

# **MINE CLOSURE**

**2<sup>nd</sup> INDO-US COAL  
WORKING GROUP MEETING  
WASHINGTON  
NOVEMBER 2005**

# Coal Mining in India

- Coal mining in India has a history of over 200 yrs.
- Number of coal mines during Nationalization (1971-72):

<b>Opencast</b>	<b>:</b>	<b>less than 55</b>
<b>Underground</b>	<b>:</b>	<b>about 870</b>
<b>Total</b>	<b>:</b>	<b>927 mines</b>
<b>Total Area</b>	<b>:</b>	<b>about 700 Sq.km</b>

- Number of coal mines as on March 2004 :

<b>Opencast</b>	<b>:</b>	<b>170</b>
<b>Underground</b>	<b>:</b>	<b>359</b>
<b>Mixed</b>	<b>:</b>	<b>33</b>
<b>Total</b>	<b>:</b>	<b>572</b>
<b>Total Area</b>	<b>:</b>	<b>855 Sq.km</b>

# Mine Closure : Requirements

- **The mined out areas need to be reverted back to sustainable use**
- **Land affected by mining and related activities require large scale reclamation and rehabilitation measures**
- **Earlier, mining areas were abandoned without proper decommissioning measures leading to unauthorized activities, causing social and environmental damages in mining area and surroundings**

# Mine Closure - Policy

Govt. of India's National Mineral Policy 1993 emphasizes on the issue of rehabilitation and mine closure

**“Mineral deposits being exhaustible, once the process of economical extraction of mine is complete there is need for closure. Specially where the mining activities have been spread over few decades, mining community get established and closure of mines means not only loss of jobs but also disruption of community life. Whenever, mine closure become necessary it should be orderly and systematically planned so as to help the workers and depending community rehabilitates themselves without undue hardship”.**

# **Policy Framework for Abandoned Mines**

- **There are legal provision to plan for mine closure for the new & on going mines but there are many mines which have been closed prior to formulation of the new laws.**
- **The policy frame work to deal with such abandoned mines including funding arrangement for implementing the mine closure plans as in vogue in USA is of interest.**

# **Policy Framework for Mine Closure**

- **To address the issues related to mine closure Govt. of India made necessary amendments in the rules.**
- **All mining lessees are required to submit the progressive mine closure plan and final closure plan.**
- **The final mine closure plan is required to be submitted one year prior to the proposed closure of the mine.**

# Issues to be Addressed for Mine Closure

- **Secure the abandoned mine (OC or UG) from any unsafe or illegal access points**
- **Rehabilitation/separation of workers affected due to the closure**
- **Maintaining/relocation of the facilities made available to the local populace during operation of the mine.**
- **In case of open cast mining, the land use plan of post closure period should be implemented commensurate with post closure socio-economic activities and aspiration of the area.**

**SOME VIEWS OF  
OB MANAGEMENT &  
RECLAMATION IN  
INDIAN MINES**



# PLANTATION ON DUMP SLOPES





# TERRACING ON DUMP SLOPES





# PLANTATION ON DUMPS





# PLANTATION ON DUMPS





# WATER STORAGE IN ABONDENED PIT



# Management of OB dumps

- **Location of external Dump in case of constraints near the pit.**
- **Bench height & overall height of dumps permitted both for external & internal dumps**
- **Upto what extent external dumps are used for back filling.**
- **Provisions for dump profiles for different localities.**
- **Funding arrangement for maintenance of OB dumps.**

# Assistance Required from USA

- **Possibility of adopting the mine closure procedures followed in the United States for their different mining settlements can be explored.**
- **The US experience in planning and implementing the mine closure addressing all the issues may be shared with Indian planners and mine operators**

THANK YOU