

INAP OpCom Meeting
April 10, 2014
Tucson, Arizona, USA

Participants: Stephen Foot – Antofagasta (via phone), Bill Upton – Barrick (via phone), Johnny Zhan – Barrick (via phone), Mike Steward – Freeport, Brett Waterman – Freeport, Charles Bucknam – Newmont, Stephanie Stoeberl – Newmont, Rich Borden – Rio Tinto, Terry Chatwin – INAP, Andrea Chatwin – INAP

Invited Participant: Adam Whitman – Yamana

Presenters: Mike O’Kane – O’Kane Consulting, (via Go-to-Meeting), Mary Poulton – University of Arizona

Welcome: Terry Chatwin welcomed all participants to the meeting and each participant introduced him/ or herself

Presentation & Discussion of Soil Cover Guidance Document: Mike O’Kane

- See attached presentation –update on the project (Brett or Mike to send to Terry)
- A draft of Phase One will be completed by April 23, 2014 and will then be reviewed by INAP members
 - Mike O’Kane will present this at the AMD conference in Adelaide, Australia in April 30, 2014
- Phase Two is scheduled to be completed in March of 2015 so that the document can be rolled out at the 10th ICARD in April of 2015 in Santiago, Chile
 - In addition to OKC staff, eight extremely qualified and experienced mine-closure engineers and scientists from across the globe are participating in the development of this guidance document.
 - The TAG team is planning to meet face-to-face in April, 2014 at the AMD conference
 - Ron Nicholson has also volunteered to be a reviewer of the document as well as the TAG
 - Global Alliance members have also volunteered to review the document
- Case Studies will be utilized in the document as illustrations of design principles and impacts of climatic conditions on design elements
 - A number of case studies are being used in the document; however, additional case studies could be used to illustrate other climatic conditions – Climatic regions? Commodities/Geology?
 - O’Kane Consulting has developed hypothetical or generic case studies for the document
 - Mike Aziz of Gold Corp has offered to have Equity Silver be one of the case studies
 - It is desirable for mining companies need to offer site for use in this document

INAP Budget Update: Terry Chatwin

- Cash in bank on March 31, 2014 -
 - INAP is currently in a comfortable position with \$300,000+ in the bank
 - Sufficient funds to cover INAP’s outstanding expenses and research projects
 - The major research cost item initiated in 2013 was the Soil Cover Guidance Document at \$169,000

Presentation – Dr. Mary Poulton, Chair-Mining Engineering, University of Arizona

- **“Overview of the Lowell Institute for Mineral Resources”**
 - One of the main purposes of the Lowell Institute is to create a venue for gathering the full range of disciplines at the University of Arizona (i.e., geo-science, public health,

environmental science, philosophy, management information and social science) to address the issues facing the mining industry and to build relationships and trust with mining industry stakeholders

- See attached presentation (Mary to send Terry)

Education and Capacity Building : Terry Chatwin

- Shortened, simplified illustrated GARD Guide understandable to all interested stakeholders
 - Artwork similar to the Soil Covers Guidance Document
 - Mary Poulton has prepared publications such as this but her cost is high
- Global Alliance Capacity Building
 - Case studies competition will help
 - ADTI will develop a template for the case studies
 - Winning case studies should develop a poster to display at the 10th ICARD
- Biogeochemical Advisory Group
 - Claudio Andrade is unable to champion this activity
 - Bill Upton will check on Claudio's situation
 - Does anyone know of someone who could champion this activity
- 10th ICARD Planning
 - Scheduled for April 21-25, 2015 in Santiago, Chile in conjunction with the 2015 IMWA conference
 - The call for abstracts is technically due in June, but has been extended until after the 2014 IMWA conference which will be held in China, August 2014.
 - INAP is seeking technical editors for the following areas: Covers, Geochemistry, Drainage Collection and Treatment, Mitigation and Prevention, Pit Lakes, and Prediction of Drainage Chemistry

Fostering Best Practice: Brett Waterman and Terry Chatwin

- Tour of FMI's Sierrita Pilot Plants on Thursday afternoon, April 10, 2014 and the Bisbee Facility reclamation project on Friday morning, April 11, 2014
- Sulfate Treatment Workshop – February 27-28, 2014
 - A 1 ½ day workshop was held following the SME in Salt Lake City, Utah
 - Over 120 participants from 5 different countries
 - Program consisted of 21 presenters, a 6 person panel discussion, break-out sessions to discuss 6 focused topics
 - Field trip to Kennecott's (Rio Tinto) RO plant
 - Outcomes from the workshop
 - In conjunction with the 3 sponsors (Veolia, Golder and Arcadis), the workshop made a profit of \$7,000
 - Develop a flowchart of sulfate expertise and best practice
- Next workshop
 - Path Forward at the 10th ICARD

Stakeholder Engagement : Terry Chatwin

- Stakeholder mapping
 - A template which included **Entity, Influence** and **Interest** was distributed and discussed
 - Interest of Global Alliance members was discussed
 - How can newer GA members incorporate consultants and other service providers?
 - SANAP was discussed in particular since the 10th ICARD will be in Chile in May, 2015

- Need a leader outside of the mining industry to step forward
 - ❖ University connection – perhaps talk to Mary Poulton since she is collaborating with the Catholic University in Santiago
 - ❖ Consultants – Golder – Jake Waples (travels between US and Chile)
 - ❖ Fundacion Chile - Carmen Gloria has gone back to work for them
- Animus River Stakeholders Group
 - Brainstorming session suggested by INAP held in Denver, April 1, 2014. Terry Chatwin attended
 - Included about 25 experienced ARD practitioners to assist in selection of Innocentive Challenge winners
 - Discussions were relevant and useful

Next OpCom Meeting

- Early December 2014 – Vancouver, BC in conjunction with the BC MEND Conference

ACTION ITEMS

1. Terry Chatwin will develop and distribute flowchart of Sulfate expertise and best practice as gleaned from the Sulfate workshop held in Salt Lake City
2. Terry Chatwin will continue to work on getting the Bio-Geochemical advisory group operational
3. Terry Chatwin will work with ADTI for the case study competition template
4. Terry Chatwin will develop a list of editors for the abstracts for ICARD
5. Terry Chatwin will develop list of reviewers for Phase One of the Soil Covers Guidance Document
6. Terry Chatwin will continue to interface with the Animus River Stakeholders Group