



Technical meeting
to prepare for the on-site training in Tajikistan and to enhance capacity for governance and policy making on tailings safety in Central Asia

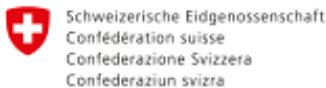
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Conduct of the on-site training: groups, practical information and next steps in advance of the evaluation workshop



Recommendations for visual inspection of tailing dumps

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Visual inspection is an essential element of the tailings safety assessment.

It allows you to identify deviations from the project and violations of the normal operation of the object.

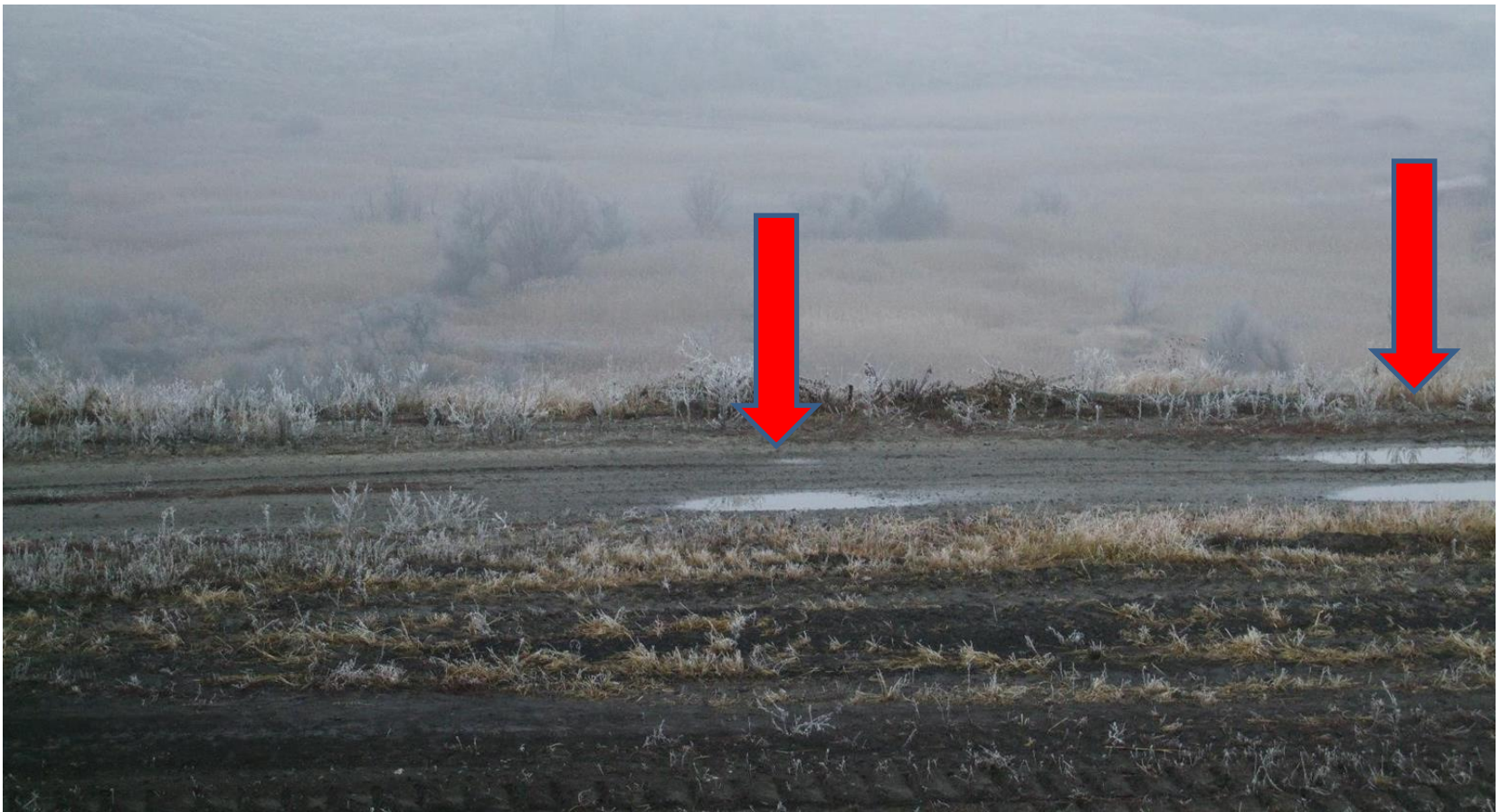
It is obvious that over time, the number and quality of such deviations will increase, which will be reflected in the appearance of signs indicating problems with the safe operation of tailing dumps.

These signs can be divided into two groups – explicit, well-manifested visually and allowing for an unambiguous assessment, and implicit, hidden, non-obvious.

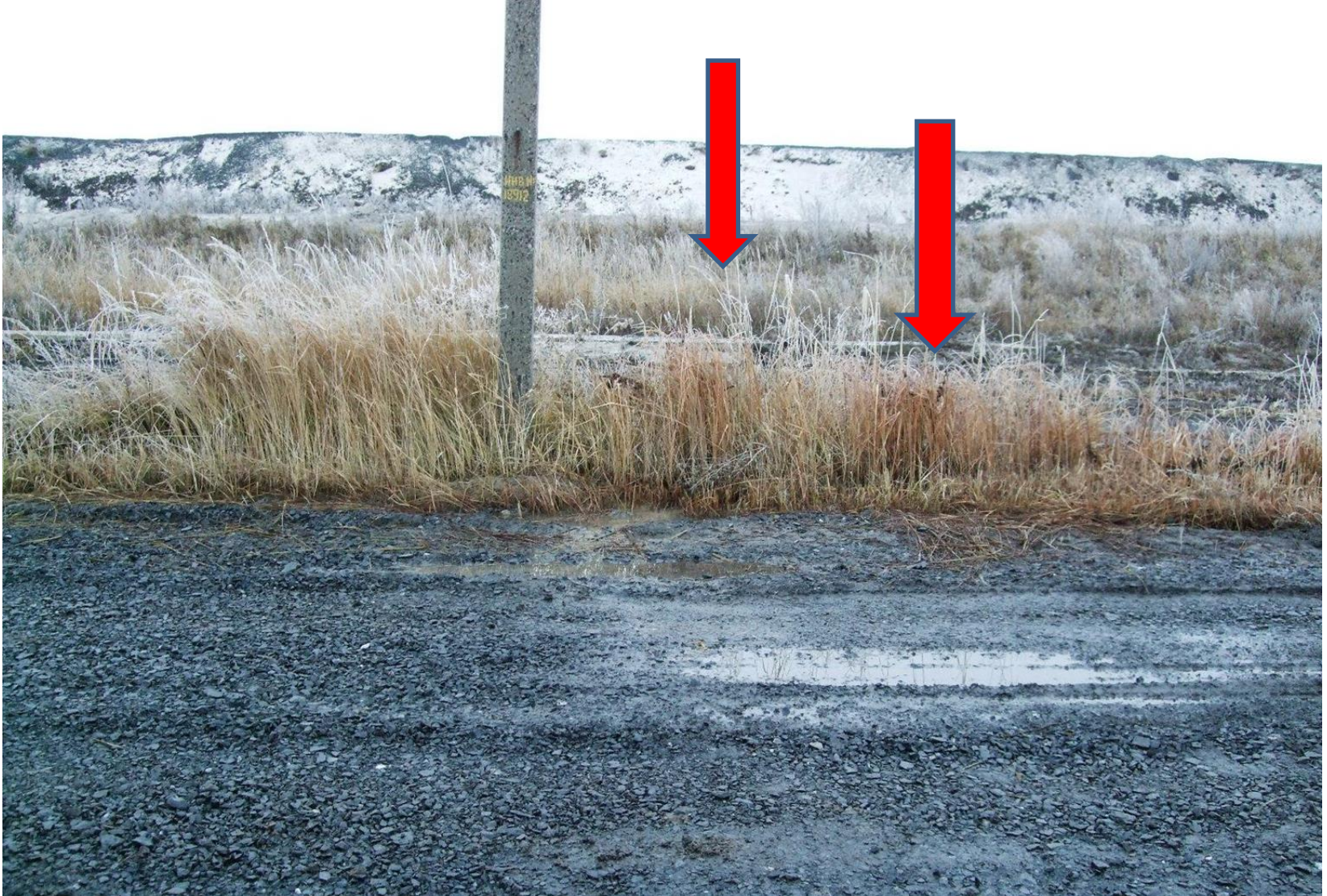
These signs are not always noticeable, cause different interpretations, but they are the first signals that processes have begun at the tailings management facility, which can lead to serious problems in the future, but they can be prevented now.

When visually inspecting the tailings management facility, special attention is recommended to pay to the following signs:

1. Dam flooding, filtration, and leaks



Excessive waterlogging of the dam, atmospheric precipitation is not absorbed.



An implicit sign of filtration is the development of moisture-loving vegetation



Filtration of water through a dam and outlet in the form of a spring.
(View from the dam)



Concrete tailings dam.
Filtration of water
through
the pores in the monolith
("teardrop»)



The outer slopes of the tailings dam.

Salt deposits as a result of filtration of solutions through the body of the dam

2. Erosion of tailings dams



Internal slope of the tailings dam.
Erosion due to sludge pipe leaks



External slope of the tailings dam: rain washouts.
In these places, gullies may occur



On mountain drainage ditches and chutes.

Bottom erosion of the talvega gulch or ravine caused by improper drainage of water from the territory of the tailings storage facility.



With further erosion, the drainage system will be destroyed

3. Landslides and subsidence in the body of the dam



The outer slope of the dam.

A flowing landslide (oplyvina), indicating that it is heavily watered. (View from the dam)



The outer side of the tailings dam.
Landslide Breakaway Crack



The crest of the tailings dam.
The breakaway crack is an
implicit sign of an incipient
landslide

- 1. Clear visual signs of unsatisfactory condition of tailings dumps and their dams indicate an active stage of development of adverse processes that can lead to an emergency situation. To stop these processes, a set of short-term measures is required
- 2. Implicit visual signs of unsatisfactory condition of objects can indicate the initial stages of the development of adverse processes and phenomena. The measures used here are medium – term, in some cases-short-term and will prevent the transition of dangerous processes to the active stage

Thanks for your attention!