

SECOND TIME (TOXICOLOGICAL INVESTIGATIONS INTO MINING EFFLUENTS) WORKSHOP

**November 22 and 23, 2001
Travelodge Hotel Ottawa West
Carleton Room (Lower Level)
1376 Carling Avenue
Ottawa, ON K1A 7L5**

AGENDA

OBJECTIVES:

- To share new information and developments, including success stories and challenges, with respect to the acute toxicity of mining effluents;
- To discuss the findings of TIME-sponsored projects conducted to date and potential future projects; and
- To discuss next steps with a focus on the future of the TIME Network.

DAY 1 of Workshop – Thursday, November 22
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- 8:15 Registration**
A continental breakfast will be provided
- 8:55 Introductions and Welcoming Remarks**
Charlene Hogan, TIME Secretariat
- 9:05 Purpose and Approach of Workshop/ Rules of Procedure**
Round Table Introduction of Delegates
Hajo Versteeg, Facilitator
- 9:15 Status of the Proposed Metal Mining Effluent Regulations (MMER)**
Patrick Finlay, Environment Canada

Toxicity Reduction Evaluation (TRE) Protocols and Toxicity Investigations

- 9:45 Guidance Document for Conducting Toxicity Reduction Evaluation (TRE)**
Investigations for Canadian Metal Mining Effluents
Lesley Novak, ESG International Inc.

10:15 Break (15 minutes)

- 10:30 A Combined Toxicity Identification Evaluation/Toxicity Treatment Evaluation (TIE/TTE) Approach to Identification of Effective Treatments for Reduction or Elimination of Mine Effluent Lethality (*The NALMET Program*)**
Don Hart, Beak International Incorporated

- 11:00 The Raglan Story**
Denis Kemp or Bernie Swarbrick, Falconbridge Limited
- 11:30 Toxicity Identification Evaluation of Effluent from a Mine (*Homestake Canada*)**
Howard Bailey, EVS Environment Consultants
- 12:00** *Lunch (60 minutes)*
Lunch will be provided
- 13:00 Application of Source Investigations and Toxicity Treatability Evaluations for Toxicity Reduction of a Final Effluent at a Canadian Metal Refinery (*Inco*)**
Lesley Novak, ESG International Inc.
- 13:30 A Case Study of Water Treatment Plant Effluent Toxicity Characterization, Rouyn-Noranda Area, Quebec**
Craig Ford, Inmet Mining Corporation
- 14:00 Group Discussion on Findings of TRE Protocols and Toxicity Investigations**
- 14:30** *Break (15 minutes)*

Ammonia Toxicity in Mining Effluents

- 14:45 Video on “Best Management Practices for Ammonia”**
Brian Bell, Mining Association of Canada
- 15:15 Dome Mine Copper Toxicity Control with EDTA and Ammonia Toxicity Control with Post pH Adjustment**
David Yaschyshyn, Placer Dome (CLA) Limited – Dome Mine
- 15:45 Influence of Water Quality on the Acute Lethality of Ammonia**
Arden Rosaasen, COGEMA Resources Inc.
- 16:15 Group Discussion on Findings of Ammonia Toxicity in Mining Effluents**
- 16:45 Overview of Issues for Discussion on Day 2**
Hajo Versteeg, Facilitator
- 16:50 Close of Day 1 Session**

Acute Lethality Testing

- 17:30 to 19:00 Wine and Cheese Reception (Carleton Room)**

DAY 2 of Workshop, Friday November 23
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8:00 Morning Reception
Coffee and doughnuts will be provided

8:25 Opening of Day 2
Hajo Versteeg, Facilitator

Acute Lethality Testing

8:30 Development of a Guidance Document for Acute Lethality Testing of Metal Mining Effluents
Guy Gilron, ESG International Inc.

9:00 Evaluation of Toxicity Test Results for Split Mine Effluent Samples
Patti Orr, Minnow Environmental Inc.

9:30 Rainbow Trout Liver Hepatocyte Test as a Potential Alternative to the Acute Toxicity Method For Screening Effluents
Richard Scroggins, Environmental Technology Centre, EC

10:00 Group Discussion on Findings of Acute Lethality Testing

10:30 Break (20 minutes)
Coffee will be provided

Environmental Research Issues

10:50 Literature Review of Chemistry and Toxicity of Mercury, Cadmium, Selenium and Antimony in Metal Mining Effluents
Don Hart, Beak International Incorporated

11:20 Creating a Model for Predicting Metal Toxicity to Invertebrates
Julie Schroeder, University of Waterloo / Ontario Ministry of the Environment

11:50 Public Interest Research Issues
Glenda Ferris, Northern Ecology Action Committee

12:20 Lunch (60 minutes)
Lunch will be provided

Environmental Research Issues, Continued

13:20 Group Discussion on Environmental Research Issues

Panel Discussion on the TIME Network

13:50

Panel Discussion

Representatives from the Federal Government, Provincial/Territorial Government, Environmental Non-Governmental Organizations, Industry and Academia to address issues relevant to future direction of TIME

Panelists

- Environment Canada – Patrick Finlay
- Natural Resources Canada – Jim McGeer
- Ontario Ministry of the Environment – Julie Schroeder
- Canadian Environmental Network – Brennain Lloyd or Sue Moodie
- Mining Association of Canada – Walter Sencza
- University of Saskatchewan – Karsten Liber

The Process

Prior to the Workshop the Panelists will be given three questions to consider. During the Panel Discussion each Panelist will be allocated 10 minutes to address these questions. After the Panelists have completed their comments the discussion will be opened to the floor.

Guiding Questions :

- What important contributions has the TIME Network made towards helping to resolve effluent toxicity problems? Discuss 1 – 2 issues.
- What are the remaining challenges in mining effluent toxicity?
- How do you see the mandate of TIME evolving to address these concerns?

14:50

Open Discussion

16:00

Close of the Workshop