

TECHNICAL PROGRAM

Time Zone Santiago, Chile. GMT -3 | English-Spanish-Portuguese Interpretation Available in all Technical Sessions

Tuesday, September 29



The parallel technical sessions will begin at 8:30 a.m. on Tuesday, September 29.

The session distribution and times will be announced during the first week of September.

INAUGURAL CEREMONY

Welcome Words

18:20

Mimy Mackenzie, Conference and Publications Manager, Gecamin, Chile

Hugo Quelopana, Tailings 2026 Program Director; Engineering Manager, Gestiona Consultores, Chile

James McPhee, Tailings 2026 Co-Organizer, Professor, AMTC, Universidad de Chile

Álvaro Videla, Tailings 2026, Co-Organizer, Director, Departamento de Ingeniería de Minería, Pontificia Universidad Católica de Chile

Guilherme Gomes, Tailings 2026 Co-Organizer, Professor, Universidade Federal de Ouro Preto, Brazil

Linda Figueroa, Tailings 2026 Co-Organizer, Professor, Tailings Center, Colorado School of Mines, USA

Opening Talk

19:00

"Built to Last: Long-Term Governance and Stewardship of a Tailings Management System"

Katie Kruger, Manager of Tailings, Crushed Leach, and Water Freeport-McMoRan, USA

19:30



Welcome Reception

Wednesday, September 30

PLENARY SESSION 1

ENG

11:00

"Beyond Compliance: Implementing GISTM With a Focus on Effectiveness"

Scott Martens, Technical Director, Tailings and Geotechnical Engineering, Teck Resources, Canada



ENG

11:30

"Circular Mining at Scale: Transforming Tailings into Strategic Assets at Vale" (TBC)

Geraldo Paes, Corporate Geotechnical Director, Vale, Brazil



PLENARY SESSION 2

SPA

12:20

"The Consolidated Mining Standard Initiative (CMSI): Unifying the Future of Tailings Management" (TBC)

Tabatha Chávez, Innovation Manager, International Council of Mining and Metals (ICMM), UK



SPA

12:50

"Breaking the Scale Barrier: Implementing Large-Scale Filtered Tailings to Improve Water Recovery and Geotechnical Stability"

Claudio Román, Principal Geotechnical Engineer, Ausenco, Chile



Thursday, October 1

PLENARY SESSION 3

11:00

SPA

"The GTMI: Strengthening the framework for an Independent Standard"

Jerónimo Covacevich, Head of Tailings and Processing Excellence, BHP, Chile

BHP

11:30

ENG

"A House of Cards: Characterization of Cemented Soils and Implications for Tailings Dam Performance"

Simon Dickinson, Principal Geotechnical Engineer and Chief Technical Officer, BGC Engineering, Canada

BGC
BGC INGENIERÍA LTDA.

PLENARY SESSION 4

12:20

SPA

"Cerro Verde TSFs: Leading Water Recovery and Tailings Stewardship in the Region "

Liliana Gutiérrez, RTFE Manager (Responsible Tailings Facility Engineer), SM Cerro Verde, Freeport-McMoRan, Peru

Freeport-McMoRan

12:50

SPA

"Unlocking the Vicuña District: Synergistic Infrastructure as the Blueprint for Modern Tailings Management"

Pablo D'Agnillo, Director of Infrastructure, Vicuña, Argentina

Vicuña

Accepted Articles

(167 articles as of August 18)

Represented Countries (19): Argentina, Australia, Brazil, Bulgaria, Canada, Chile, Cyprus, Denmark, France, Germany, Peru, Poland, Saudi Arabia, South Africa, Spain, Suriname, Sweden, UK and USA

GEOTECHNICS AND DAM SAFETY

(43 articles)

1. **(A01) Stress Paths, Time Effects, and Monitoring Interpretation in Tailings Facilities**
Priscilla Nelson, Colorado School of Mines, USA
2. **(A11) Lessons Learned from the Design of Drainage Systems in Tailings Dams: An Approach to Dam Safety**
Pablo Valdés and José Luis Illanes, ARDUM Ingeniería, Chile; and Enrique Siu, INGEOCONTROL, Chile
3. **(A26) Challenges and Opportunities in Coarse Tailings: Pressuremeters and AI**
Rafael Martínez, José Quiroz and Maximiliano Jara, Pangea Geotecnia, Chile
4. **(A27) Seismic Response of an Earth-fill Dam to Crustal Earthquakes: A Parametric Study**
Edward Escudero, SRK Consulting, Peru; and C. Gonzales, Universidad Nacional de Ingeniería, Peru
5. **(A28) Influence of Construction Stages on the Settlement of Tailings Dams in PLAXIS 2D**
José León, Felipe Rojas and Denys Parra, Anddes, Peru
6. **(A32) Probabilistic Slope Stability Analysis of Tailings dams: A Case Study**
Brahian Román, Melannie Espinoza and Martín Villanueva, SRK Consulting, Peru
7. **(A42) Effect of Constitutive Model Selection on Trigger Analyses in Tailings Storage Facilities**
Franco Orabona, Universidad de Buenos Aires, Argentina; Nicolás Tasso, WSP Australia; and Felipe López, WSP, Argentina
8. **(A45) Influence of the Damping Model on the Seismic Response of Tailings Dams**
Agustín Toro, Cristian Monje and Sebastián Maureira, WSP, Chile
9. **(A46) Numerical Effect of Including Vertical Seismic Motion in the Stress-Strain Analysis of a Tailing Dam**
Rodrigo Maluenda and Cristian Monje, WSP, Chile
10. **(A49) Evaluation of Strength Parameters in Soils and Tailings Based on EC7-2G Statistical Approaches**
Jonathan Ybáñez, Felipe López and Lisandro Roldán, WSP, Argentina
11. **(A50) Assessing the Correlation Between Seismic Intensity Measures and Tailings Dam Displacements: A Numerical Study**
Nicolás Di Giovanni, Felipe López, Nicolás Tasso, Marcelo Martínez and Jonathan Ybáñez, WSP, Argentina
12. **(A60) Impact of Open-Pit Blast-Induced Vibrations on Adjacent TSF Performance: Field Monitoring and Analytical Assessment at Rosebel Gold Mines**
Andra Putra and Cecilia Mata, Zijin Rosebel Gold Mines, Suriname

- 13. (A64) Scaling Hydraulic Dewatered Stacking toward a Field Demonstration at Sossego: From UFOP to On-Site**
Gustavo Belotto, Rafael Santos, Jean Lima, João da Costa, Henrique Guerzoni, José Costa, Romulo Reis, Jason Hall, Vale Base Metals, Brazil; and Ricardo Fiorotti, Universidade Federal do Ouro Preto
- 14. (A66) Cyclic Resistance Characterization of Borrow Sands Using Cyclic Direct Simple Shear Test**
Alan Reyes, Scarlet Frez, Matías Bravo-Zapata, Catalina Fuentes, Wendy Valenzuela and Héctor Fuentes, IDIEM, Chile
- 15. (A74) Alternatives Study: Copper Tailings Disposal System for a Greenfield Project in the Brazilian Amazon**
Jean Lima, João da Costa, Henrique Guerzoni, Rafael Santos, Gustavo Belotto and José Costa, Vale Base Metals, Brazil; and Thiago Gomes and Elisa Silveira, DF+ Engineering, Brazil
- 16. (A76) Estimation of the Site Effect for a Filtered Tailings Storage Facility and Its Influence on Physical Stability**
Katherine Ascencio, Compañía Minera del Pacífico, Chile; and Paz Esparza, Valeria Miranda and Héctor Huenchulao, E-Mining Technology, Chile
- 17. (A80) Effect of Fines content on the Critical State Behaviour of Cycloned Tailings Sands**
Pedro Mendoza, David Rodríguez, Jaime Tello and Jorge Chávez, WSP, Peru; and Franklin Olaya, Pontificia Universidad Católica del Perú
- 18. (A88) Influence of Relative Density on the Cyclic Behaviour of a Sand-Like Foundation in a Tailings Dam**
Víctor Puyen, Sebastian Farfán, Brenda Carrasco and Pedro Mendoza, Ausenco, Peru
- 19. (A97) Chemical Environment Effects on the Long-Term Performance of Geogrids in Tailings Applications**
Lizeth Ardila and Cristina Schmidt, HUESKER, Brazil; and Oliver Detert, HUESKER, Germany
- 20. (A101) Stochastic Characterization and Probabilistic Stability of a Tailings Dam on Lacustrine Clay**
Francesco Franco and Denys Parra, Anddes, Peru
- 21. (A106) Influence of Crest Width on the Stability of a TSF With Centerline-Raise Dam**
Charbel Chapana, WSP, Chile; and José Ale, WSP, Peru
- 22. (A111) Static and Seismic Slope Stability Under Uncertainty: A Probabilistic Performance-Based Design Approach for a Tailings Embankment**
Alan Figueroa, Sebastián Araya and Dennis Raddatz, Stantec, Chile
- 23. (A113) Normalization of Deviation and Other Human Errors Affecting the Safety of Tailings Storage Facilities**
Luis González and Rodrigo Ramírez, WSP, Chile; and María Hernández, WSP, Argentina
- 24. (A121) Strength Gain of Fine Tailings Resulting from Secondary Compression**
Iván Contreras, Barr Engineering, USA
- 25. (A125) Not Just Subduction: Integrating Active Faults into Seismic Hazard Assessment for Tailings Storage Facilities in the Central Andes**
Carlos Benavente, BE. Earthwise, Peru; and Alan Hull, Hull Seismic Review, USA
- 26. (A133) Bayesian Inference of Critical State Line and Shear Modulus Parameters in Silty-Sand Tailings**
Alexandre Vilaça and Guilherme Gomes, Federal University of Ouro Preto, Brazil; Bruno Delgado, WSP, UK; and Matheus Rabelo, Independent Engineer, Brazil

27. (A135) High-Confinement Response of Copper Tailings: A Review of Experimental Evidence and Critical State Interpretation

Sergio Villalobos, Pares & Alvarez, Chile; and Nilo Consoli and Lucas Festugato, Universidad Federal de Río Grande del Sur, Brazil

28. (A145) Numerical Modeling of the Decharacterization of an Upstream-Raised Tailings Storage Facility

André Lima and Ana Luiza de Oliveira, TPF Engenharia, Brazil; and Jeanne Castro, Vale, Brazil

29. (A148) Assessment of Flow Liquefaction Susceptibility in Mine Tailings Using State Parameter and CPTu Data

Miguel Bernilla, Miguel Santaria, Luis Neyra, Ronald Landa and Denys Parra, Anddes, Peru

30. (A161) Integrated Geotechnical Characterization for Risk-Based Tailings Management in Chile

Diego Cáceres, Mauricio Vásquez, Florencia Henríquez and Camila Lara, Ingemars Ingeniería, Chile

31. (A166) Performance-Based Design in the Decommissioning of Tailings Dams

Juliana Meza, Valeria Armigliato, Nelson Motta, Waldemar Felitti, AECOM, Brazil; and Masood Kafash, AECOM, USA

32. (A167) Mechanical Behavior of Processed Rare Earth Tailings Based on Triaxial Testing

Domenico Gontijo, João Caixeta, Ricardo Almeida, Daniel Fortuna and Frederico Oliveira, WSP, Brazil; Alexandre Vilça, Federal University of Ouro Preto, Brazil; and Danilo Eloi, WSP, Canada

33. (A171) Combined Drained and Undrained Shear Strength Envelope for Compacted Filtered Tailings at High Confining Stresses

Hainer Inga, Raúl Malacas, Erika Pariona and Denys Parra, Anddes, Peru; and Stefania Oliveira and Sabrine Rodrigues, BVP Geotecnia e Hidrotecnia, Brasil

34. (A175) Shot-Tailings: Reuse of Tailings for Dust Control and Progressive Closure

Jorge López, Luis Morales and Álvaro Gutiérrez, Capstone Copper, Chile

35. (A176) Can CPT See Fine Brittle and Sensitive Layers? On The Detectability of Thin Weak Laminae in Varved Glaciolacustrine Foundations

Mo Shahsavari and Alistair James, GeoXtra Solutions, Canada; and Fahimeh Naftchali, NewFields, Canada

36. (A177) Comparison between Monte Carlo Simulation and Latin Hypercube Sampling for the Probabilistic Assessment of Slope Stability

Nilthson Noreña, Carlos Meza, Juliana Meza and Jimena López and Celso Romanel, Pontifical Catholic University of Rio de Janeiro, Brazil

37. (A179) Brittleness Assessment of Cycloned Tailings Sand Based on Triaxial Tests within the Critical State Soil Mechanics (CSSM) Framework

David Rodríguez, Pedro Mendoza, Carmen Ayquipa and Jorge Chávez, WSP, Peru; and Franklin Olaya, Pontificia Universidad Católica del Perú

38. (A192) Effect of Strength Parameter Uncertainty on Tailings Dam Stability

Thiago Dib, TBretas Consultoria, Brazil; and Isabele Bissoli, Ausenco, Brazil

39. (A193) Yield Stress and Structural Reversibility of Iron Ore Tailings: A Multi-Test Rheological Approach

Neemias Dias, Patrício Pires and Edson Soares, Federal University of Espírito Santo, Brazil

40. (A206) Comparative Evaluation of the Casagrande and Cone Penetration Methods for Determining the Liquid Limit of Mining Tailings

Anna Couto, Raianny Almeida, Kayky Lucas, Luís Júnior, Jhonatan Borges and Tálita Nola, Federal University of Ouro Preto, Brazil; João Silva, Vale, Brazil and Roberto dos Santos, Federal University of Viçosa, Brazil

41. (A212) Revisiting the Destructiveness Potential: Past, Present, and Future of Seismic Hazard Assessment in Tailings Dams

Rodolfo Saragoni and Bastían Garrido, S y S Ingenieros Consultores, Chile

42. (A220) Beyond a Single Scenario: Integrated Probabilistic Dam Break Analysis for Tailings Facilities from Concept to Application

Hugo Quelopana and Francisca Salas, Gestiona Consultores, Chile

43. (A226) Strain Localization, Boundary Effects, and Accuracy in the Interpretation of Monotonic Triaxial Tests: An Experimental Investigation

Felipe Saavedra and Miguel Acevedo, Spence, BHP, Chile

**GEOTECHNICAL ENGINEERING, DESIGN AND CONSTRUCTION
OF WASTE ROCK DUMPS, STOCKPILES, AND MINING
STOCKPILES**

(10 articles)

1. (A47) Effect of Loading Protocol and Holding Time on Particle Breakage of Copper Tailings Sand Under High-Stress 1D Compression

Mauricio Vásquez and Sergio Carrasco, Universidad Técnica Federico Santa María, Chile

2. (A63) Hydrogeotechnical Modeling of a Waste Rock Pile in an Open Pit in the Quadrilátero Ferrífero Region, Brazil

Hugo Alvarenga, Juan Huang, Marina Ribeiro, Water Services and Technologies, Brazil; and Rinaldo Afranio, Fabiane Ferrer, Camila Queiroz, Wesley de Souza and Frank Pereira, Vale, Brazil

3. (A77) Construction Quality Assurance (CQA) in Tailings Storage Facilities

Gustavo Vásquez, Camilo Cornejo, Matías Valenzuela and Gonzalo Jara, Stantec, Chile

4. (A82) Tailings Dam Post-Decharacterization Stability: Transient Flow and Numerical Limit Analysis

Carlos Conegundes, Guilherme Gomes, Universidade Federal de Ouro Preto, Brazil; and David Juajinoy, University of São Paulo, Brazil

5. (A153) Overview of Hypothetical Failure Studies for Filtered Tailings Stockpiles, Waste Rocks and Co-Disposal

João Tavares, Vale, Brazil

6. (A178) Co-disposal and Shared Disposal of Waste Rock and Tailings: Operational and Design Implications

Talita Bergamaschi and Lucas Machado, HIDROBR, Brazil

7. (A191) Heap Leach Liners: Laboratory Testing and Design Challenges

Keda Cao and Alistair James, NewFields, Canada

8. (A194) Validation of Failure Surfaces of a Heap Leach Pad in the Peruvian Andes Using LEM and SSR Method

Jimmy Tapia, Jean Minaya and Diana Machuca, Universidad Nacional de Ingeniería, Peru

9. (A196) Influence of Modified Cam Clay and Hardening Soil Models on Failure Prediction of Heap Leach Pad by 3D Shear Strength Reduction Method

Jimmy Tapia, Jean Minaya and Diana Machuca, Universidad Nacional de Ingeniería, Peru

- 10. (A214) A Preliminary Case Study on the Influence of Sampling Method on the DSS Response of Fine Tailings**
Alan Chandía and Marcelo Garrido, Fugro, Chile

RHEOLOGICAL AND CHEMICAL ASPECTS

(4 articles)

- 1. (A116) The Rheological Modification Module: Maximizing Efficiency in the Transport of High-Density Tailings**
Mauricio Villanueva, Sergio Ríos and Eduardo Salas, Southern Cone Technology, Chile; and Dragomid Araya, SNF Chile
- 2. (A138) Assessing the Potential of Salt Water to Reduce Sodium Hydroxide Demand in Alkali-Activated Tailings for Backfilling**
Mohsen Moeenian Far, Amin Hekmatnejad and Iván Navarette, Estefanía Loyola, Álvaro Videla, Pontificia Universidad Católica de Chile
- 3. (A163) Chemical Improvements for Cycloned Sand Drainage in Tailings Dams: Comprehensive Assessment and Strategies for Large-Scale Operation**
Claudio Vásquez, Andrei Chaura, Becky Rodríguez and David Romo, Paterson and Cooke, Chile
- 4. (A209) Solid-Phase Distribution of Rare Earth Elements in Cu Tailings: Environmental and Recovery Implications**
David Rubinos, SMI-Chile

HYDRAULICS AND TRANSPORT

(4 articles)

- 1. (A23) Application of FLOW 3D Tailings Module for TSF Failure Hydrographs and Volume Predictions**
Adolfo de Resende, WSP, Australia
- 2. (A61) Assessment of USPED Model for Erosion and Deposition Mapping in Mining Waste Dumps**
Bibiana Soares and André Rodrigues, Federal University of Minas Gerais, Brazil; Keila Dourado, Guilherme Rodrigues, Douglas Rodrigues, Barbara Batista and Antonio Fernandes, Vale, Brazil; and Francisco Rodrigues, Progen, Brazil
- 3. (A183) When CFD Adds Value to Tailings Hydraulic Design: Four Practical Cases**
Leonardo Olavarría and Pablo del Río, Paterson & Cooke, Chile
- 4. (A201) Case Study: Paste Tailings Transport Optimization, Model Calibration and Concentration Sensitivity**
Cristian Giner, Gonzalo Laciari, Cristian Bertolo and Alexander Manos, Knight Piésold, Argentina

SEEPAGE, WATER CONTROL AND WATER MANAGEMENT

(7articles)

- 1. (A20) Jet Grouting Seepage Barriers: An Alternative for Tailings Storage Facilities**
Macarena Ayarza, Pilotes Terratest, Spain; and Christian González, Pilotes Terratest, Chile
- 2. (A29) Accelerated Degradation of Steel Pipes Due to Seepage Leachates**
Francisco Scheihing, Cristián Cortés and Ana Ramos, Ausenco, Chile

3. **(A35) Optimizing Tailings Management of Large TSFs with Implementation of Mechanical Consolidation and Dewatering**
Oscar Santiago and William McAdam, Phibion, Australia; and Rafael Menezes, Phibion, Chile
4. **(A36) Application of Oxygen and Deuterium Isotopes in the Evaluation of Groundwater Flow in the Foundation of Tailings Storage Facilities**
Cleveland Silva and Lucas dos Santos, Alcoa, Brazil
5. **(A58) Thickener Retrofits: Improving Performance of Existing Equipment**
Fred Schoenbrunn, Schoenbrunn Consulting, USA; and James Chaponnel, GKD, USA
6. **(A68) Evaluation of Infiltration Zones and Drainage Performance Using 3D Transient Modeling in a TSF**
Roxana Ugaz, Erick Alvarado, Arnold Quispe and Aldair Quispe, Water Waste and Land, Australia
7. **(A186) Mineralogical Selection of Rocks for Internal Drainage in Tailings Structures**
Isabele Bissoli and Wanessa Silva, Ausenco, Brazil; Leonardo Diamantino and Rogério Ribeiro, University of São Paulo, Brazil; and Thiago Dib, TBretas Consultoria, Brazil

DESIGN AND STUDIES OF TAILINGS STORAGE FACILITIES (CONVENTIONAL, THICKENED, PASTE, FILTERED AND CENTRIFUGED)

(18 articles)

1. **(A05) Beyond Filter Presses: Exploring Sustainable Alternatives for Tailings Dry Stacking**
Timo Dobler and Jürgen Hahn, Bokela, Germany
2. **(A07) Filtered Tailings: Risk Reduction Versus Risk Transfer**
Nelson Amoah, SLR Consulting, Australia
3. **(A17) Stress-Strain Response to Paste Tailings Deposition Sequences: DEPIM Stage II Case Study**
Nicolás Rodríguez, Grupo Minero Las Cenizas, Chile; Ricardo Valdebenito, Emmanuel Fuentealba, Gustavo Valdebenito, RVIA, Chile; and Adeline Delonca, Universidad Técnica Federico Santa María, Chile
4. **(A24) Analysis of the Mechanical Response of Compacted Iron Ore Tailings**
Diego López, Júlio Azevedo, Sergio Marques, Nilo Consoli and Lucas Festugato, Universidade Federal do Rio Grande do Sul, Brazil; and Lessandro Franco, Marcus Dias, Diego dos Santos and Rodrigo Marinaro, Vale, Brazil
5. **(A43) Applying Multiple Accounts Analysis for Tailings Storage Facility Site Selection**
James Alcorn, Masood Kafash and Braden Error, AECOM, USA
6. **(A59) Hypothetical Failure: A Tailings and Waste Rock Stack Break Study in the Iron Quadrangle, Brazil**
Daniel Henriques, Maria Borba, Gabriel Pereira, Ana Yoda, Douglas Coelho, Tractebel Engie, Brazil; and Bruna Braga, Vale, Brazil
7. **(A95) CPTu-Based Vs Prediction in Tailings: A Comparative Study**
Rafael Piton, Ezequias Oliveira, Darlis Devise, Felipe Castro, Jaqueline Bertella, Vale, Brazil; Robert Nagai, GWS Engenharia, Brazil; and Helena Nierwinski, Federal University of Santa Catarina, Brazil
8. **(A102) Self-Consolidation Effects in Unsaturated Filtered Tailings**
Miguela Cabañas, JRI Ingeniería, Chile
9. **(A110) First Industrial Pilot Tailings Filtration Plant Constructed at 4,700 m.a.s.l.**
Carlos Meléndez, Miguel Ángel Moreno and Jorge Carranza, Minera Chinalco, Peru

- 10. (A130) Advancing Tailings Innovation: Global Trials, Emerging Technologies and Future Pathways**
Louise McNab and Johan Boshoff, Gold Fields, Australia
- 11. (A132) Assessment of CPT-Based Soil Classification in a Partially Saturated Tailings Storage Facility**
Santiago Guivin and Daniel Jauregui, SRK Consulting, Peru; and Camilo Morales, SRK Consulting, Chile
- 12. (A155) El Abra Expansion Project: Challenges in the Tailings Management System**
Ricardo Yáñez and Claudio Cifuentes, Freeport McMoRan, Chile
- 13. (A160) From Waste to Resource: Technologies for Zero Tailings Deposition**
Waldo Aracena, Florencia Middleton, Vreni Caro, Felipe Concha and Millaray Hernández, Centro de Investigación en Minería Sustentable JRI, Chile
- 14. (A181) Runout Calibration of a Failure Event Occurred in a TSF Using MPM and Mobilized Friction Reduction**
Henrique Mendes and Fernando Azevedo, Ausenco, Brazil
- 15. (A187) Enhancing Filtered Tailings Implementation via Comprehensive Upstream Process Integration**
Juan Ccarita, Jord International, Peru; and Mario Saavedra and Oliver Whatnall, Jord International, Australia
- 16. (A202) Multiple Account Analysis of Tailings Technologies to Define the Next TSF Stages**
Cristian Bertolo, Gonzalo Laciari and Cristian Giner, Knight Piésold, Argentina
- 17. (A211) Lessons Learned and Operational Optimization of a Filtered Tailings System**
Elizabeth Díaz, Andres Frez and Katherine Ascencio, Compañía Minera del Pacífico, Chile
- 18. (A228) Digital Tracking for Mine Material Selection in TSF Infrastructure**
Fernando López and Rodrigo Fernández, Spence, BHP, Chile

TAILINGS IN COMPLEX ENVIRONMENTS

(7 articles)

- 1. (A16) Plastic Concrete Cutoff Walls for Seepage Control in High-Permeability Soils: A Case Study in Tailings Dams**
Christian González and Felipe Soto, Pilotes Terratest, Chile
- 2. (A19) What Remains: Disaster Risk and Emergency Preparedness in a Chilean Mining Town**
Nigel Wight, SMI Chile; and Jill Harris, Angelica Andrade and Deanna Kemp, CSRM, Sustainable Minerals Institute, University of Queensland, Australia
- 3. (A41) Circular Economy Pathways for Tailings and Waste Rock: From Environmental Liabilities to Resources**
Jéssica Castro, Sérgio Machado and Marco Antonio Casaes, Vale Base Metals, Brazil
- 4. (A169) Tailings Storage Facilities in High-Rainfall and Seismic Environments: Design, Construction, Operational Challenges and Practical Approaches**
Evelyn Arredondo, Sebastián Yáñez, Matías Silva and Gonzalo Suazo, GHD, Chile; and Jasna Zúñiga, GHD, Australia
- 5. (A182) Tailings Stack Influence on a Shallow Tunnel in Soft Rock: Study in the Brazilian Lithium Valley**
Daniel Henriques, Natália Silva, Rian Porto, Bruno Chaves, Ana Lúcia Yoda, Tractebel Engie, Brazil; and Gabriel Dimitrov, Lithium Ionic, Brazil

6. **(A198) Filtered Tailings at Scale: Strategic Decisions in Complex Environments**
Edgar Quiroz, Frame, Peru
7. **(A200) Operational Challenges of Stacking Filtered Tailings at Extreme Altitude Conditions: Salares Norte; Ramp Up Experience**
Carol Vásquez, Néstor Vargas and Karina Menares, Salares Norte, Gold Fields, Chile

MONITORING, INSTRUMENTATION AND SURVEILLANCE TECHNOLOGIES

(18 articles)

1. **(A14) Validation of Calibration and Cross-Verification of Electric Piezometers during Reinforcement Works of an Iron Ore Containment Dike in the Quadrilátero Ferrífero Region: Minas Gerais, Brazil**
Jarleson Andriao, Nathalia Sena and Rodrigo Peres, Vale, Brazil
2. **(A69) Early Detection of Seepage Zones in Tailings Storage Facilities with Integrated Satellite Monitoring**
Matías Fernández and Carola Sepúlveda, Worley, Chile
3. **(A79) A Three-Level Automated QA/QC Framework for Geotechnical Instrumentation Data in TSFs**
Benjamín Latorre and Sergio Vergara, Velageo, Chile
4. **(A86) Field Evaluation of an IoT-Based GNSS Monitoring System Using LoRa Communication for Tailings Dams**
Eduardo Diniz and María Alonso, Worldsensing, Brazil; Eduardo Castro and Alan Rodrigues, Tecwise, Brazil; and Tiago da Silva, Vale, Brazil
5. **(A107) Assessing the Internal Structure of a TSF with Ambient Noise**
Miro Döring, Institute of Mine Seismology, Canada; and Ashley Morris, Institute of Mine Seismology, Australia
6. **(A108) InSAR-Based Risk Analysis for Proactive Tailings Dam Safety: The Cieneguita Failure Case Study in Mexico**
Skevi Perdikou, Vipin Maurya, Bala Raju and Andrew Lees, GEOFEM, Cyprus
7. **(A117) Multi-Platform SAR Ground Displacement Monitoring Approach for TSFs: Bridging Satellite and Ground Systems with SARDrone**
Javier Duro, Rubén Iglesias, Eduard Makhoul, Dani Monells, Gerard Ruiz-Carregal, Marc Lort Cuenca, Luis Yam, Gerard Masalias, Antonio Heredia, Giuseppe Centolanza and Azadeh Faridi and Nelly Chávez, DARES Technology, Spain; and Hernán Zapata, DARES Technology, Chile
8. **(A128) Lessons Learned on the Possibilities of Distributed Sensors in Earth Structures**
Isabel Salah, Geokon, USA; Wilson Junior, G5 Instrumentos, Brazil; and Tomasz Howiacki, Nerve-Sensors, Poland
9. **(A139) Reduction of False Alerts and Reliability Improvement: Experience with more than 500 Electric Piezometers**
Abraham Figueroa, Patricio Chacón and Consuelo Rodríguez, Arcadis, Chile
10. **(A165) The Role of QA/QC in Geotechnical Instrumentation Installation in TSFs: Critical Control Stages**
Sergio Vergara and Benjamín Latorre, Velageo, Chile
11. **(A170) Recent Advancements in CPTu Modules for Enhanced Characterization of Mine Tailings**
Iman Entezari and Dallas McGowan, ConeTec Group, Canada; Joseph Bindner, ConeTec Group, USA; Mayu Tincopa, ConeTec Group, Peru; and Adam Llanos, ConeTec Group, Chile

- 12. (A189) Hydroperiod Characterization in Tailings Storage Facilities Using Multi-Sensor Satellite Imagery**
Nicolás Ibáñez, Blas del Río and Lisandro Roldán, SRK Consulting, Argentina
- 13. (A205) Real-Time Rheology Monitoring for Tailings Thickening Optimization**
Valentina Mella, José Grandi, Rodrigo Balboa, Arturo Rock and Miguel Parra, Konatec, Chile; and Walter Díaz, Vicente Bustamante and Leopoldo Gutiérrez, Universidad de Concepción, Chile
- 14. (A213) Chilean National Tailings Observatory: Advances in the Development of an Integrated Platform for the Operational Management and Technical Surveillance of Tailings Storage Facilities**
Cristóbal Carrasco, Sergio Fuenzalida, Santiago Fuentes and Patricio Merino, Sernageomin, Chile
- 15. (A219) Online Particle-Size Measurement System: TIPCO**
Claudio Araya, FLSmith, Chile
- 16. (A221) Integrated Monitoring of the Lyulyakovitsa Tailings Storage Facility: From Conventional to Real-Time Digital Surveillance**
Vladmir Dodnikov and Stefan Tangarov, Asarel-Medet, Bulgaria
- 17. (A223) Operational Geophysical Monitoring of the Subsurface Using ERT and Vs in a Saline Tailings Storage Facility: The Spence Operational Pond Case Study, Atacama Desert, Chile**
Francisco Gutiérrez, Spence, BHP, Chile; and José María Martínez, Julio Viveros, Sergio Garrido and Felipe González, AguaEx Geociencias, Chile
- 18. (A227) Role of Multi-Source Instrumentation in the Post-Seismic Assessment of a Tailings Storage Facility Dam**
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