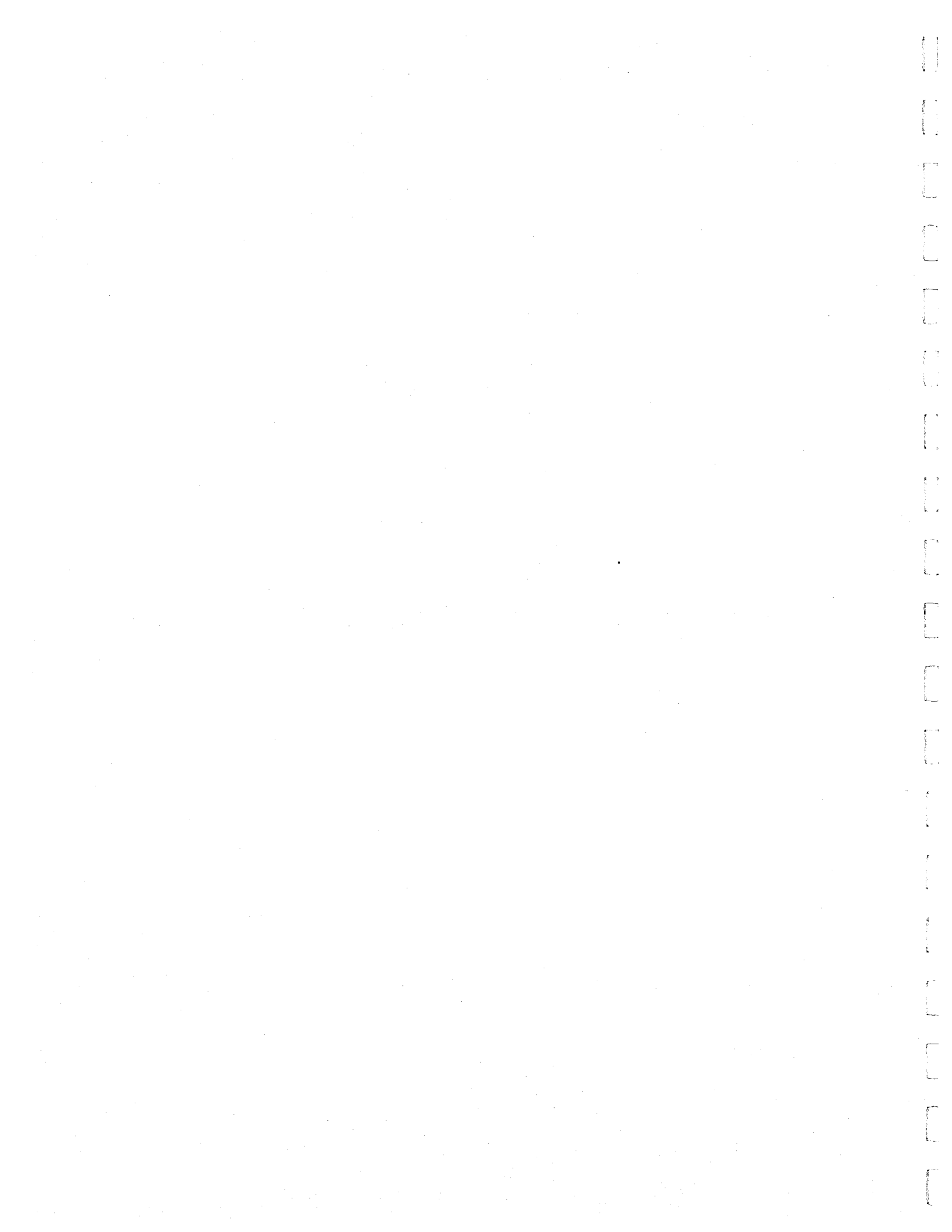


F.2. Toxicological Investigations of Mining Effluents  
(TIME): Status Report

*by*  
*Gordon Ford*  
*BC Ministry of Environment, Lands & Parks*



# Toxicological Investigations of Mining Effluent (TIME)

## Status Report

Gordon Ford PEng.  
Ministry Of Environment, Lands & Parks



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## Why

- **Proposed revision of the Federal Metal Mining Liquid Effluent Regulation will require:**
  - **Effluent to be Non-Lethal to Rainbow Trout (96 hr LC 50 at 100% effluent)**
  - **TSS to be less than 30 mg/L in a grab sample and 15 mg/L for a monthly mean**
  - **Cyanide to be less than 2 mg/L in a grab and 1mg/L for a monthly mean**



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## What is Effluent

- **Effluent will Include:**
  - **Discharge from a Tailings Pond**
  - **Discharge from a Sedimentation Pond**
  - **Discharge from Diversion Ditches ?**



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## Initiative Goals

- **To Share information on the toxicity of mining effluents**
- **To identify the challenges:**
  - **Knowledge Gaps**
  - **Causes of Toxicity**
- **To develop solutions to mining effluent toxicity**



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## **Initiative Status**

- **Initial workshop held in Ottawa on November 25 - 26, 1999**
- **CANMET will provide Secretariat function**
- **MAC, Environment Canada and CANMET will provide funds.**



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## **Who - Initiative Participants**

- **CANMET (Secretariat)**
- **Environment Canada**
- **Mining Association of Canada**
- **Provinces (BC ON ?)**
- **CEN (Canadian Environmental Network)**
- **First Nations, etc.**



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## Projects Planned (2000)

- **NALMET (Non-Acutely Lethal Mining Effluent Techniques) Env.Can. \$150k)**
- **Assessment of Ammonia Toxicity / Management / Treatment (\$35k)**
- **Manual for Toxicity Identification / Reduction evaluation (TI/RE) \$50-75k)**
- **Inventory of mine toxicity problems (\$35k)**
- **Literature review for Available Technology (\$10k)**



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## Questions - Challenges

- **Is 96 hr LC 50 test suitable for regulatory control**
  - Is analytical precision better than  $\pm 50\%$
- **Is there a relationship between end of pipe toxicity and receiving environment - Environment Effects Monitoring (EEM)**
- **Harmonization of Regulations**
  - Federal - Provincial Environmental Assessment
  - Provincial Acts, Regulations, Permits



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## How Does One Get Involved

- **In conjunction with initiative participants**
- **Contact TIME Secretariat**
  - Jennifer Nadeau
  - CANMET, Natural Resources Canada,
  - (613) 992 1762
- **Contact Mining Association of Canada**
  - Elizabeth Gardiner, (613) 233 9391 ext 328



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