INTEK Decon Solutions: An Aqueous Based Chemical Decontamination Process .... 307
Durante, Raymond

Material Sample Collection with Tritium and Gamma Analyses at the University of
Illinois’ Nuclear Research Laboratory TRIGA Nuclear Research Reactor .................. 311
Aggarwal, Sue; Charters, Grant
The Financing of Decommissioning - A View on Legal Aspects in the European Union
Fillbrandt, Marcus

The Changing Role of Public Participation as a FUSRAP Site Moves from Characterization to Remedial Action and Closure
Kollar, William; Roos, Allen

D&D Operational Experience - Lessons Learned from ETTP, Big Rock Point & Morel
Meyer, Ken; Smith, Carl

Regulators Experiences in Licensing and Inspection of Dry Cask Storage Facilities
Baggett, Steven; Brach, E. William

Using History to Teach Hazard Communication (HAZCOM): The Halifax Explosion
Hylko, James

Evaluation of Isotopic Data Mismatches on DOE-STD-1027 Facility Categorization Inventories for the K-1065 Complex and the Above Grade Storage Facility (AGSF)
Coleman, Gary; Mchugh, Mark

Parametric Cost Estimates for an International Competitive Edge
Hickey, Michael; Murphy, Larry

Final Verification Success Story using the Triad Approach at the Oak Ridge National Laboratory's Melton Valley Soils and Sediment Project
Cange, Jeff; Haas, Doug; King, David

Deecke, Theodore; Hyde, Jarrod

Teaching Managers How to Manage
Hylko, James

Accelerated Clean-up of the US DOE, Mound Nuclear Weapons Facility in Miamisburg, Ohio
Bradford, Jeff; Cabbil, Cheryl; Lehew, John

China's Scientific Investigation for Liquid Waste Treatment Solutions
Kelley, Dennis; Liangjin, Bao; Meiqlong, Lin

PFC Decontamination of Metal Surface and Recycling of the Spent PFC Solution
Jung, Chong Hun; Moon, Jei Kwon; Oh, W. Z.; Park, Jin Ho; Won, Hui Jun

Development of Water Detritiation Process Using the Hydrophobic Platinum Catalyst
Ahn, Do-Hee; Choi, Heu-Joo; Chung, Hongsuk; Kim, Kwang-Rak; Lee, Min Soo; Paek, Seungwoo; Yim, Sung Paal

The US DOE's National Disposition Strategy for the Treatment and Disposal of Low Level and Mixed Low Level Waste
Peterson, Gary; Tonkay, Douglas

Potential Igneous Processes Relevant to the Yucca Mountain Repository: Intrusive-release Scenario
Apted, Michael; Kessler, John; King, Fraser; Kozak, Matt; Morrissey, Meghan; Schwartz, Frank; Zhou, Wei

US DOE Initiated Performance Enhancements to the Hanford Waste Treatment and Immobilization Plant (WTP) Low-activity Waste Vitrification (LAW) System
Bowen, Brad; Gerdes, Kurt; Holton, William; Langdon; Pegg, Ian
Fluor Fernald - Project Controls Process

Reed, Wayne

A Full-scale Tunnel Sealing Demonstration Using Concrete and Clay Bulkheads Exposed to Elevated Temperatures and Pressures

Dixon, Brent; Fujita, Tomoo; Martino, Jason; Vignal, Bertrand

Implementation of the Regulatory Authority Information System in Egypt

Carson, Susan; Hassan, Ahmed; Mohamed, Yasser; Schetnan, Richard

Improvement of Leaching Resistance of Low-level Waste Form in Korea

Kim, Changlak; Kim, Juyou; Lee, Byung Chul

Development of an Improved Sodium Titanate for the Pretreatment of High Level Nuclear Waste at the Savannah River Site

Barnes, Mark; Fink, Samuel; Hobbs, David; Nyman, May; Poirier, Michael; Stallings, Mary

The Development of Improved Risk Assessment Methods for Use in Industrial Environmental Management Systems

Manners, Tim

The Evolution of Dry Spent Fuel Storage in the United States

Bland, David; McGough, Michael

Site Selection for the Disposal of LLW in Taiwan

Chang, Fu-Lin; Chi, Li-Min; Tien, Neng-Chuan

Quantitative Imaging Evaluation of Corrosion in Oak Ridge Research Reactor Pool

Arunkumar, Rangaswami; Ettien, John; Jang, Ping-Rey; Kirk, Paula; Long, Zhiling; Monts, David; Mott, Melissa; Okhuysen, Walter; Su, Yi

A Study on Removal of Iodine, Iodide Ion, and Iodate Ion from Radioactive Wastewater

Chung, Hongsuk; Kim, Kwang-Rak; Lee, Cheo Kyung; Lee, Min Soo; Shim, Myung-Hwa; Yim, Sung Paal

Preparing for Failure

Manson, Wilson; Murphy, Larry

Safety Assessment on the Storage of Irradiated Graphite Waste Produced from the Decommissioning of KRR-2

Jeong, Gyoung Hwan; Lee, Dong Gyu; Lee, Kune Woo; Oh, W.Z.

La Hague Continuous Improvement Program: Enhancement of the Vitrification Throughput

De Vera, Renaud; Flament, Thierry; Hollebecque, Jean-François; Petit Jean, Valérie; Prod'homme, Anthony; Tonche, Eric

Hazardous Materials Pharmacies - A Vital Component of a Proactive P2 Program

McCarter, Steve

Records Management in the Formerly Used Sites Remedial Action Program (FUSRAP)

Morekas, Georgeann; Pape, Mark

The Patroon Creek Contamination Migration Investigation

Dufek, Kevin; Moore, James; Zafran, Adam

Process Integration Studies on Pyrochemical Reprocessing Processes at CEA/DEN: An Example of a Waste Minimization Study

Boussier, Hubert; Conocar, Ollivier; Lacquement, Jérôme
Development of Steam Reforming for the Solidification of Cesium and Strontium Separations Product from Advanced Aqueous Reprocessing of Spent Nuclear Fuel ................................................................. 681

Boardman, Richard; Garn, Troy; Law, Jack; Tripp, Julia

Volume 2

Rate of Contamination Removal of Two Phytoremediation Sites at the US DOE Portsmouth Gaseous Diffusion Plant ................................................................. 690

Baird, Del; Lewis, Amy

Innovative Decontamination Technology for use in Gaseous Diffusion Plant Decommissioning ................................................................. 698

Chang, Ker-Chi; Fraikor, Gregory; Norton, Christopher; Peters, Michael; Potter, Gary

Fiscal Impacts to Public Safety Agencies from the Proposed High-level Nuclear Waste Repository: A Model and Projection for Clark County Nevada ................................................................. 712

Mushkatel, Alvin; Navis, Irene

Critical Path to Nuclear Science and Technology Knowledge Transfer and Skill Development in K-12 Schools: Why America Needs Action and Support from Federal and State Education Departments Now ................................................................. 730

Anderson, Guy; Vincenti, John

Reactor Vessel Head Disposal Campaign for Nuclear Management Company ................................................................. 742

Closs, John; Hoelscher, Hank; Johnson, Scott

Great Expectations: Allocation of Section 180c Funding for Repository Transportation Planning and Training ................................................................. 752

Dilger, Fred; Halstead, Robert

A Method to Evaluate Additional Waste Forms to Optimize Performance of the HLW Repository ................................................................. 758

Gombert, Dirk; Lauerhaas, Lance

Communicating Health Risks Under Pressure: Homeland Security Applications ................................................................. 772

Collie, Shanna; Garrahan, Kevin

Any Way to Run a Railroad: Dedicated Trains and Rail Transportation to Yucca Mountain ................................................................. 791

Dilger, Fred; Halstead, Robert

Full-Scale Cask Testing Revisited, Again ................................................................. 800

Dilger, Fred; Halstead, Robert

Strategies for Solving Potential Problems Associated with Laboratory Diffusion and Batch Experiments-Part 1: An Overview of Conventional Test Methods ................................................................. 813

Nakajima, Hideo; Takeda, Mikio; Zhang, Ming

Strategies for Solving Potential Problems Associated with Laboratory Diffusion and Batch Experiments-Part 2: Perspective Improvements ................................................................. 826

Nakajima, Hideo; Takeda, Mikio; Zhang, Ming

Characterization of In-Drum Drying Products ................................................................. 837

Harapin, Dragutin; Hertl, Bojan; Jankovic, Milan; Kroselj, Vladislav; Medakovic, Sasa; Skanata, Dejan

Results of 50% Waste Loading Vitrification Test on Cold Crucible Meiter for Savannah River Site Waste ................................................................. 846

Holtzscheiter, William; Knyazev, Oleg; Kobelev, Alexander; Laschenova, Tatiana; Marra, James; Polkanov, Mikhail; Ptashkin, Alexander; Stefanovsky, Sergey