

## **CHAPTER-2**

### **SCOPE OF THE STUDY**

The REIA study covers an area of 10 km radius for all environmental attributes with the proposed mining project as per MoEF guidelines. The scope of the study broadly includes :

- Literature review that includes identification of relevant data and articles from various publications, various government agencies and other sources;
- Environmental monitoring so as to establish the baseline environmental status of the study area;
- Identify various existing pollution loads due to industrial and domestic activities in the ambient levels;
- Evaluate the predicted impacts on the various environmental attributes in the study area by using scientifically developed and widely accepted Environmental Impact Assessment Methodologies;
- Prepare an Environmental Management Plan (EMP) outlining the measures for improving the environmental quality; and
- Identify critical environmental attributes required to be monitored.

Field studies were carried out during winter season, 2000 to establish the existing conditions of various environmental attributes, as outlined in Table-2.1. The environmental impact assessment methodologies for each environmental attribute are illustrated separately in the latter sections.

Table-2.1

**Environmental Attributes and Frequency of Monitoring**

Sl. No.	Attribute	Parameters	Frequency of Monitoring
1	Ambient Air Quality	SPM, RPM, SO <sub>2</sub> , NO <sub>x</sub> , CO & HC	24 hourly samples twice a week for four weeks at eight locations.
2	Meteorology	Surface : Wind speed and direction, temperature, relative humidity and rainfall	Surface : Continuous monitoring station for one month on hourly basis and also data collection from secondary sources.
3	Water Quality	Physical, Chemical and Bacteriological parameters.	Once during the study period at fifteen locations.
4	Ecology	Existing flora and fauna	Through field visit during the study period and substantiated through secondary sources.
5	Noise levels	Noise levels in dB(A)	Hourly observation for 24 hours per location at fifteen locations.
6	Soil Characteristics	Parameters related to agricultural and afforestation potential.	Once during the study period at thirteen locations.
7.	Land Use	Trend of land use change for different categories.	Based on data published in district Census Handbooks (1991).
8.	Socio-economic aspects	Socio-economic characteristics, labour force characteristics, population statistics and existing amenities in the study area.	Based on area surveys and data collected from secondary sources (Census Handbooks, 1991).
9	Geology & mining details	Geological history.	Based on mining plan submitted to IBM for approval.
10.	Hydrology	Drainage area and pattern, nature of streams, aquifer characteristics of the area.	Based on data collected from secondary sources.