

CHAPTER-III

STUDY AREA PROFILE

3.1 STUDY AREA

The study area has two components:

Core Zone

The core zone consists of mine lease area which includes the mine and its infrastructure etc.

Buffer Zone

The buffer zone is the area covered between the circle having radius of 10 km with centre at core zone. The study area is located in the Bilaspur district of Chattisgarh State. A total of 35 villages lie within the radius of 10 Km. The whole of core zone and buffer zone is called the study area for environmental study.

3.2 LOCATION

Vijay West Block located in the western part of the Sendurgarh Coalfield, lies between 22° 50'28" to 22° 53'45" N latitudes and 82°17'19" to 82° 20' 43" E longitudes, within Korea district of Chattisgarh State. The area is covered by Survey of India, Toposheet no. 64 J/5 (R.F. 1:50000). The property of this block has been planned for two underground projects e.g. Rani-Atari Project which is under implementation stage and another is Vijay West Project. The Vijay West UG Project is located in dip side of the Vijay West Geological block.

3.3 COMMUNICATION

The western boundary of the Sendurgarh coalfield of SECL is about 23 Km east of Tahsil Headquarter "Passan". The nearest railway station is Pendra Road on the Bilaspur-Katni broad gauge line of South Eastern Railway, which is about 27 km to the west of Pasan along an all weather metalled road.

A fair weather E-W running road passes through the centre of the block. This road connects the block with Pasan about 23 Km in the east on the Bilaspur -Chirimiri Road. The nearest railway station Pendra Road is on the Bilaspur -Katni broad gauge line of South Eastern Railway , which is another 40 Km to the west of Pasan along all weather metalled road. Bilaspur is about 150 Kms south of the Vijay West Block.

3.4 TOPOGRAPHY & DRAINAGE.

The block area is undulating type. The ground elevation of the explored area ranges from less than 435m in the north eastern part of the block to 517.46m in the eastern part of the block.

Within the Vijay west UG Project, the ground elevation ranges from 475.87 m (MSG-134) in the north eastern part to 512.66m (MSG-111) in the eastern part of the proposed area.

Numerous streamlets/nallas flowing radially from the plateau constitute the main drainage pattern. These streamlets join with the two main streams “Bamni Nadi & Teti Nadi” which in turn flow into the Hasdeo-river in the north-east. The seasonal nallas are the main source of irrigation in the area and all these are rain fed only. Number of shallow dug wells has been constructed in the soil and in the weathered mentle in which the occurrence of ground water is limited to weathered fractured zones.

3.5 CLIMATE

Temperature

During the summer season, the temperature often rises to 43.90⁰C. Occasional dust storms and afternoon thunder showers bring considerable relief from heat, and the maximum temperature drops appreciably with the onset of monsoon.

January is the coldest month with the maximum and minimum temperatures at about 25.10 ⁰C and 4.90 ⁰C respectively. The area also receives cold waves for a few days in the winter when minimum temperatures fall to 4.9 ⁰C to 5.40 ⁰C.

Relative Humidity

The relative humidity varies as from 42 to 90 % in monsoon and 19 to 61 % in summer.

3.6 RAINFALL

The annual average total rainfall of the region is about 1430 mm. Maximum rainfall recorded has been 1931 mm.

Generally, the rainy months are July, August and September, which spreads over to June and October with some rainfall.

3.7 WIND

Generally maximum calm days are during October to December with the highest wind speed in May and June. Predominant wind is from North West to South East direction.

3.9 SOCIO-ECONOMIC STATUS

3.9.1 DEMOGRAPHIC DETAILS

The total population of the area consists of about 32036 persons as per Census Data 1991. Schedule castes account for 2.59 % of the total population and 85.70 % is schedule tribe, whereas around 18.09 % population is literate.

As per Census Data 1991, demographic structure is as follows:

Parameter	Nos.	Percentage
Population	32036	100
Scheduled Caste	829	2.59
Scheduled Tribe	27456	85.70
No. of House Hold	5741	17.92
Literates	5796	18.09
Total Main Worker including cultivators	13847	43.22
Cultivator	10289	32.12
Marginal Workers	1772	5.53
Non Worker	16417	51.25

3.10 LAND REQUIREMENT & LAND USE

The mining right of Vijay West underground project is 475.268 Ha. Within mining right, the surface right would be 9.00 Ha, and outside mining area, the land for the colony, that is contemplated about 17 km from the project, would be 13.10 Ha; however the site thereof is not identified yet.

Under CBA

Sl. No.	Particulars	Land under CBA in Ha.	Remarks
1	Mining Right	475.268	
2	Surface Right	9.000	Situated within the Mining Right
	SUB-TOTAL	475.268	
3	Land for Colony	13.10	Site not identified yet; however, the colony is 17 km from the project.
4	Land Use		
Forest-CJJ* & BJJ* (Ha)	Tenancy (Ha)	Government (Ha)	Total (Ha)
360.660	76.405+38.203	-	475.268
360.660	114.608.	-	475.268

* CJJ-Chhote Jhar ka Jungle, BJJ- Bade Jhar ka Jungle.

To carry out mining operation below village area, no depillaring operation is proposed in this report. It has also been proposed that no depillaring activities would be carried out under important surface features like road, nalla etc.
