

# Table of Contents

## I. Business and Economic Aspects

1. Steel from Uranium?  
*Mike Dry, Rod Dry*
2. The Optimization Journey of the Harmony Gold's South Uranium Plant Operation and the Uranium Contribution to the Gold Operation as a By-product  
*R. Jacobs, R. E. L. Pobe*
3. Wheeler River Uranium Project  
*Dale Verran, David Bronkhorst, Chad Sorba, Jared Orynik*

## II. Environmental & Regulatory Issues

1. Safe Usage of Hydrogen Fluoride in Fluorination Systems  
*K. Adham*
2. Community Engagement: When Is It the Right Time to Initiate and How and Why Should It Be Done?  
*Mark Liskowich*
3. Evolution of Environmental Monitoring Programs at Canadian Uranium Mines and Mills  
*Patty Simpson, Sarah Benson*

## III. Practices for Respectful Conversations about Nuclear Technology

1. Realism and A Zero Carbon Future  
*M. Hurlbert, L. Shasko*
2. The Free, Prior, and Informed Consent (FPIC) Provisions of The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and The Deployment of SMRS in Northern Canada - A Review of Potential Challenges  
*Horatio Sam-Aggrey, Margot Hurlbert*
3. Opening Up Conversations on Small Modular Reactors through the Deliberative Mapping Approach  
*L. Shasko*

#### **IV. Processing, Refining and Conversion**

1. A Simple and Novel Approach for the Sizing and Modeling of Countercurrent Multistage Ion-Exchange Contactor Systems  
*Pierre Amadieu, Bertrand Quiniou*
2. Two-Stage Counter-Current Leaching of Uranium Ore From Global Atomic's Dasa Project  
*M. A. Archer, J. A. Brown, F. P. Kerr*
3. Improving Pumping Capacity and Reliability in the McClean Lake Leach Circuit  
*J. Aydt, H. McLaughlin, W. McCombe, L. Nightingale-Mercer*
4. Recovery of Vanadium as a By-Product in the Acid and Alkaline Processing of Uranium Ores  
*S. Burling, M. K. Maley, R. J. Ring, K. E. Prince*
5. Electrolytic Reduction, Precipitation, and Thermal Decomposition of Uranous Sulfate: A Pathway For Closed Loop Sulfuric Acid Recycle  
*A. D. Burns, K. M. Nikolaisen*
6. Best Practices in Drying and Calcining of Yellowcake  
*S. Kashani Nejad, K. Collins, J. Godwin, C. Tovee, M. Bellino*
7. Improving Uranium Processing with Membrane Systems  
*Adrien Debergé, Georges Croisé, Les-Lee Thompson, Philippe Dubois, Adil Kobzhanov, Nurzhan Otaubayev*
8. Challenges in Settling Leached Cigar Lake Ore  
*B. Holaday, H. McLaughlin*
9. Material Characterization – An Absolute Must for Predicting the Flow Behaviour of Your Hazardous Material  
*T. Holmes, C. Holmes*
10. Management of Liquid Radioactive Waste from Uranium Conversion at the Siberian Chemical Plant  
*S.A. Kotov, N.L. Shinkarkin, I.A. Menshikh, S.I. Indyk*
11. Metallurgical Test Program for Fission Uranium Corp.'s Triple R Uranium Deposit  
*Lawrence Melis*
12. Development and Demonstration of a Novel Elution Process for Chloride Tolerant Uranium Ion Exchange  
*J. E. Quinn, K. H. Soldenhoff, S. Wolstencroft, K. Bowes*
13. McClean Lake Mill 55 kT Debottlenecking Study  
*T. Saruchera, C. Sewell, G. Remple, H. Mokhtari, W. McCombe, L. Nightingale-Mercer*

14. Experimental Study on Application of Eluex in Acid ISL  
*Meifeng Zhi, Xixin Chang, Weimin Que, Fengqi Zhao, Zujun Shu, Yuqing Niu, Zhenqian Wen, Hao Wang*
15. Nexgen Energy's Rook I Project, Southwestern Athabasca Basin, Saskatchewan: The Next Generation of Uranium Processing and Tailings Management  
*Arthur Lieu and Sean Hillacre*

## V. Uranium Geology

1. Athabasca Basin Proterozoic Unconformity Uranium Deposits: Alteration, Deposit Geometry and Lithostructural Setting  
*A. Aubin, G. Zaluski, H. Yang*
2. Structural Geology Summary of The McArthur River Unconformity-Related Uranium Deposit, Athabasca Basin, Saskatchewan  
*S. Harvey*
3. A New Analytical Tool for Uranium Exploration: Whole-Rock Boron Coordination Chemistry  
*Lisa L. Van Loon, Neil R. Banerjee*
4. Nexgen Energy's Arrow Deposit, Southwestern Athabasca Basin, Saskatchewan: A Geostatistical Approach to Deposit Development  
*Troy Boisjoli, Matt Batty, Sean Hillacre*

## VI. Uranium Mining and Milling Waste Management

1. Cover Systems and Landforms For Remediation of Uranium Mining and Milling Waste – Practical Insights  
*B. K. Ayres*
2. An Update on the Arsenic Speciation in the Jeb Tailings Management Facility at McClean Lake Saskatchewan via X-Ray Absorption Near-Edge Structure (Xanes) Spectroscopy  
*P. E.R. Blanchard, J. W. Reid, J. Warner, K. A. Hughes, J. Esslifie-Dughan*
3. A Model City that Made Reparations from Past Uranium Mining And Milling Practices  
*W. L. Dam*
4. Determination of Radium in Uranium Mill Effluents by ICP-MS  
*Angelo R. Fernando, Heather Daigneault, Randy Wiens, Kieran Large, Laura Dewhirst, Jim Johnson, Mike Broczkowski*

5. Sampling Design to Best Capture the Aging of In-Situ Tailings: Results and Lessons Learned  
*Kebbi Hughes, John Rowson, Joseph Esslifie-Dughan, Caitlin Brown*
6. Spent Nuclear Fuel Repository Seal Geometry Optimisation  
*M.A. Perras, G. Walton, H.A. Kasani*
7. Process Scale-Up for Uranium, Mercury and Cesium Recovery from Surrogate Radioactive Cemented Waste  
*N. Reynier, M. Courchesne, C. Laviolette, A. Demers, R. Lastra, M. Chapman*
8. Radium in Mining Effluents: Promising Water Treatment and Environmental Monitoring  
*J. Schick, V. Granger*
9. Evaluation of Elements of Concern in the Jeb Tailings Management Facility using Synchrotron Radiation Techniques  
*Arthur Situm, Jeremiah C. Beam, John R. Hayes, Peter E. R. Blanchard, Andrew P. Grosvenor, Kebbi A. Hughes, John Rowson*
10. Orano Mining R&D and Innovation Portfolio and Deployment Methodology  
*Hervé Toubon, Jim Corman, Mamane Bello Boubacar Kinassa, Matthieu Davrinche, Pierre Amadieu*
11. Uranium Mine Remediation in Northern Australia  
*Peter Waggitt*

## VII. Uranium Production

1. Heap Leaching Optimization for the Imouraren Deposit: Synthesis of a Laboratory Testwork Program  
*B. Bossé, N. Durupt, and M. Vaillé, A. Michaut*
2. Technical Advancements Towards Achieving 1500 T/A Production Rate at the Honeymoon ISR Operation  
*K. W. Bowes, D. Craib, B. L. Jones, A. Rao, J. A. Davidson*
3. Hidden Risks of Sulphite in Water Systems - SO<sub>2</sub> Management at McClean Lake Mill  
*N. Chow, G. Remple, W. McCombe, L. Nightingale-Mercer, J. Nikkari*
4. A Study of Factors Affecting Residual Sulphur Content in Ammonium Diuranate During Uranium Milling  
*Angelo Fernando and Thom Mambe*

5. Alkyl Arsines and U  
*J. Gogal*
6. Predictive Modeling for In Situ Recovery Operation  
*Gilles Joubert, Gwenaële Petit, Ulan Massimkhanov*
7. Mineralogy and Modelling – Predicting Uranium Leach Extraction at Olympic Dam  
*V. Liebezeit, K. Ehrig, Y. Li, E. Macmillan, B. Pewkliang, M. Smith*
8. Uranium in Argentina: Resources, Demand and Perspectives for Nuclear Supply  
*L. López*
9. Continuous Uranyl Peroxide Precipitation from Combined Solvent Extraction Strip Liquor and Ion Exchange Eluate For The Honeymoon Uranium Project  
*M. D. Maley, R. J. Ring, K. Bowes*
10. Uranium Accounting Reconciliation  
*D. A. Mango, S. Brochot, S. Saparova, A. Kobzhanov*
11. Hydrogen Mitigation in the McClean Lake Uranium Leaching Circuit – An Update  
*W. McCombe, L. Nightingale-Mercer*
12. Pugging-Curing Process: Uranium Recovery Model in Orano Mining Somaïr Plant  
*A. Michaut, V. Bruned, K. Mohamed*
13. What Will Future Uranium Mining Projects Look Like?  
*B. Moldovan, M. Fairclough*
14. Reducing Risk from First-of-Kind In-Situ Recovery for the Athabasca Basin  
*Chad Sorba, Dale Verran, David Bronkhorst, Jared Orynik, Jim Viellenave, Hal Demuth, Errol Lawrence*
15. Nexgen Energy's Rook I Project, Southwestern Athabasca Basin, Saskatchewan: The Next Generation of Uranium Operations  
*Troy Boisjoli*