

ZAMBIA



GUIDELINES FOR INSPECTION AND REVIEW OF TAILINGS STORAGE FACILITIES

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INTERNATIONAL TRAINING PROGRAMME 308

Mine Water & Mine Waste Management



Sweden
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THE CHANGE PROJECT

ZEMA regulates the mines on their operations and how waste is treated and handled. The most challenging waste from most mine operations in Zambia is the disposal of tailings.

Tailings are typically chemically similar to the parent material, but have been subjected in some way to physical and chemical separation processes, such as crushing and grinding, flotation or acid leaching, which can have significant influences on their properties and behaviour. In addition, the presence of process reagents, evaporation of water, weathering and access to oxygen after deposition may alter its physical-chemical properties and risk profile.

Some of the Tailings Storage Facilities (TSF) are designed to discharge into surface water bodies and there are usually reports on contamination of both surface water and groundwater.

These guidelines aims to provide proponents, licensees and environmental consultants with relevant information and requirements for preparing an Environmental Impact Assessment (EIA). They will also enhance environmental management of Tailings Storage Facilities (TSF) to prevent surface and groundwater pollution. Good environmental performance also increases the social acceptance of the mine in the area.

The importance of this project is to develop applicable and easy-to-follow guidelines that will help harmonise the inspection and review of the EIA document for the TSF.

The Agency also issues licences to mining companies on owning and operating a dam. These licences have conditions attached which guide them on how to operate.

ZEMA inspectors conduct compliance monitoring of the dams twice a year. A checklist has been developed for the inspection of the TSF combining the conditions given to them by the Agency and the checklists which most of the mining companies use.

The checklist for the review of the EIA documents will be available to the environmental consultants so that they use the information in the document when conducting the EIA studies. The checklist for inspection of the TSF will be used internally and shared with Mine Safety Department (MSD) who also conduct similar inspections.



SIGNIFICANCE FOR THE PEOPLE AND THE ENVIRONMENT

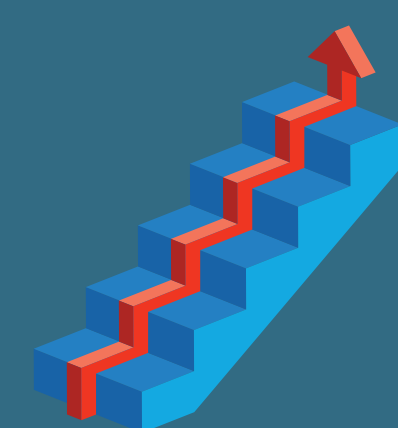
The guidelines will help the ZEMA inspectors, mine operators and environmental consultants have the same guide in relation to the tailings dam. The guidelines will simplify the regulations and make them easy to understand for all environmental protectors. The guidelines are meant to streamline both private and public organisations work with, for example, water pollution and community and stakeholder relations.

The specific importance of the guidelines are;

- To manage the environment sustainable
- To prevent and control dam fail
- To protect the environment and people
- To prevent damage to property
- To try and do things different so that we can achieve the global goals for sustainable development.



ZEMA staff conducting field work for the change project.



RESULTS AND ACHIEVEMENTS

The guidelines were developed within the 10 month change project phase. During this time, the team conducted:

- Literature Review
- Reconnaissance Visits
- Stakeholder consultations
- Took photographs for the document

The document is now in the process of review within ZEMA, and will later be communicated with stakeholders.



THE WAY FORWARD

Stakeholder consultation will be necessary once the guidelines are concluded and once the Director General of ZEMA Board of Directors endorse the guidelines. The stakeholders are many, as TSFs and the guidelines affect many people. The most important ones which will be communicated to are:

- All ZEMA staff that are affected, as inspections and review are the daily activities and checklists will help improve work efficiency.
- Proponents and operators of TSF
- Environmental consultants
- Local authorities
- Interested and affected persons
- WARMA
- DMMU
- Fisheries Department
- Forest Department
- Water Utilities, and
- Mine Safety Department (MSD)

It is important to note that the guidelines will be for both internal and external use. The EIA checklist will be shared with the environmental consultants while the checklist for inspection of the TSF will be shared with MSD and mining companies.

The guidelines will not replace the regulation but will simplify it so that time is saved when executing the daily functions. The reports to be submitted will have proper information for decision making by the authorities.



ITP team visiting the ZEMA office in Ndola.