

LIST OF TABLES

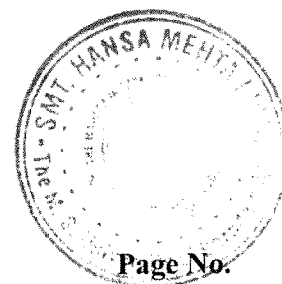


Table 1.1: Attributes of mining	3
Table 2.1: Key environmental legislations in India	14
Table 4.1 – Lithostratigraphic Succession of the Study area	23
Table 5.1: Lignite production profile for five years	43
Table 6.1: Decadal rainfall data of Jhagadia station	46
Table 6.2: Groundwater sampling locations	48
Table 6.2a: Physical parameters of the groundwater	49
Table 6.2b: Seasonal variations in the alkalinity and hardness of the groundwater	50
Table 6.2c: Seasonal variations in the major cations and anions of the groundwater	51
Table 6.2d: Seasonal variations in the heavy metals in the groundwater	52
Table 6.2e: Seasonal variations in the heavy metals in the groundwater	53
Table 6.3: Geohydrological details of the study area	54
Table 6.4: Well distribution data of the study area	55
Table 6.5a: Pump test and computed aquifer parameters in the study area	56
Table 6.5b: Pump test and computed aquifer parameters in the study area	56
Table 6.5c: Water budget for the core and buffer zones	57
Table 6.7: Details of Water Level at Jhagadia Taluka during pre and post monsoon.	58
Table 7.1a: Location of ambient air quality stations for winter, summer and post monsoon seasons	67
Table 7.1b: SPM, SO ₂ and NO ₂ data from the eight locations within the impact zone	69
Table 7.1c: SPM, SO ₂ and NO ₂ data from the eight locations within the impact zone	69
Table 7.2: Noise levels for three seasons around study area	71
Table 7.3a: Surface water sampling locations	73
Table 7.3b: Physical parameters of the surface water in the study area	74
Table 7.3c: Inorganic parameters of the surface water in the study area	74
Table 7.3d: Inorganic parameters of the surface water in the study area	75
Table 7.3e: Organic and nutrient parameters of the surface water in the study area	75
Table 7.3f: Heavy metals in the surface water in the study area	76

Table 7.3g: Heavy metals in the surface water in the study area	76
Table 7.4a: Wastewater sampling locations	77
Table 7.4b: Physical parameters of the wastewater in the study area	77
Table 7.4c: Inorganic parameters of the wastewater in the study area	78
Table 7.4d: Inorganic parameters of the wastewater in the study area	78
Table 7.4e: Organic and nutrient parameters of the wastewater in the study area	78
Table 7.4f: Heavy metals in the wastewater in the study area	79
Table 7.4g: Heavy metals in the wastewater in the study area	79
Table 7.5a: Soil sampling locations	80
Table 7.5b: Physical properties of the soil in the study area	81
Table 7.5c: Organic carbon and water holding capacity of the soil in the study area	81
Table 7.5d: Cation exchange properties of the soil in the study area	82
Table 7.5e: Chemical properties of soil in 1:2 soil water extract	83
Table 7.5f: Chemical properties of soil in 1:2 soil water extract	84
Table 7.6a: Locations of samples for leachate analysis	86
Table 7.6b: Leachate analysis of soil, dump and lignite samples from the study area	87
Table 7.7: Summary of overall Environmental Impact Assessment for Rajpardi Lignite Mine.	91