

STEEL AUTHORITY OF INDIA LIMITED
RAW MATERIAL DIVISION
KIRIBIRU IRON ORE MINE
ENVIRONMENTAL POLICY

Kiriburu Iron ore Mines(KIOM) is one of the captive Iron ore Mines of Steel Authority of India Limited(SAIL). Iron ore is being mined and processed at the rate of 4.25 MT/Annum to meet the internal requirement of Bokaro Steel Plant and other Sister integrated Steel Plants operating under SAIL. This environmental policy has been derived from SAIL corporate policy dated 5th June 1996.

KIOM is dedicated and committed to continually improve its organizational effort to protect the environmental and, therefore strive to:

- Progressively replace the pollution prone process by cleaner technology.
- Comply with the relevant environmental legislation and regulation
- Minimize waste generation and promote recovery and reuse of them
- Help in increasing greenery in around this mines.
- Conserve energy, water and other resources
- Enhance environmental awareness among all level of employees.
- Strive for continual improvement in our environmental performance by setting suitable objectives and targets

Afforestation in vacant , barren land & colony area.

A total of 5500 nos of Samplings consisting of Teak, Gulmohar, Karanj , Acacia, Neern . Sheshum etc. have been planted covering an area of 50.0 Hectares during the period 1999-2013

Avenue plantation

Most of the avenues in the township area are properly afforested where around 220 nos of tree guards have been provided during 2006 - 2010 in addition to the earlier ones.

e) Survival rate

More than 90 % in all

Waste dump Management

a) Stabilization

There are three waste dumps viz. Dump A, Dump B & Dump, C to dump the overburden and inter-burden. All these dump sites have been chosen after taking into consideration and surface water pollution, stability, ecological implications and techno - economics. Downhill emplacement methodology is followed for stacking of waste rock.

Dump - A was used during the initial stages of development of the mine, where most of the top soil and lateritic cover occurring at the top of the deposit has been stacked . About 1.0

million cubic metres of such waste ores had been removed and stacked at the Dump-A. Lush green vegetation has grown over the years by itself, over the site and it is no more an eye sore today. Growth of vegetation has helped in binding of the soil also and practically no wash-off of solids with the rainwater can be noticed during the monsoon.

Dump – B was used during 1993 and about 1.95 million cubic metre of wastes have been stacked . The dump has been successfully stabilised by planting 28,000 saplings during 1994-96. Practically no wash – off of solids into the rainwater is noticed during the monsoon

Dump - C is presently in active dumping stage and being used . About 1.75 million CU.M of waste will be stacked in the Dump-C before closing of the mining operation at the North Block of Kiriburu deposits. Stability of the dump slopes has been ensured with adequate drainage facilities. At the end of operation phase of each bench, use of suitable grass and shallow rooted trees will be planted to provide stability.



Top Soil Management

a) Collection & storage: The top soil varies from 0.4 meter to 0.8 meter in thickness. It is stacked separately outside the ore boundary and preserved by making a garland of boulders and boulder pitching all around the stack. Quantity 1,000 Ton

b) Utilisation

Top soil has been spread out over the waste dump and plantation raised over it. The top soil is mixed with manure and applied to the roots of the saplings for faster growth.

Recently a large quantity of top soil has been used in preparing the 'LAKE GARDEN' in front of the Township 'B' type quarters and also the General Office premises.

4) **Reclamation & Rehabilitation:** Reclamation & Rehabilitation The mine is still active and has not reached its ultimate pit limit i.e. 752 RL except certain place sand it is to be developed on either side. Reclamation and rehabilitation activities have been started, wherever mother rock is encountered, which is mostly at the center of the deposit. However, the complete front of the dead waste dump has been afforested.

Management of Sub grade Materials

a) **Stacking or storage:** The ore containing 52% -57% iron, are generally considered as sub grade minerals and are stacked at different points at southern side of mining at RL 842 in Hill -1 area.

b) **Utilisation:** The ore of Sub-grade are time to time fed to Crushing Plant blended with the blue dust high grade ore to achieve the required quality norms of various Steel Plants. However the stacking and utilisation are continuous.

6) Installation & Use of Mechanical beneficiation facilities including crushing & screening plant



Dust Suppression Arrangements

a) Ambient Air Quality



Dust suppression system by water sprinklers procured from BEML having capacity of 28000 litres.



Water spray nozzles have been fitted at all transfer chutes and hopper to control dust pollution



Hydro-cyclone with slow speed classifier is proposed to be installed to reclaim (-100 +50 mesh) fraction from slime. This will certainly enhance the life of tailing dam and improve the quality of effluent discharged to tailing dam