Short Term Course

On

MINE CLOSURE AND POST MINING LIABILITY MANAGEMENT

(During **March 26-30, 2018** at Department of Mining Engineering, IIT Kharagpur)

How to close a non-profit making mine? How is it different from closing a mine as per the planned mine closure after exhaustion of minable reserve? How and what interval do you examine the adequacy of the closure plans made at the planning stage of the mine? Have you evaluated the future liabilities financially? Do you have a systematic audit to evaluate closure preparedness of existing low performing underground coal mines? Can such audit extend the profitable mining life?

There are many such questions related to Mine Closure Policy and Planning that arise at the time of execution of mine decommissioning and closure. To make mining socially responsible, India also has like many other countries regulations and statutory guidelines that every mines need to comply with.

Modern Mining activities are planned to minimize the long lasting impacts on landscape, ecology and on the mind set of local inhabitants. All mining operations attempt to leave minimum footprint. However, there are more to be done to assess post closure impacts of mining and arrangements for transfer of mining lease to the next custodians without further liabilities. Value addition to the post mining sites and converting the remaining wastes to wealth are approaches to minimize liabilities and facilitate lease transfer.

Closing of mining operation involves numerous issues like resource conservation, safety and hazard potentials, reclamation and environmental protection, community issues, socio-economic consideration, planning for alternate use of available facilities, cost estimation and asset disposal. These issues must be aligned with a proper Mine Closure Policy of any mining company and appropriate budget allocation. Cost effective mine closure or post-closure site management is possible only through integrated planning based on scientifically investigated planning inputs. The mining companies today need to adopt a proactive work strategy to avoid critical socio-economic and environmental crisis after mine closure.

The practicing engineers must be empowered with the support of the modern mine management tools like Remote Sensing (RS) technology and computer based automated Geographic Information System (GIS). GIS technology integrates common database operations such as query and statistical analysis with the unique visualization and geographic analysis benefits offered by maps. They need to understand data being generated at their worksites and learn how to capture it and analyze it to take appropriate decisions. Statistical decision making is a necessary competency for including post closure mine management, as present actions are based on a forecasted situation.

The short-term course has been designed to impart essential scientific and technical background for mine closure planning, environmental management and Remote Sensing and GIS applications through theoretical and practical classes. The course aims at providing the competency of the practicing engineers for mine closure management activities and decision making.

Course Content: The course will include the following areas:

- Best practices of mine closure in India and abroad
- Regulatory Policies for Mine closure
- Baseline information for mine closure planning - their acquisition and analysis techniques.
- Risk Analysis for Mine Closure
- Evaluation of mine closure based on Sustainability Development Framework
- Post closure land use planning
- Monitoring and management of post mining sites
- Catchment Area Treatment near mining sites

- Tools and Techniques for environment management
- Assessment of socio-economic impacts of mine closure
- Safety analysis of abandoned mines
- Satellite Remote Sensing and GIS for environmental management - concepts, application and introductory hand-on exercise on geo-rectification, merging, subsetting, mosaicing, vectorisation etc. of satellite imagery, digital photogrammetry and GPS

Course fee

The course fee of this non-residential course is ***Rs. 30,000.00*** *per participant payable by demand draft in favor of* ***"CEP-STC, IIT, Kharagpur" payable at Kharagpur or by*** *electronic money transfer to* ***"CEP STC IIT Kharagpur" to the account number 95562200002955 of Syndicate Bank at Branch SRIC IIT Kharagpur (IFSC Code SYNB0009556)****. The* ***course fee does not include boarding and lodging charges****. IIT Kharagpur is exempted from Income Tax and while sending the course fee no Tax should be deducted.* GST @18% will be charged extra as per GoI rules.

Companies sending more than 4 participants will avail the following reduced fee:

1. *For 5 participants: Rs 1, 45,000.00 (Excluding boarding & lodging).*
2. *More than five participants: Rs. 28,000/- for every additional participant (Excluding boarding & lodging).*
3. *The above course fee does not include GST that will have to be paid additionally by the sponsors as per GOI rule.*

PARTICIPATION: The course will be useful for the executives and supervisors engaged in Environmental Management, Mining Operation, Environment Control as well as those who are engaged in planning and information processing. The higher and middle level management who would prepare documents for decision-making regarding various issues related to mine closure would be highly benefited by the course. Officers of Pollution Control Boards, Ministry of Environment and Forests, State Mineral Development Corporations also will be benefitted.

Address for Communication

For any other information or sending nomination please write to:

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For any query please contact: Mr. Sourav Kumar Mandal, Course Manager, E-mail: souravm.iitkgp@gmail.com, cell: 9732952854

Department of Mining Engineering, lIT Kharagpur

Set up in the year of 1956, this Department has steadily grown as one of the best mining education centre in the country. Besides offering undergraduate, postgraduate, and doctoral courses in Mining Engineering, it is actively involved in short term courses and research activities in the areas of Mining Machinery, Mine Safety and Reliability, Mine Fire and Explosions, Model Studies in Ventilation, Rock Mechanics and Ground Controls, Numerical Analysis of Mine Structures, Underground and Surface Environment, Geometrics and Remote Sensing, Mine Closure Planning and relevant computer applications. Short-term courses, consultancy, sponsored research programmes and postgraduate project works are part of the department's regular activities.