ENVIRONMENTAL MANAGEMENT PLAN

INTRODUCTION
The mine development in the ML area needs to be intertwined with judicious utilization of natural resources within the limits of permissible assimilative capacity. The assimilative capacity of the study area is the maximum amount of pollution load that can be discharged in the environment without affecting the designated use and is governed by dilution, dispersion and removal due to natural physicochemical and biological processes.

The environmental management must be integrated into the process of mine planning so that ecological balance of the area is maintained and adverse affects are minimized. An Environmental Management Plan (EMP) is a site specific plan developed to ensure that the project is implemented in an environmentally sustainable manner. An effective EMP ensures the application of best practice environment management to a project. The purpose of an EMP is to:

i. Assists proponent in the preparation of an effective and user friendly EMP.
ii. Improve the contribution that an EMP can make to the effectiveness of the environmental management process.
iii. Ensure a minimum standard and consistent approach to the preparation of EMP's.
iv. Ensure that the commitments made as part of the project's EIA are implemented throughout the project life.

v. Ensure that environment management details is captured and documented at all stages of a project.

The design of EMP for operational phase has been aimed to achieve the following objectives:

i. To ensure adoption of state of art technological environmental control measures and implementing them satisfactorily.
ii. Effectiveness of mitigatory measures in mitigation of impacts.
iii. Description of monitoring program of the surrounding environment.
iv. Institution arrangements to monitor effectively and take suitable corrective steps for implementation of proper EMP.

v. An Environmental Management Cell (EMC) should be set up to take care of all environment aspects and to maintain environmental quality in the project area.

The detailed hierarchy and responsibilities of Environment Management Cell is as:

Flow Chart of EMP
Periodic air quality survey will be carried out to monitor the changes consequent upon mining activities as per the norms of CPCB/State Pollution Control Board.

NOISE AND VIBRATION ENVIRONMENT
The ambient noise level monitoring carried out in and around the proposed mine lease area shows that ambient noise levels are well within the stipulated limits of MoEF&CC. Noise pollution due to transportation, loading unloading will cause some problem to the inhabitants of this area because there is human settlement in close proximity to the link roads in lease area. Effective steps will be taken to keep the noise level well below the DGMS prescribed limit of 85 dbA.

Noise Abatement and Control
i. All the machineries including transport vehicles will be properly maintained to minimize generation of noise.
ii. Silencers in the machineries will be provided to reduce generation of noise.
iii. Attenuation between source and receive points will be incased.
iv. Dense plantation in mining area will also reduce propagation of noise outside the core zone.
v. Rock breakers will be used instead of secondary blasting.
vi. Periodical monitoring of noise will be done to adopt corrective actions wherever needed.
vii. Plantation will be taken up along the approach roads. The plantation minimizes propagation of noise and also arrests dust.

WATER MANAGEMENT
There will be no wastewater generation from the mining operations. Only wastewater generation will be sanitary wastewater, which will be treated in septic tank followed by subsurface dispersion.

Surface Water Management
i. As such no surface water body exists within the lease area; no adverse impacts are envisaged on the same.
ii. Proper mitigative measures will be taken up to control the pollutants within prescribed standards and limiting the emissions to site only.
iii. Garland drains will be provided to prevent the entry of rainwater into the mining pit.

Ground Water Management
i. Mining will not intersect the ground water table of the area. So it will not disturb water environment.
ii. Natural pits will be used for rainwater conservation and harvesting.
iii. Rain water harvesting practices shall be done which will lead to ground water recharge.
iv. At the end of the life of mine artificial water reservoir has been proposed in mining plan.

Waste Water Management
No waste water is generated from the mining activity of minor minerals as the project only involves lifting/excavation of Stone and transportation directly to the consumers.

Water Conservation
The project do not consume any process water except for drinking, dust suppression and plantation. Plantation is proposed, which will increase the water holding capacity and help in recharging of ground water. Artificial rainwater harvesting is proposed for the present project.

SOLID WASTE AND TOP SOIL MANAGEMENT
Waste Management
The waste will be of OB & weathered clay. Waste generating during proposed period will be temporary dumped towards north western part of the lease area. Later on concepation period will be utilized for carpeting along of the approach road.
Therefore, the proposed mining project can be considered “significantly positive” i.e. keep regular watch on adverse impacts through practicing pollution control measures and post monitoring with simultaneous contribution towards raising standard of living of the people in study area together with its development.

**OCCUPATIONAL HEALTH AND SAFETY**

Occupational Health and Safety professionals develop and coordinate safety and health systems and strategies within organizations. They identify workplace hazards, assess risks to employee health and safety, and recommend solutions. Increasingly, Health and Safety Professionals are also responsible for many of the environmental aspects of their workplace. As this profession matures there is an increased emphasis on risk management strategy and on the development of workplace culture.