

# PRELIMINARY TECHNICAL PROGRAM

Time Zone Santiago, Chile. GMT -4. English-Spanish Interpretation available.

## WEDNESDAY, JUNE 12

### Technical Sessions

#### 08:50 - 17:30 Technical Sessions

The Technical Sessions will start on Wednesday, June 12th in the morning. Authors will be notified on which date and time they will be presenting on May.

## WEDNESDAY, JUNE 12

### Inaugural Ceremony

#### 18:00 Words of Welcome

**Mimy Mackenzie**, Conference Manager, Gecamin, Chile

**Gonzalo Suazo**, Tailings 2024 Co-Organizer; Assistant Professor of the Department of Civil Works, Universidad Técnica Federico Santa María, Chile

**Jorge Macedo**, Tailings 2024 Co-Organizer; Assistant Professor, Georgia Tech, TALENG, USA

**Lucas Deleon**, Tailings 2024 Co-Organizer; Professor, Universidade Federal de Ouro Preto, Brazil

#### 18:30 "Title to be Confirmed"

**Geraldo Paes**, Corporate Geotechnical Director, Vale, Brazil

#### 19:00 – 21:00 Welcome Cocktail

## THURSDAY, JUNE 13

### Plenary Session 1

#### 11:00 "Freeport-McMoRan's Implementation of the Global Industry Standard on Tailings Management"

**Tamara Johndrow**, Director Tailings & Water, Freeport-McMoRan, USA

#### 11:30 "Title to be Confirmed"

Arcadis, Chile

#### 12:00 Short Break

**Plenary Session 2**

12:20 **“Governance Foundations for Tailings Management: The Experience and Results of Las Bambas”**

Edgar Quiroz, Tailings and Water Manager, Minera Las Bambas, MMG, Peru

12:50 **“Relationships between incident, failure, risk tolerance and ALARP”**

Silvana Dal Pozzo, Tailings Principal, BHP, Chile and Jerónimo Covacevich, Tailings Practice Lead, BHP, Chile

**FRIDAY, JUNE 14****Plenary Session 3**

11:20 **“Evaluation of the Seismic Performance of Tailings Dams”**

Jorge Macedo, Georgia Tech, TALENG, USA

11:50 **“Title to be confirmed”**

Speaker to be confirmed

12:20 **“GISTM Implementation at Codelco: Success and Challenges” (TBC)**

René Orellana, Corporate Manager of Water, Tailings and Divisional Projects, Codelco, Chile (TBC)

# RECEIVED PAPERS

(126 papers as of April 30<sup>th</sup>)

**Represented Countries (20):** Argentina, Australia, Brazil, Canada, Chile, Ecuador, Germany, Italy, Iran, Morocco, New Zealand, Peru, Panama, Portugal, Spain, Sweden, The Netherlands, Turkey, United Kingdom, USA

**Geotechnics and Dam Safety****(23 papers)****(A10) Numerical Simulation of the Deformation History of a Large Rockfill Tailings Dam**

Carlo Bermudez, Juan Valdivia, Rolando Rojas and Carlos Huaman, WSP, Peru

**(A14) Numerical Modelling of the Decommissioning Phases of a Tailings Dam**

Juliana Meza, Progen, Brazil; Nilthson Noreña and Frank Pereira, Vale, Brazil; Luísa Araújo and Rafael Carvalhais, Dam Engineering Projects, Brazil; Thiago Bretas, TBretas, Brazil

**(A16) Main Considerations for Planning a Large-Scale Triaxial Test on Coarse Granular Materials: Laboratory Experience and Test Tracking**

Alan Figueroa and César Ahumada, Stantec, Chile; Danae Momberg, IDIEM, Chile

**(A18) The Behaviour of a Tailing Storage Facility (TSF) in 2D and 3D Stability Analyses**

André Lima, TPF Engenharia, Brazil; Alfredo Nunes, TPF Consultores de Engenharia e Arquitetura, Portugal; Raphael Rodrigues and Virginie Pinto, Vale, Brazil

**(A22) Near Closure Tailings Management Challenges: Sossego Mine, Brazil**

Juliano Ferreira, Henrique Guerzoni, João da Costa, Felipe Barbosa, Carlos Lima, Gustavo Belotto and José Wanderley, Vale, Brazil

**(A33) Dam Experimental Excavation Back-Analysis: Safety Assessment in Iron Ore Tailings Dam**

Thatyane Gonçalves, Keitiane Coimbra and Frank Pereira, Vale, Brazil

**(A42) Piezocone Test Monitoring on an Upstream Dam**

Isabelle Silva, Samuel Tarazona and Frank Pereira, Vale, Brazil

**(A46) Evolution of Brazilian Mining Regulation and its Impacts**

Paulo Gomide, Fernanda Sol, Stéphanie Y. and Daniel Raposo, Vale, Brazil

**(A54) Main Challenges in Implementing a Microseismic Monitoring in Mining Dams: A Case Study**

Luiz Santos, Beatriz Friguetto and Frederico Juliano, Vale, Brazil

**(A62) The Vane Shear Test in Mine Tailings**

Iván Contreras, Jason Harvey and Dafar Obeidat, Barr Engineering Company, USA

**(A71) Influence of the Rheology on the Runout in Failure of Tailings Dams with Complex Terrain**

Bastían Valdivia and Ignacio Fuenzalida, Universidad de Talca, Chile

**(A78) Methodology to Incorporate Climate Change and Snow Line Variations for Dam Design Flows Estimation**

Pablo Chong, Felipe Orellana, HIDRICA Consultores, Chile, Carlos Garrido, SMI Ingenieros, Chile; and Jimmy Jorquera, Ministerio de Obras Públicas, Chile

**(A82) Influence of Rapid Drawdown on the Safety Analysis of Earth Dams for Tailings Containment**

Darym Campos, Denis Costa, Francisco Rodrigues, Progen, Brazil; Thiago Morandini, Federal Center for Technological Education of Minas Gerais (CEFET), Brazil; Fernanda Sol and Paulo Gomide, Vale, Brazil

**(A96) Influence of Dam Materiality on the Response to Overtopping-Triggered Failures**

Misael Carrillo, Jose Farfán and Bruno Espinace, GA Consultores, Chile

**(A100) Enhancing Tailings Liquefaction Stability Using Fibers**

Hugo Blanco and Jesús Laine, ArcelorMittal Global R&D, Spain; Michael Rees, ArcelorMittal Mining, United Kingdom

**(A101) Conformance Analysis of GISTM Requirement 7.2: A Case Study on a Chilean Tailings Dam**

Javier Ubilla, Gail Riddell and Emilio López, Nava Consulting, Chile

**(A107) New Approach to Seismic Coefficient Assessment for Tailings Facility Analysis: A Case Study**

Luis Ríos and Julio Tejo, WSP, Chile; Marcelo Martínez, WSP, Argentina; Alan Hull, WSP, USA

**(A128) Challenges in the Risk Assessment Activity**

Manuel Cortés, Emilio López, Fabián Olea and Karla Burgos, Nava Consulting, Chile

**(A129) About Seismic Acceleration Coefficient for Pseudo-Static Analyses**

Felipe Cruz, Gabriel Sant'Ana, Marina Secco and Vinícius Queiroga, DF+ Engenharia, Brazil

**(A132) The Critical State Line Parameters of Iron Ore Tailings from Basic Laboratory Tests**

Jose Ccotohuanca, Vinicius Lanza and Isabella Costa, Klohn Crippen Berger, Brazil

**(A135) Application of the SHANSEP Model in Slope Stability Analysis for a Tailings Deposit**

Luz Solano, José Ipanaqué and Jorge Lopez, WSP, Peru

**(A137) Best Practices in Tailings Dam Safety: Learning from Brazil's Geotechnical Monitoring and Automatic Siren Activation**

Samuel Carneiro, Vale, Brazil; Marcella Garcia and Fernanda Kunoh, Ausenco, Brazil; Claudio Román, Ausenco, Chile

**(A152) Geotechnical and Operational Control to Reuse Tailings - Case TSF B2 San Rafael Unit Mining**

Elizabeth Narciso and Harry Silva, Minsur, Peru

**Hydraulics and Transportation****(5 papers)****(A80) Sedimentation Rate in Cyclone Sands**

Jorge Casanova and Camila Casal, SHIMIN Ingeniería, Chile

**(A85) Hydrograph Approximation Analysis for Tailings Dam Failures through 2D Modeling**

Juana María Canavessi, Federico Giurich and Ignacio Ezama, SRK Consulting, Argentina

**(A138) Comparison of Theoretical Models for Friction Loss in Laboratory-Pressurized Tailings Pipes**

Guido Huilca, Edison López and Camila Saldaña, WSP, Peru

**(A139) Hydraulic Design of Simultaneously Operating Slimes Spigots**

Guido Huilca, Fredy Capcha and Eduardo Saldivar, WSP, Peru

**(A148) Advantages of Integrated Slurrification Equipment Compared to Traditional Methods for Tailings Transport**

Guido Villamil, IHC Mining, The Netherlands

**Seepage and Water Management****(5 papers)****(A87) Effect of Degree of Turbidity and Particle Size on Inclined Element Settler Modelling**

Cristian Reyes, Universidad de Chile; Cristóbal Arratia, KTH Royal Institute of Technology and Stockholm University, Sweden; and Christian Ihle, SHIMIN Ingeniería, Chile

**(A94) Effect of Degree of Turbidity and Particle Size on Inclined Element Settler Modelling**

Cristiane Sebastião, Mariana Duarte, Naiara Lima, Luiza Alvarenga and Rafaela Tacco, Vale, Brazil; Bruno Baêta, Federal University Of Ouro Preto, Brazil; Gustavo Gomes, Hector Luna and Diego Lima, Intelecto, Brazil

**(A118) Advancing Water Stewardship in Tailings Management with Accelerated Mechanical Consolidation**

Oscar Santiago and William McAdam, Phibion, Australia; Rafael Menezes, Phibion, Chile

**(A124) Structural Characterization of a Variegated Clay from the Amazon, BR**

Lucas Mendes and Tácio Campos, Pontifical Catholic University of Rio de Janeiro, Brazil; Elaine Barreto, Fluminense Federal University, Brazil; Mariana Motta, São Paulo State University, Brazil

**(A157) Water Recovery System of TSF Los Diques**

Cristian Recabarren, Cía. Minera Contractual Candelaria, Chile; Alejandra Neira and Susana Cornejo, WSP, Chile

**Rheological and Chemical Aspects**

**(4 papers)**

**(A09) Evaluation of the Interference of Tailings Disposal in the Periquito and Onça Pits on the Water Quality of Drainage Wells – Itabira Complex, Mg.**

Thiago Manzini, Vale, Brazil; Thiago Silva and Jose Neto, Watergeo Solutions, Brazil

**(A43) Dewatering and Rheology Control of Thickened and Paste Tailings to Maximize Water Recovery**

Amanda Martins, Livia Faustino, Leandro Bicalho, Helder Martins and Wagner Silva, Clariant, Brazil; Phillipe Alvarenga, Anglo American, Brazil

**(A98) Effect of Physicochemical Aspects in the Rheology of a Tailing Slurry**

Ricardo Estrada and Sergio Palma, Universidad Técnica Federico Santa María, Chile; Wendel Rodrigues, Clariant, Chile

**(A145) The Importance of Early-Stage Geochemical Characterization for Mine Waste and Tailings Management**

Claudina Gonzalez, Ignacio Ezama, Fernando Pantuzzo and Thiago Toussaint, SRK Consulting, Argentina

**Innovations in Conventional Tailings Design and Studies**

**(27 papers)**

**(A01) Guidelines for Stacking Dewatered Tailings**

Christopher Olsen, FLSmidth, USA

**(A02) Tailings Disposal Using Confinement and Dewatering Technique with Geotextile Tubes**

Eduardo Guanaes and Lizeth Ardila, Huesker, Brazil

**(A03) Deep Seabed Semi Consolidated Tailings Deposition (DSP-RSC)**

Juan Rayo and Waldo Aracena, CIMS-JRI, Chile

**(A31) Characterization Differences Between Iron Tailings from Mines of the Iron Quadrangle and the Carajás Complex**

Danilo Eloi, Pedro Louzada and Rodney Silva, Vale, Brazil

**(A37) Good Practices for the Elaboration of Hypothetical Dam Break Studies (HDBS) in Brazil**

Caique Costa, Fernando Aguilar, Mônica Almeida and Vicente Mello, AECOM, Brazil

**(A38) Hydraulic Safety for Mining Dams: Good Practices**

Fernando Aguilar, Luane Monteiro and Manuelle Pereira and Vicente Mello, AECOM, Brazil

**(A51) Technical Feasibility of the Combined Disposal of Waste Rock and Dewatered Mining Tailings**

Javier Vergara and Pedro Baltierra, DRA Global, Chile; Kevinn Quiñones, DRA Global, Peru

**(A66) A Probabilistic Methodology for Dam Break Analysis of Tailings Dams and Its Comparison to Current Methods - Procedure**

Francisco Moyano, Federico Giurich and Ignacio Ezama, SRK Consulting, Argentina

**(A73) Alternate Approach for the Development of Dry Stack Tailings Facilities**

Luciano Piciacchia, José Antonio Vides, BBA, Canada; and Rodrigo Zapata, BBA, Chile

**(A75) Analysis of the Reliability of Tailings Dry Stack by Different Probabilistic Methods in 2D and 3D**

Ana Luiza Halabi, Miguel Villalobos, GeoCoba, Brazil; and Fernanda Gavioli, Vale, Brazil

**(A88) A Benchmark on In-Pit Tailings Disposal**

Alix Becerra, Rodrigo Araya, Claudio Román, Sebastián Cisternas and Jimena Cofré, Ausenco, Chile

**(A105) Field Tests to Evaluate Combined Sedimentation, Self-Weight and Desiccation Processes for Bauxite Tailings**

Caio Marinho and Roldnei Candido, Mineração Rio do Norte, Brazil; Tácio Campos, Pontifical Catholic University of Rio de Janeiro, Brazil

**(A106) Cyclone Sand Dewatering with Metso Screens**

Jason Palmer, Metso, Australia; Einari Ojala, Metso, Chile; Hilario Gorvenia, Metso, Peru

**(A108) Tailings Treatment by Hydro-Dewatering Equipment**

Atilio Astete and Héctor Avendaño, Eral Chile

**(A111) Applicability of Digital Twins in Tailings Storage Facilities**

Alvaro Veizaga and Samuel Cuellar, Arcadis, Chile

**(A115) Enhancing the Performance of a Tailings Thickener Following the Upgrade of the Feed System**

Vahid Hassanzadeh and Brandt Henriksson, Metso, Australia; Ochirbal Bolookhuu, Freeport McMoRan, USA

**(A120) From Tacit to Explicit: Remote Operator Development Training for Enhanced Performance in Dam Closure**

Luana Araujo, Larissa Rezende, Thatyane Gonçalves and Frank Pereira, Vale, Brazil; Samira Lima and Marcelle La Guardia, Situated Consultancy and Research, Brazil

**(A121) Innovating Dam Closure: A Case Study of Remote-Controlled Equipment for Enhanced Safety and Efficiency**

Luana Araujo, Thatyane Gonçalves, Larissa Rezende and Frank Pereira, Vale, Brazil

**(A126) The Importance of a Laboratory Testing Campaign to Reinforcement Design with Dry Tailings**

Ana Dias and Lucas Mendes, ALTA Geotecnia Ambiental, Brazil

**(A134) Non-Conventional Tailings: The Reason Why**

Leonardo Parraguez, Catalina Gómez and Carlos Salinas, Paterson &amp; Cooke, Chile

**(A144) Tailings Handling with Geobags for Dewatering Iron Fine Tailings: An Operational and Geotechnical Approach**

Victor Bretas, André Viana, Flaviano Lucas, Jeter Luiz, Thiago Diniz, Vanderlei Leal and Vanderlúcio Ferreira, Vale, Brazil

**(A149) A Comprehensive Study on Tailings Runout Distance: Experimental Insights**

Sergio Palma and Isidora Pinilla, Universidad Técnica Federico Santa María, Chile; Alejandra Alvarez, JRI Ingeniería, Chile

**(A151) Validation of Innovative Digital Management Tools for Tailings Storage Facilities at OceanaGold's Waihi Operation**

Pieter Neethling, Seequent, New Zealand; Ignacio Torresi and Marina Trevizolli, Seequent, Chile; Andre Alipate, OceanaGold, New Zealand

**(A153) Challenges to Use Old Open Pit as Tailing Storage Facility**

Jhury Andrade and Harry Silva, Minsur, Peru

**(A155) Hydraulic Dewatered Stacking: Delivering Desaturated Tailings Management Without the Capital Cost of Filtration**

Phil Newman and Auel Kulmagambetova, Anglo American, United Kingdom; Andrea López, Anglo American, Chile; Mark Bruton, WSP, United Kingdom

**(A160) A Review of CTP-Based Soil Classification Correlations Applied to Mine Tailings**

Camilo Morales, Andres Gavidia and Carolina Palma, SRK Consulting, Chile

**(A162) Hydraulic Dewatered Stacking (HDS): Effects of Fines Content in the Drainage Performance of the Sands**

Phil Newman, Andrea López, Anglo American, Chile; Nicolás Bustamante, Jaime Musso and Gonzalo Suazo, Universidad Técnica Federico Santa María, Chile

**Thickened and Paste Tailings****(4 papers)****(A04) Slurry Fluidity, an Additional Design Parameter for High Density Thickeners**

David Minson, Mintecprocess Consulting & Management, Canada

**(A32) An Innovation in Paste Thickening**

Fred Schoenbrunn, Antonio Accioly and Craig Gilbert, FLSmidth, USA; Francisco Reyes, FLSmidth, Chile

**(A68) Thickened Tailings Deposits in Chile, a Perspective from Operational Control**

José Farfán and Bruno Espinace, GA Consultores, Chile

**(A143) Parameters and Considerations for Thickening and Filtration System Design – Copper Tailings**

Guido Huilca, Gerardo Gonzales, Hugo Escalante and Sherily Valencia, WSP, Peru

**Filtered and Centrifuged Tailings Design and Studies**

**(12 papers)**

**(A07) Installation and Commissioning of The GHT5000 F DOMINO: The World's Largest Filter Press - Data, Optimisations and Lessons Learned**

Stefano Mantovani, Diemme Filtration, Italy; Idemilson Fritzsche, Aqseptence Group, Brazil

**(A08) CAPEX and OPEX Depending on Tailing Properties: Two Case Studies**

Jurgen Hahn, BOKELA GmbH, Germany

**(A21) Percolations in Iron Ore Tailings Hydraulically Disposed Under the Stress of a Future Tailings Pile**

Danilo Eloi, Thiago Manzini and Miguel Paganin, Vale, Brazil

**(A34) Proposal for Guidelines on Tailings Pile Disposal: Detailing the Hypothetical Rupture Studies**

Elaine Soares, Waldemar Felitti, Fernando Aguilar, Vicente Mello, Alex Castro and Luiz Vilas Bôas, AECOM, Brazil

**(A50) Comparative Analysis of Laboratory Test Methods Used for Dry Stack Projects Field Control**

João Silva, Gêssica Pereira, Isabela Bernardes, Hely Bertozzo and Inácio Carvalho, Vale, Brazil

**(A53) A Characterization of Flotation Iron Ore Filtered Tailings**

Matheus Muniz, Rodolfo Neves and Andréa Portes, Vale, Brazil; Vinicius Assis, Progen, Brazil

**(A56) Cyclic Response of Filtered Iron Ore Tailings Determined from Cyclic Simple Shear Tests**

Roberto Santos, Federal University of Viçosa, Brazil; João Silva and Bruno Delgado, Vale, Brazil; Michéle Casagrande, University of Brasilia, Brazil

**(A61) Hydrocyclone Classification for Ceramic Vacuum Disc Filtration of Discrete Tailings Streams**

Cameron Stockman, Victoria Cranston and Roberto Fortunato, CEC Mining Systems, Canada

**(A63) Experimental Landfill of Filtered Iron Ore Flotation Tailings at Minas-Rio System**

Daniela Amorim, Laís Silva, Felipe Rezende, Thales Nicoli, Anglo American, Brazil; Uilian Albino, Fernando Saliba, TEC3 Geotecnia e Recursos Hídricos, Brazil; and Paulo Franca, F&Z Consultoria e Projetos, Brazil

**(A65) Saving Water & Tailing Dam Space for Mines - Centrifuge Technology to Recover Process Water from Tailings**

Stephen Benyo, Flottweg, USA

**(A102) Testing the Filtration Performance of Tailings**

Carlos Suárez, Aida Vega, Gloria González and Ana Fernández, ArcelorMittal Global R&D, Spain

**(A116) A Case Study – Seismic Liquefaction Potential Assessment by Artificial Neural Networks (ANN)**

Marjan Oboudi and Rafael Dávila, Hatch, Canada

**Technologies and Instrumentation for Monitoring and Surveillance**

**(14 papers)**

**(A06) Automated Geoelectrical Monitoring to Assess Structural Integrity of TSF in Real-Time: Case Studies**

Greta Tresoldi, LSI LASTEM, Italy; Azadeh Hojat, Shahid Bahonar University of Kerman, Iran; Luigi Zanzi, Politecnico di Milano, Italy



**(A11) Assumptions and Methodology for Preparing Conceptual Detection Models for Doppler Radars**

Eduardo Jardim, Lucely Gonçalves and Lucas Esteves, Vale, Brazil

**(A35) Unconventional Seismic Signatures in Tailings Dams**

Matheus Cunha, Tainã Oliveira, Felipe Jesus, Daniel Coelho and Lorena Oliveira, Tetra Tech South America, Brazil; Milena Matos, Alonso Nolasco, Carlos Gomes and Luciano Assis, Vale, Brazil

**(A36) PSInSAR Based Deformation Monitoring of Tailings Dam: The Case Study of the Şebinkarahisar, Gümüşhane, Türkiye**

Mahmut Cavur, Kadir Has University, Turkey; Sebnem Duzgun, Colorado School of Mines, USA

**(A79) Strategy to Define a Geotechnical Instrumentation Plan to Monitor Tailings Storage Facilities**

Carlos Catripán, Roberto Gesche, Universidad de Chile; Karina Monsalve, Gullibert Novoa, SERNAGEOMIN, Chile; and Raúl Fuentes, RWTH Aachen University, Alemania

**(A93) Improvements in Tailings Storage Facilities Monitoring: Lessons learned in the use of Topographic Prisms**

Ramón Nazar, Gonzalo Rojo and Hugo Quelopana, DELFING, Chile

**(A95) A New Tool for Tailings Storage Facility Management: Insights from Archived Satellite Imagery**

Veronique Nell, Daniel Ortiz and Marlin Arocha, PhotoSat, Canada

**(A97) Advances in Instrumentation for Efficient Management and Technologies to Identify Seepage Under and around Tailings**

Arturo Fahrenkrog, Jaime Magna, David Opazo, GeoMediciones HydraMetrix, Chile

**(A99) InSAR Rapid TSF Monitoring Service: Frequent Decision-Taken Geotechnical Updates**

Javier Duro, Rubén Iglesias, Dani Monells, Eduard Makhoul, Nieves Pasqualotto, Giuseppe Centolanza, Luis Yam, Gerard Ruiz, Albert Gili, Azadeh Faridi, Marc Palmada and Hernán Zapata, DARES Technology, Spain

**(A114) Enhancing Tailings Storage Facility Management through Data Insights**

Hernán Cifuentes, ATC Williams, Australia

**(A133) XRF-CPT Based Resource Estimation of Mine Tailings Potential for Raw Materials**

Eugen Martac, Fugro, Germany

**(A150) Bayesian Networks for Modeling and Statistical Prediction of the Instability of Tailing Dams**

Nicolás Bórquez, Alejandra Álvarez, and Hengels Castillo, JRI Ingeniería, Chile; Sergio Palma, Universidad Técnica Federico Santa María, Chile

**(A158) Miniaturization of Equipment for Cut-Off Wall and Soil Improvement Techniques for The Tailing Dam's Upgrade**

Esteban Venegas and Jaime Sobrino, BAUER Spezialtiefbau, Germany

**(A161) From Point Solutions to Predictive Power: How Machine Learning Can Revolutionize Tailings Management**

Ryan Hunter, Zaman Forootan and Daniel Molina, Hatch, Canada

**Governance and Operational Experiences****(9 papers)****(A74) Quality Management Challenges in Tailings Dams: GISTM Analysis and Chilean Insights**

Luis Gabriel Gonzalez, WSP, Chile; and José Mello, NeoGeo Consult, Chile

**(A77) Methodology Proposal for Gap Assessment in GISTM Implementation**

Maria Jose Zubieta, Bruno Espinace and Emilio Lorca, GA Consultores, Chile

**(A92) Improving Fulfillment of Sustainability GISTM Principles through a Digital Twin of Copper Mining Tailings Storage Facilities: Case Study in Chile**

Paulo Fuentes and Iván Elgueta, Alaya Digital Solutions, Chile

**(A110) Analysis of GISTM Requirements as Failure Risk Controls for Tailings Storage Facilities**

Danielle Menezes, Tatiana Santos and Hernani Mota de Lima, Federal University of Ouro Preto, Brazil

**(A119) Relevance of Information Management for Tailings Dam Governance**

Gabriela Drumond, Gustavo Oliveira and Manoela Araújo, Vale, Brazil

**(A123) Achievements and Remaining Challenges in GISTM Implementation After August 5th 2023**

Mauricio Ortúzar, Emilio López, Nathalie Astorga, Ignacio Pizarro and Andrea Esquivel, Nava Consulting, Chile

**(A125) Experiences and Lessons Learned during the Evaluation of the ALARP Principle**

David Hernandez and Samuel Cuellar, Arcadis, Chile

**(A131) RTFE: How this New Role has Improved Safety Governance for TSF**

Victor Bretas, Raphael Rodrigues, Jeanne Castro, Marina Borges, Filipe Costa, Gustavo Marçal and Daniel Bastos, Vale, Brazil

**(A159) Enhancing Internal Controls and Governance in Tailings Management with the COSO Framework**

André Winter and Poliana Menezes, KPMG, Brazil

**Tailings Closure Management****(4 papers)****(A48) Challenges of the Tailings Dam Decommissioning in Brazil**

Gino Vizcarra, Thatyane Gonçalves, Ricardo Ramos, Renata Araujo and Frank Pereira, Vale, Brazil

**(A49) Case Study: An Upstream Raised Dam Decharacterization in Iron Quadrangle, Minas Gerais, Brazil**

Victor Rocha and Marcia Palhares, Vale, Brazil; Henrique Pereira, Progen, Brazil

**(A83) Application of a Micropile System in the Spillway of a Dam in Quadrilátero Ferrífero**

Bruna Vargas, Progen, Brazil; Victor Rocha and Lucio Yamamoto, Vale, Brazil

**(A154) Closure of the Decant Tunnel System in the TSF B3 – San Rafael Mining**

Pablo Guzmán and Harry Silva, Minsur, Peru

**Inclusion of Stakeholders in Tailings Planning****(2 papers)****(A05) Tailings Management System (TMS): Can Only Be Effective with Wider Collaboration**

Anjan Kundu, GHD, Australia

**(A72) Collaborating with Stakeholders to Transform Tailings into Valuable Resources for Other Industries**

Stuart Sandler, Circular Mine, USA; Leonardo Brescia, BPlus, Chile; Enoc Quinoñes, Grupo Brauth, Chile; and Michael Ingwersen, Circular Mine, Australia

**Poster Session****(17 papers)****(A12) Improvement of a Biogeotechnical Process to Control Seepage from a Tailings Dam**

Davor Cotoras, Constanza Marchant, Franco Cárdenas, Jorge Osman and Pabla Viedma, Universidad de Chile

**(A28) The Role of Geotechnical Asset Maintenance in Monitoring Dams and Tailings Piles**

Lucely Goncalves, Beatriz Friguetto, Samuel Silva, Waldir Azevedo Junior and Rodrigo Basílio, Vale, Brazil

**(A52) Correlation of Stress-Strain Data with Ground-Based Radar Monitoring in Tailings Dams**

Clíscia Silva, Felipe Guerra, Fabiane Silva, Keilla Xavier, Yngrid Ferreira and Frederico Juliano, Vale, Brazil

**(A55) Commingling of Waste Rock and Tailings: Geotechnical Laboratory Characterization**

Nicolas Bustamante, Gonzalo Suazo and Jaime Musso, Universidad técnica Federico Santa María

**(A76) Tailings Storage Alternatives Assessment in a Mine in Latin America**

Santiago Pastine, Ignacio Ezama, María del Pilar Rico and Nicolás Alscher, SRK Consulting, Argentina

**(A84) Co-Disposal Facilities: Aspects for Consideration in the Development of Integrated Mine Solutions**

María del Pilar Rico, Ignacio Ezama and Diego Marrero, SRK Consulting, Argentina

**(A103) The role of the 3D Geological Model as digital twin in modern tailing storage: The case of Mount Polley TSF failure**

Lucas Torres and Ignacio Escudero, Seequent, Chile y Amanda Fuccio, Seequent, Brazil

**(A112) Management and Design Challenges in Tailings Dams**

Rubén Vargas and César Olivos, Knight Piésold Consultores, Peru

**(A136) Comparison of Stability Evaluation Using Hydrostatic and Non-Hydrostatic Models for a Tailings Deposit**

José Ipanaqué, Luz Solano, Víctor Liñán and Jorge López, WSP, Peru

**(A140) Geotechnical Monitoring Plan for Tailing Dams: An Overview**

Eduardo Diniz, CheckSlope, Brazil; Jefferson Mendes, Federal Institute Minas Gerais, Brazil

**(A141) Liquefaction Potential Evaluation of Dam Foundation in Lacustrine Soils with Semi-Empirical Methods**

André Cabrera, César Sánchez, Bryan Sánchez and Jorge López, WSP, Peru

**(A142) Hydraulic Design of Simultaneously Operating Slurry Boxes**

Guido Huilca, Piero Chávez, Alvaro Linares and Hyojan Huaman, WSP, Peru

**(B01) Geotechnical Design Challenges in Dynamic Stability Analysis to Ensure the Safety of Large Dams in Mine Tailings Storage Facilities in Chile**

Bastian Rojas and Carlos Cacciuttolo, Universidad Católica de Temuco, Chile

**(B03) Influence of Solids Concentration and Rheological Parameters on Head Loss in Tailings Transportation**

Emilio León and Sergio Palma, Universidad Técnica Federico Santa María, Chile

**(B04) Estimation of Moisture Values in Tailings Deposits Using a Petrophysical Approach**

Aaron Moya, Diana Comte, Leopoldo Córdova, Daniel Díaz and Brian Townley, Universidad de Chile; Adrien Dimech, École de Technologie Supérieure, Canada

**(B06) Technical, Economic and Environmental Effects of Using Mine Tailings to Reduce Cement in 3D-Printable Concrete**

Claudia Eugenin, Iván Navarrete and Wernher Brevis, Pontificia Universidad Católica de Chile

**(B08) Manufacture and Optimization of Artificial Aggregate Based on Geopolymers Made with Mine Tailings**

Estefanía Loyola, Iván Navarrete and Álvaro Videla, Pontificia Universidad Católica de Chile

## PAPERS DISTRIBUTION

<b>Mining Companies</b>	<b>(41 papers)</b>
Anglo American, Brazil (2)	
Anglo American, United Kingdom	
Anglo American, Chile (2)	
ArcelorMittal Global R&D, Spain (2)	
ArcelorMittal Mining, United Kingdom	
Cía. Minera Contractual Candelaria, Chile (1)	
Freeport McMoRan, USA (1)	
Mineração Rio do Norte, Brazil (1)	
Minsur, Peru (3)	
OceanaGold, New Zealand (1)	
Vale, Brazil (28)	

<b>Engineering and Consulting Companies</b>	<b>(53 papers)</b>
ALTA Geotecnia Ambiental, Brazil (1)	
Ausenco, Chile (1)	
Arcadis, Chile (2)	
ATC Williams, Australia (1)	
Barr Engineering Company, USA (1)	
BBA, Canada (1)	
BBA, Chile	
CEC Mining Systems, Canada (1)	
Circular Mine, USA (1)	
Circular Mine, Australia	
CheckSlope, Brazil	

Dam Engineering Projects, Brazil  
DELFINING, Chile (1)  
DF+ Engenharia, Brazil (1)  
DRA Global, Chile (1)  
DRA Global, Peru  
F&Z Consultoria e Projetos, Brazil  
GA Consultores, Chile (3)  
GeoCoba, Brazil  
Geomediciones Hydrametrix, Chile (1)  
GHD, Australia (1)  
Hatch, Canada (2)  
HIDRICA Consultores, Chile (1)  
Huesker, Brazil (1)  
IHC Mining, The Netherlands (1)  
JRI Ingeniería, Chile (2)  
Knight Piésold Consultores, Peru (1)  
KPMG, Brazil (1)  
LSI Lastem, Italy (1)  
Mintecprocess Consulting & Management, Canada (1)  
Nava Consulting, Chile (3)  
Paterson & Cooke, Chile (1)  
Progen, Brazil  
Seequent, Chile (1)  
Seequent, Brazil  
Seequent, New Zealand  
SMI Ingenieros, Chile  
SHIMIN Ingeniería, Chile (1)  
Situating Consultancy and Research, Brazil  
Stantec, Chile (1)  
SRK Consulting, Argentina (5)  
SRK Consulting, Chile (1)  
TBretas, Brazil  
TEC3 Geotecnia e Recursos Hídricos, Brazil  
TPF Engenharia, Brazil  
TPF Consultores de Engenharia e Arquitetura, Portugal  
Watergeo Solutions, Brazil  
WSP, Peru (8)  
WSP, Chile (2)  
WSP, Argentina  
WSP, United Kingdom  
WSP, USA

**Supplier Companies****(17 papers)**

AECOM, Brazil (3)  
Alaya Digital Solutions, Chile (1)  
Aqseptence Group, Brazil  
BAUER Spezialtiefbau, Germany (1)  
BOKELA GmbH, Germany (1)

BPlus, Chile  
Clariant, Brazil  
Clariant, Chile  
DARES Technology, Spain (1)  
Diemme Filtration, Italy (1)  
Eral Chile (1)  
Flottweg, USA (1)  
FLSmith, Chile  
FLSmith, USA (2)  
Fugro, Germany (1)  
GeoSystems, USA (1)  
Grupo Brauth, Chile  
Klohn Crippen Berger, Brazil (1)  
Metso, Australia (1)  
Metso, Chile  
Metso, Peru  
Phibion, Chile  
PhotoSat, Canada (1)  
Tetra Tech South America, Brazil

**Universities and Research Centers****(15 papers)**

CIMS-JRI, Chile (1)  
Colorado School of Mines, USA  
Kadir Has University, Turkey (1)  
KTH Royal Institute of Technology and Stockholm University, Sweden  
Federal Institute Minas Gerais, Brazil  
Federal University of Minas Gerais, Brazil  
Federal Center for Technological Education of Minas Gerais (CEFET), Brazil  
Federal University of Ouro Preto, Brazil (1)  
Fluminense Federal University, Brazil  
Politecnico di Milano, Italy  
RWTH Aachen University, Alemania  
São Paulo State University, Brazil  
Shahid Bahonar University of Kerman, Iran  
Universidad de Chile (4)  
Universidad Técnica Federico Santa María, Chile (2)  
University of Brasília, Brazil  
Pontifical Catholic University of Rio de Janeiro, Brazil (1)  
Pontificia Universidad Católica de Chile (2)  
Universidad Católica de Temuco (1)  
Universidad de Castilla La Mancha, Spain  
Universidad de Talca, Chile (1)  
Universidad de Santiago de Chile

**State-Owned Institutions, NGOs and Government Agencies**

Ministerio de Obras Públicas, Chile  
SERNAGEOMIN, Chile