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**MEETING OF THE PARTIES TO THE  
CONVENTION ON THE PROTECTION  
AND USE OF TRANSBOUNDARY  
WATERCOURSES AND  
INTERNATIONAL LAKES**

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Workshop on the safety of tailing management facilities

Yerevan, 12–14 November 2007

## **REPORT OF THE WORKSHOP ON THE SAFETY OF TAILING MANAGEMENT FACILITIES**

### **Introduction**

1. The Workshop on the safety of tailing management facilities, which was mandated by the Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents and the Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (see ECE/CP.TEIA/15, Part II: Decisions, Decision 2006/4) was held in Yerevan from 12 to 14 November 2007. It was organized by the Ministry of Nature Protection of Armenia with the financial support from the Federal Ministry for Environment, Nature Conservation and Nuclear Safety of Germany.

2. The workshop was held under the auspices of the United Nations Economic Commission for Europe (UNECE) within the framework of the Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents and the Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

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## **I. OBJECTIVES**

3. The Parties to both Conventions launched a process to draw up safety guidelines and good practices for tailing management facilities within the framework of UNECE. The Joint Ad Hoc Expert Group on Water and Industrial Accidents, established to consider issues of common concern to both Conventions, was given responsibility for the process. The group established a steering group comprised of experts on mining and tailings to draft the document, which would be considered further by the Joint Expert Group and later adopted by the Conventions' governing bodies.

4. This workshop enabled representatives of competent authorities and experts from the public and private sectors, in particular tailing dam operators, to share information and experience on management systems, inspections and emergency planning for tailing dams, as well as on their pre-construction and closing. Participants discussed the issue of abandoned and orphan tailing dam sites, including their decommissioning and remediation, as well as training and education for mining professionals on safety.

## **II. PARTICIPATION**

5. The workshop was attended by experts from the following 15 UNECE member countries: Armenia, Bulgaria, the Czech Republic, Georgia, Germany, Hungary, Kyrgyzstan, Moldova, Poland, Romania, Sweden, Tajikistan, The former Yugoslav Republic of Macedonia, Ukraine and Uzbekistan. Experts from the United Nations Environment Programme (UNEP) and the United Nations Industrial Development Organization (UNIDO) also attended. An expert from the Caucasus Environmental NGO Network (CENN) also participated in the meeting, as did experts from the mining sector: Deno Gold Mining CJSC, Armenian Copper Programme CJSC, and Swedish Association of Mines, Mineral and Metal Producers (SveMin).

## **III. OPENING, WELCOME ADDRESS, SETTING THE SCENE**

6. Ms. Anahit Aleksandryan, Head of the Hazardous Substances and Waste Management Department, Ministry of Nature Protection of Armenia, and Chair for the first day, opened the workshop and introduced Mr. Aram Harutyunyan, Minister of Nature Protection of Armenia.

7. Mr. Harutyunyan welcomed the participants in Armenia and expressed his satisfaction that the workshop was taking place in Yerevan. He stressed the importance of tailing dam safety for Armenia and expressed his hope that the workshop and the safety guidelines would contribute to improving the safety of tailing management facilities operation in UNECE countries.

8. Mr. Lukasz Wyrowski, UNECE secretariat, welcomed the participants on behalf of the UNECE and expressed his gratitude to Armenian Ministry of Nature Protection for organizing the workshop and to the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety for providing financial support for it.

9. Mr. Gerhard Winkelmann-Oei (Germany), Co-Chairperson of the Joint Expert Group, set the scene for the workshop by reiterating the mandate given for developing the safety guidelines

and good practices for tailing management facilities within the organization of the workshop. He reported on the work being carried out by the steering group, which had drawn up the first draft of the safety guidelines submitted for discussion at the workshop.

#### **IV. PROGRAMME**

10. The workshop was divided into three sessions:
  - (a) Session I: Overview on the key issues addressed by the guidelines;
  - (b) Session II: Feedback from stakeholders on the draft guidelines, including on the evaluation of their future implementation;
  - (c) Session III: Discussion on the improvement of the guidelines.
11. The workshop programme, including a list of presentations, is given in the annex. The presentations are available on the UNECE website at:  
<http://www.unece.org/env/teia/water/tailingdams/yerevan-document.htm>.

#### **V. DISCUSSION ON IMPROVEMENTS OF GUIDELINES**

12. The concluding session consisted of a discussion on the draft safety guidelines and good practices for tailing dams. Mr. Winkelmann-Oei chaired this session.
13. Participants made valuable comments regarding the principles on safety and recommendations to UNECE member countries, competent authorities and tailing dam operators. Numerous comments were also made regarding the technical annex. The steering group took note of all the comments so they could consider them while preparing the second version of the document. It was agreed that after the second version was finalized by the steering group, it will be circulated to UNECE member countries, tailing dam operators and non-governmental organizations, in English and Russian, for a final round of comments.

#### **VI. CLOSING OF THE WORKSHOP**

14. Mr. Winkelmann-Oei, as the Chair of the second day, thanked the speakers for their interesting presentations and the participants for their valuable input to the workshop discussions. He noted that he considered the workshop to have contributed to the exchange of experience and good practice on national and international developments regarding the prevention, control and reduction of tailing dam failure. He also stressed the important role of the workshop participants in shaping the draft safety guidelines and good practices for tailing management facilities.
15. Mr. Winkelmann-Oei expressed his wish that the safety guidelines will be widely applied in UNECE region after they were adopted by the governing bodies to both Conventions. He also informed participants that the Joint Expert Group should be working with countries that would need assistance in implementing the guidelines.

## **VII. VISIT TO A TAILING FACILITY AT ARARAT**

16. A site visit to a tailing management facility at Ararat was organized on 14 November 2007. During the visit, workshop participants had the possibility to talk to a representative of the tailing facility operator, and to pose questions related to safety.

Annex

**WORKSHOP PROGRAMME**

<b>SESSION I: Overview of the key issues addressed by the guidelines</b>	
1.	Risk and hazard assessment for tailing dams - <i>Speaker:</i> Prof. Pavel Danihelka, Head of the Laboratory of Risk Research and Management, Faculty of Safety Engineering, Technical University of Ostrava, Czech Republic
2.	Avoiding tailing dam failures: good practice in prevention - <i>Speaker:</i> Prof. Philip Peck, Associate Professor, Lund University, Sweden
3.	Tailing dam inspections - <i>Speaker:</i> Ms. Juliane Knaul, Legal Expert, Brandenburg Agency for Mining, Geology and Minerals
4.	Emergency planning for tailing dams - <i>Speaker:</i> Prof. Wilhelm G. Coldewey, Head Chair of Applied Geology, University of Münster, Germany
5.	Abandoned sites - Assessment and risk management - <i>Speaker:</i> Lars-Ake Lindahl, Director, Environmental Affairs, Swedish Association of Mines, Mineral and Metal Producers
6.	Training for tailing safety - <i>Speaker:</i> Mr. Fritz Balkau, Consultant
7.	Public participation and information to the public throughout the phases of tailing dam life cycle - <i>Speaker:</i> Ms Knaul, on behalf of Mr. Klaus Freytag, President, Brandenburg Agency for Mining, Geology and Minerals
<b>SESSION II: Feedback from stakeholders on the draft guidelines, including the evaluation of their future implementation</b>	
1.	Implications of earthquakes on the stability of tailing dams - <i>Speaker:</i> Tobias Rudolph, Integrated Reservoir Modeling Team, Shell International B.V.
2.	European Union rules for safe management of mining waste facilities - <i>Speaker:</i> Mr. Peter Kovacs (Hungary), on behalf of Mr. Fotios Papoulias, DG Environment - Unit G.4 "Sustainable Production & Consumption"
3.	The safety of tailing management facilities in Ukraine in view of the future implementation of the guidelines - <i>Speaker:</i> Dr. Grigori Shmatkov, Chairman, Environmental Association "Ekomet" in Ukraine
4.	Tailing dam safety and implementation of safety guidelines by a tailing dam operator - <i>Speaker:</i> Ms. Lucy Hewlet, Deno Gold Mining CJSC
5.	The role of the Public Environmental Information Centre on mining in view of the future implementation of the guidelines - <i>Speaker:</i> Ms. Nana Janashia, Executive Director, Caucasus Environmental NGO Network (CENN)
<b>Section III: Discussion on the improvement of the guidelines</b>	
Discussion on the draft safety guidelines/good practices <i>Discussion leader:</i> Mr. Gerhard Winkelmann-Oei, Federal Environment Agency, Germany	
<b>Chair's closing remarks</b>	

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