

**Arctic Mining: Environmental issues,
mitigation and pollution control for
marine and coastal mining-
Workshop March 21, 22, 23, 2023**



Title: Arctic Mining - Presentation on EU Best Available Techniques Reference Document for the Management of Waste from Extractive Industries: Key principles and examples of BAT conclusions

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Biography: *Soile Nieminen is a Chief Environmental Specialist in environmental safety of mining. She represents the Centre for Economic Development, Transport and the Environment, Finland.*

What is the Purpose of your Talk?

The presentation gives a general overview on the European Commission Best Available Techniques (BAT) Reference Document for the Management of Waste from Extractive Industries (MWEI BREF) published in December 2018. The purpose of the talk is to highlight the key principles and approaches of the BAT conclusions as well as to present examples of some important BATs for arctic mining. Also, other recently published European guidance on environmental management of the extractive sector are presented.

Abstract:

Mining generates a high amount of extractive waste that requires appropriate management. Inappropriate design and operation of extractive waste management may cause major accidents and have catastrophic impacts.

MWEI BREF is a technical document representing the results of the European exchange of information on the BAT for the management of extractive waste and associated monitoring. It provides information of identified generic and risk-specific BAT to prevent and reduce as far as possible any adverse effects on the environment and human health from the management of extractive waste.

The goal of the MWEI BREF is to ensure the short-term and long-term safe and environmentally responsible deposition of extractive waste. Generic BATs are generally applicable in every site where extractive waste is managed, while risk-specific BATs are applicable to sites where specific environmental risks and possible impacts are identified. Risk assessment is an overarching principle in MWEI BREF BAT conclusions. A risk-specific approach applied in the document enables it to reflect the vast diversity in the extractive waste activities, extractive sectors, and geographical, climatic, and site-specific conditions in Europe. The approach is based on risk assessment and management principles to identify, evaluate, and manage the potential impacts of an extractive waste facility along the whole life cycle. The Environmental Risk and Impact Evaluation is a core BAT in the BREF and requires site-specific assessment of the suitability and application of the risk-specific BATs.

Second key principle of the MWEI BREF is the design for closure approach. To achieve environmentally responsible management of extractive waste its deposition is planned and designed for closure from the very beginning and the closure is continuously adapted and improved. The third key principle of the MWEI BREF is the integrated design approach in the extractive waste management. According to the approach all relevant parameters are considered in designing the construction of the EWFs to optimize the overall environmental, human health and safety aspects in the short and long term.

Recently the European Commission has also published several best practices guides on the extractive sector e.g., on extractive waste management plans, mine closure and financial guarantees and

environmental impact assessment. Also, a guidance on risk management of the extractive sector is being developed. In addition to MWEI BREF these documents are important European guidance to support sustainable mining and environmentally safe extractive waste management.