

**PART –II**

**1. Production Details**

Sl. No	Year	Coal (in MTPA)		Overburden (M.Cu.m)	
		As per EC	Actual	As per EC	Actual
1	2016- 2017	6.30	6.01	29.10	36.412
2	2017 - 2018	6.80	6.80	44.00	37.958
3	2018- 2019	6.80	6.35	44.00	44.295
4	2019-2020	6.80	6.79	53.481	51.604
5	2020-21	8.16	7.44	53.581	38.510
6	April 2021 to Sept 2021(Six months)	4.08	3.89	28.22	22.92

**2.Topsoil Management (in L.Cu.m) 30.09.2021**

1	Total Topsoil(From 01.04.2018) Prop : 3.20 M.Cum. Stock yard: 0.55M.Cum.	:	3.75 Mm <sup>3</sup> (Bank Volume)
2	Topsoil removed so far	:	1.81 Mm <sup>3</sup>
3	Topsoil stored in temporary stockyard	:	1.05 Mm <sup>3</sup>
4	Topsoil spread on Dumps	:	1.26 Mm <sup>3</sup>
5	Topsoil removed in last six months	:	0.34 Mm <sup>3</sup>

**3. Overburden Management (in L.Cu.m)**

1	Total Overburden (From 01.04.2018)	:	841.32 Mm <sup>3</sup> (including Top Soil)			
2	Total OB removed since inception	:	157.33 (including Top Soil)			
3	Total OB removed during last six months	:	22.92 Mm <sup>3</sup> (including Top Soil)			
4	Details of External OB dumps	:	Area (in Ha)	Quantity in (M.Cu.M)	Height (m)	Overall slope
	External OB Dump	:	359.47	75.03	120	23 deg.
5	Details of Internal dump (Backfilling)	:	433.92	82.30	120 (w.r.t. Ground level))	22 deg

#### 4. Plantation:

1	No of plants planted during last Six months from Aril 21 to Sept 2021	125000
2	Area covered in Ha	35
3	Expenditure incurred in Rs. lakhs	75 Lakhs
4	Total area brought under plantation so far in Ha	430.09
5	Total no of plants planted so far since inception (Nos)	125000
6	Species of plants planted	Eucalyptus clones, Dendrocalamus strictus, Hardwickia, Bendrocalmus Bamboo,Albezzia odoretissima, Aegle marmelos, Ficus bengalensis, Ficus religiosa, Delonix regia, Acacia nilotica etc.,
7	Seeds sown so far	Stylosanthes hamata, Sesbania, Sunnhemp, Babul,

Note: Plantation plan is enclosed with the report.

#### 5. Water Balance Statement:

Sl	Description	Quantity in KLD
1	Average quantity of water pumped out of the mine	20655
2	Water used for drinking/bathing and other industrial requirement(Domestic)	300
3	Water used for dust suppression	9720
4	Firefighting	1000
5	washing HEMM	3600
6.	CHP utilization	1000
7	Water used for plantation	500
8	Water supplied for nearest township/village for domestic purpose	300
9	Total utilization in the mine	16420
10	Point of discharge	4235
8	Discharge Consent from TSPCB	4245

## 6. Soil Erosion Control Measures:

1	Garland drains	(6.77 Km +4.76 Km)=11.53 Kms
2	Settling ponds	2 nos

## 7. Micro-meteorological Monitoring

Micro-meteorological station was installed at **GM OFFICE** , RG-II:

The summary of the monitoring from 01.04.2021 to 30.09.2021 as follows:

### April, 2021 – September, 2021)

S.No	Parameter (s)	Min	Max	Mean
1.	Temperature (°C)	20.2	42.4	29.5
2.	Wind Speed (m/s)	Calm 19.19%	1.3	6.9
3.	Relative Humidity (%)	30.3	99.9	79.1
4.	Predominant Wind direction for the study period	North East (NE), followed by South East (Se)		
5.	Total Rainfall (mm)	1462mm		

## Ambient Air Quality Monitoring:

### Parameters:

In accordance with MoEF Notification, GSR-742 (E), dt. 25.09.2000 and National Ambient Air Quality Standards, the concentration of Suspended Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>), Sulphur Dioxide (SO<sub>2</sub>) and Oxides of Nitrogen (NO<sub>x</sub>) is being monitored at work zone locations and also in nearby villages to assess the impact of mining operations on surrounding habitation.

Respirable Dust Sampler is used for monitoring of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> and Ambient Fine Dust Sampler is being used for monitoring of PM<sub>2.5</sub>. SCCL is carrying out post-project environmental monitoring through EPTRI, Hyderabad, a CPCB recognized and NABL accredited laboratory. EPTRI has also established laboratories in SCCL mining areas for analyzing critical parameters in the field.

### Frequency of Monitoring:

Air quality monitoring is being carried out at a frequency of once in a fortnight (24 hourly sampling) at the identified locations near the dust generating sources. The results are enclosed in Annexure-I.

### Monitoring Locations:

S.No.	Station Code	Name of the Stations	Latitude	Longitude
<b>CORE ZONE</b>				
1	CA4	RG OCP III Krushi Bhavan	N 18°41' 35.8"	E 79° 32'
2	CA5	RG OCP III Base Workshop	N 18°42' 38.4"	E 79° 30'
3	CA6	Off Loading Camp (P C Patel Company)	N 18°43' 44.0"	E 79° 31' 30.7"
4	CA7	OCP III CHP	N 18°41' 53.4"	E 79° 30'
<b>BUFFER ZONE</b>				
1	BA1	Laxmipuram Village	N 18°42' 56.0"	E 79° 29'
2	BA3	Peddampeta Village	N 18°43' 02.5"	E 79° 32'
3	BA4	Pothana Colony	N 18°41' 21.3"	E 79° 31'
4	BA5	Penchikalpet Village	N 18°41' 19.3"	E 79° 30'

### Monitoring data of AAQM:

The summary of the air quality monitoring data from 01.04.2021 to 30.09.2021 as follows:

Location	Direction & Distancen in KM (From Krishi bavan)	PM10			
		Min.	Max.	98%tile	Standard
RG OCP III Krushi Bhavan (CA 4)	0	95.0	197	195.2	250
RG OCP III Base Workshop (CA 5)	N W---2.98	102.0	209	208.3	250
Off Loading Camp (CA 6) (P C Patel Company)	N-W----2.5	82	153.0	149.9	250
OCP III CHP(CA 7)	N-W----3.72	102.0	216	211.2	250
Laxmipuram Village(BA 1)	N-W----5.04	56.0	76.0	75.1	100
Peddampeta Village(BA 3)	N E---3.0	52.0	86.0	85.1	100
Pothana Colony(BA 4)	SW—2.0	57.0	79.0	78.1	100
Penchikalpet Village(BA5)	SW-3.40	52.0	79.0	77.5	100
Location	Direction & Distancen in KM (From Krishi bavan)	PM2.5			
		Min.	Max.	98%tile	STD
RG OCP III Krushi Bhavan (CA 4)	0	40.5	58.7	57.8	-

RG OCP III Base Workshop (CA 5)	N W---2.98	39.1	62.3	61.7	--
Off Loading Camp (CA 6) (P C Patel Company)	N-W----2.5	32.4	48.6	48.3	-
OCP III CHP(CA 7)	N-W----3.72	42.6	58.9	58.4	-
Laxmipuram Village(BA 1)	N-W----5.04	31.5	41.2	40.8	60
Peddampeta Village(BA 3)	N E---3.0	29.4	47.1	46.6	60
Pothana Colony(BA 4)	SW—2.0	32.4	42.3	42.0	60
Penchikalpet Village(BA5)		29.4	41.4	41.2	60
Location	Direction & Distancen in KM (From Krushi bavan	SO2			
		Min.	Max.	98%tile	STD
RG OCP III Krushi Bhavan (CA 4)	0	8.5	15.7	15.5	120
RG OCP III Base Workshop (CA 5)	N W---2.98	10.0	16.6	16.6	120
Off Loading Camp (CA 6) (P C Patel Company)	N-W----2.5	8.5	14.3	14.2	120
OCP III CHP(CA 7)	N-W----3.72	10.0	15.0	15.0	120
Laxmipuram Village(BA 1)	N-W----5.04	7.2	10.7	10.7	80
Peddampeta Village(BA 3)	N E---3.0	7.6	11.9	11.7	80
Pothana Colony(BA 4)	SW—2.0	8.0	11.2	11.1	80
Penchikalpet Village(BA5)	SW-3.40	8.0	11.0	11.0	80
Location		NO2			
		Min.	Max.	98%tile	STD
RG OCP III Krushi Bhavan (CA 4)	0	14.1	20.2	19.8	120
RG OCP III Base Workshop (CA 5)	N W---2.98	13.0	20.5	20.0	120
Off Loading Camp (CA 6) (P C Patel Company)	N-W----2.5	13.6	17.9	17.9	120
OCP III CHP(CA 7)	N-W----3.72	13.2	18.9	18.6	120
Laxmipuram Village(BA 1)	N-W----5.04	11.1	14.0	13.9	80

Peddampeta Village(BA 3)	N E---3.0	11.8	15.1	15.1	80
Pothana Colony(BA 4)	SW—2.0	11.9	15.0	14.9	80
Penchikalpet Village(BA5)	SW-3.40	11.6	14.8	14.8	80

#### **Air Pollution Control Measures:**

- Water spraying lines are laid along the conveyor belt, haul roads and at coal face. 1No 70 KL,10 No. s of 28KL, 1 No. of 10KL capacity of SCCL and 9 No.s of 20KL capacity (Off-loading) water sprinklers are provided to control the dust emitted from the movement of HEMM.
- Wet Drilling arrangement is provided to all the 18 drills.
- All approach roads are black topped.
- Water spraying arrangement is provided at feeders.
- Mist spaying arrangement is provided at all crushing and transfer points of CHP.
- Controlled blasting is done with the use of Nonels.
- Saplings are planted along conveyor belts, around coal bunkers & coal Dump yards and along coal transportation route.
- Optimum loading of coal in the trucks is being done, tarpaulin is covered after loading while transportation.
- As far as possible all the coal produced will be dispatched immediately.
- Periodical maintenance of all diesel operated machinery is being done to control SO<sub>2</sub> NO<sub>x</sub> & CO in the exhaust emissions.
- No burning of coal or wood or cotton waste impregnated with oil and grease is done in the mine premises.
- Plantation was raised in and around the premises of CHP to control the dust.
- Plantation was raised in OB dumps and vacant areas in and around the mine and also in colonies.

## 9. Water Quality Monitoring

Selection of Sampling Locations : A total of 6 water samples i.e., 2 samples from surface water and 4 samples from groundwater were collected and analyzed for various physico-chemical and bacteriological parameters.

**Table 4.1 Surface Water Sampling Locations**

Sl. No.	Sample code	Date of sampling	Sampling Location	Latitude	Longitude
1.	SW-1	28.08.2021	Jallaram Vagu U/S	N 18°41' 53.8"	E 79° 32' 06.7"
2.	SW-2	28.08.2021	Jallaram Vagu D/S	N 18°42' 06.5"	E 79° 33' 34.2"

**Table 4.2 Groundwater Sampling Locations**

Sl. No.	Sample code	Date of sampling	Sampling Location	Latitude	Longitude
1.	GW-1	28.08.2021	8 INC. Colony In front of NIM MC Block no-2 Hand Pump / Well	N 18°41' 24.2"	E 79° 32' 00.8"
2.	GW-2	28.08.2021	Pothana Colony Hand Pump / Well	N 18°41' 26.2"	E 79° 31' 09.2"
3.	GW-3	28.08.2021	Veerlapally Village Hand Pump / Well	N 18°43' 01.3"	E 79° 30' 53.6"
4.	GW-4	28.08.2021	Old Timber yard Hand Pump / Well	N 18°43' 44.5"	E 79° 31' 35.9"

**Table 4.3 Physical-Chemical and Bacteriological Characteristics of Surface Water at Selected Location in the Study Area**

S.No.	Parameters	Unit	Test Method	CPCB Water quality Criteria			RESULT	
				Class A	Class B	Class C	SW-1	SW-2
							(Jallaram Vagu U/S)	(Jallaram Vagu D/S)
1	pH	-	4500-H <sup>+</sup> B	6.5 -8.5	6.5 -8.5	6.0- 9.0	7.4	7.7
2	Temperature	°C	2550. B	-	-	-	25.5	25.5
3	Turbidity	NTU	2130. B	-	-	-	3.1	4.3
4	Electrical Conductivity	µmhos/cm	2510-B	-	-	-	460	472
5	Total Dissolved Solids at 180° C	mg/L	2540.C	-	-	-	215	282
6	Total Suspended Solids at 105° C	mg/L	2540. D	-	-	-	27	33
7	Dissolved Oxygen	mg/L	4500-O.C	6 mg/l or more	5 mg/l or more	4 mg/l or more	6.5	6.8
8	Bio chemical Oxygen Demand for 3 days at 27° C	mg/L	IS: 3025	2 mg/l or less	3 mg/l or less	3 mg/l or Less	2.6	2.8
9	Total Coliforms	MPN/100mL	9221A & B	50 or less	500 or less	5000 or less	220	350
10	Fecal Coliforms	MPN/100mL	9221 E	-	-	-	11	17
11	<i>E. coli</i>	Presence or Absence/ MPN/100 mL	9221 F	-	-	-	Absent	Absent
12	Chemical Oxygen Demand	mg/L	5220. D	-	-	-	18	20
13	Chlorides as Cl <sup>-</sup>	mg/L	4500-Cl <sup>-</sup> .B	-	-	-	55	40
14	Nitrites as NO <sub>2</sub>	mg/L	4500-NO <sub>2</sub> <sup>-</sup> .B	-	-	-	BDL	BDL
15	Nitrates as NO <sub>3</sub>	mg/L	4500-NO <sub>3</sub> <sup>-</sup> .B	-	-	-	11.7	12.3
16	Sulphates as SO <sub>4</sub> <sup>2-</sup>	mg/L	4500-SO <sub>4</sub> <sup>2-</sup> .E	-	-	-	36	42



S.No.	Parameters	Unit	Test Method	CPCB Water quality Criteria			RESULT	
				Class A	Class B	Class C	SW-1	SW-2
							(Jallaram Vagu U/S)	(Jallaram Vagu D/S)
17	Arsenic as As	mg/L	3120. B	-	-	-	BDL	BDL
18	Lead as Pb	mg/L	3120. B	-	-	-	BDL	BDL
19	Zinc as Zn	mg/L	3120. B	-	-	-	BDL	0.09
20	Cadmium as Cd	mg/L	3120. B	-	-	-	BDL	BDL
21	Total Chromium as Cr	mg/L	3120. B	-	-	-	BDL	BDL
22	Nickel as Ni	mg/L	3120. B	-	-	-	BDL	BDL
23	Iron as Fe	mg/L	3120. B	-	-	-	1.0	0.44
24	Copper as Cu	mg/L	3120-B	-	-	-	BDL	BDL
25	Boron as B	mg/L	3120-B	-	-	-	0.04	0.06
26	Colour	Pt-co-scale	2120. B	-	-	-	10	15
27	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	4500-NH <sub>3</sub> -C	-	-	-	BDL	BDL
28	Total Phosphates	mg/L	4500-P-D	-	-	-	BDL	BDL
29	Oil & Grease	mg/L	5520. B	-	-	-	<1	<1
30	Fluoride	mg/L	4500-F.C	-	-	-	0.42	0.29
31	Phenolic compounds as C <sub>6</sub> H <sub>5</sub> OH	mg/L	5530-D	-	-	-	BDL	BDL
32	Selenium as Se	mg/L	3120-B	-	-	-	BDL	BDL

**Table 4.4 Physico-Chemical, Bacteriological Characteristics of Groundwater Collected within the Study Area**

**Table 4.4.1 Organoleptic and Physical Parameters**

S.No.	Parameters	Unit	Test Method	IS: 10500 Requirement (Acceptable Limit)	IS: 10500 Permissible Limit in the absence of alternate source	RESULT			
						GW-1 (8 INC. Colony)	GW-2 (Pothana Colony)	GW-3 (Veerlapally Village)	GW-4 (Old Timber yard)
1.	Colour	Pt-co-	2120. B	5	15	<5	<5	<5	<5
2.	Odour	TON	2150. B	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	Taste	FTN	2160. B	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4.	pH	-	4500-H <sup>+</sup> B	6.5 to 8.5	No relaxation	7.5	7.6	7.1	7.1
5.	Turbidity	NTU	2130. B	1	5	0.78	0.86	0.69	0.73
6.	Total Dissolved Solids at 180°C	mg/L	2540.C	500	2000	942	987	984	1040

**Table 4.4.2 General Parameters Concerning Substances Undesirable in Excessive Amounts**

S. No.	Parameters	Unit	Test Method	IS: 10500 Requirement (Acceptable Limit)	IS: 10500 Permissible Limit in the absence of alternate source	Result			
						GW-1 (8 INC. Colony)	GW-2 (Pothana Colony)	GW-3 (Veerlapally Village)	GW-4 (Old Timber yard)
1.	Aluminium as Al	mg/L	3120-B	0.03	0.2	BDL	BDL	BDL	BDL
2.	Barium as Ba	mg/L	3120. B	0.7	No relaxation	0.06	0.06	0.04	0.06
3.	Boron as B	mg/L	3120-B	0.5	2.4	0.10	0.34	0.09	0.10
4.	Calcium as Ca	mg/L	3500-Ca.B	75	200	152	148	168	216
5.	Chlorides as Cl <sup>-</sup>	mg/L	4500-Cl.B	250	1000	160	133	203	175
6.	Copper as Cu	mg/L	3120-B	0.05	1.5	BDL	BDL	BDL	BDL
7.	Fluoride as F <sup>-</sup>	mg/L	4500-F.C	1.0	1.5	0.92	0.78	1.05	1.08
8.	Residual free chlorine	mg/L	4500-Cl.B	0.2	1.0	BDL	BDL	BDL	BDL
9.	Iron as Fe	mg/L	3120-B	1.0	No relaxation	0.31	0.63	0.42	1.4
10.	Magnesium as Mg	mg/L	3500-Mg.B	30	100	46	44	68	90
11.	Manganese as Mn	mg/L	3120-B	0.1	0.3	BDL	BDL	BDL	BDL
12.	Nitrates as NO <sub>3</sub>	mg/L	4500-NO <sub>3</sub> .B	45	No relaxation	43	53	35	28
13.	Phenolic compounds as C <sub>6</sub> H <sub>5</sub> OH	mg/L	5530-D	0.001	0.002	BDL	BDL	BDL	BDL
14.	Selenium as Se	mg/L	3120-B	0.01	No relaxation	BDL	BDL	BDL	BDL
15.	Silver as Ag	mg/L	3120. B	0.1	No relaxation	BDL	BDL	BDL	BDL
16.	Sulphates as SO <sub>4</sub> <sup>2-</sup>	mg/L	4500-SO <sub>4</sub> <sup>2-</sup> .E	200	400	68	55	76	58
17.	Total Alkalinity as CaCO <sub>3</sub>	mg/L	2320. B	200	600	475	555	345	425
18.	Total Hardness as CaCO <sub>3</sub>	mg/L	2340. C	200	600	570	550	700	910
19.	Zinc as Zn	mg/L	3120-B	5	15	0.47	0.20	0.04	0.12

**Table 4.4.3 Parameters Concerning Toxic Substances**

S.No.	Parameters	Unit	Test Method	IS: 10500 Requirement (Acceptable Limit)	IS: 10500 Permissible Limit in the absence of alternate source	RESULT			
						GW-1 (8 INC. Colony)	GW-2 (Pothana Colony)	GW-3 (Veerlapally Village)	GW-4 (Old Timber yard)
1	Cadmium as Cd	mg/L	3120-B	0.003	No relaxation	BDL	BDL	BDL	BDL
2	Cyanide as CN-	mg/L	4500-CN-.F	0.05	No relaxation	BDL	BDL	BDL	BDL
3	Lead as Pb	mg/L	3120-B	0.01	No relaxation	BDL	BDL	BDL	BDL
4	Molybdenum as Mo	mg/L	3120. B	0.07	No relaxation	BDL	BDL	BDL	BDL
5	Nickel as Ni	mg/L	3120-B	0.02	No relaxation	BDL	BDL	BDL	BDL
6	<b>Pesticides:</b> $\alpha$ -BHC, $\beta$ -BHC, $\gamma$ -BHC, $\delta$ -BHC, o,p-DDT, p,p' -DDT, Endosulfan, $\beta$ - Endosulfan, Aldrin, Dieldrin	$\mu$ g/L	6630. D	Absent	0.001	ND	ND	ND	ND
	2,4-D, Carbaryl (Carbonate) Malathion Methyl Parathion Anilophos, Chloropyriphos	Qualitative analysis	6630. D	Absent	0.001	ND	ND	ND	ND
7	<b>Polyaromatic Hydrocarbons (PAH's):</b> Acenaphthene, Acenaphthylene, Anthracene, B(a)A, B(a)P, B(b)F, B(k)F, Pyrene, Dibenz(a,h) anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-(d) Pyrene, Naphthalene, Phenanthrene, Pyrene, Methyl Naphthalene	$\mu$ g/L	6440.C	-	-	ND	ND	ND	ND
8	Total Arsenic as As	mg/L	3120-B	0.01	No relaxation	BDL	BDL	BDL	BDL
9	Total Chromium as Cr	mg/L	3120-B	0.05	No relaxation	BDL	BDL	BDL	BDL

**Table 4.4.4 Bacteriological Quality of Drinking water**

S.No.	Parameters	Unit	Test Method	IS: 10500 Requirement (Acceptable Limit)	IS: 10500 Permissible Limit in the absence of alternate source	RESULT			
						GW-1 (8 INC. Colony)	GW-2 (Pothana Colony)	GW-3 (Veerlapally Village)	GW-4 (Old Timber yard)
1	<i>E. coli</i>	Presence or Absence/ 100 mL	9221 F	-	-	Absent	Absent	Absent	Absent
2	Total Coliforms	MPN/100 mL	9221A & B	-	-	<1.8	<1.8	<1.8	<1.8
3	Fecal Coliforms	MPN/100 mL	9221 E	-	-	<1.8	<1.8	<1.8	<1.8

NTU – Nephelometric Turbidity Unit; TON – Threshold Odour Number; FTN – Flavor Threshold Number; BDL – Below Detection Limit, Detection Limit – Phenols – 0.1 mg/L; Cyanide – 0.05 mg/L, Hex. Chromium – 0.05 mg/L; Copper – 0.02 mg/L; Manganese – 0.01 mg/L; Cadmium – 0.01 mg/L; Selenium – 0.04 mg/L; Arsenic – 0.04 mg/L; Lead – 0.04 mg/L; Aluminum – 0.04 mg/L; Chromium – 0.03 mg/L; Nickel – 0.03 mg/L; Residual free chlorine – 1 mg/L; Nitrites – 0.01 mg/L; Orthophosphates – 0.05 mg/L; ND-Not Detected; Detection Limit: Pesticides– 0.1 ppm; PAHs – 1 ppm.

### (iii) Effluents sampling locations

Sl.No.	Sample code	Name of the Location	Latitude	Longitude
1.	EW1	OCP III mine discharge	N 18° 42' 17.5"	E 79° 31' 44.2"
2.	EW 2	RG OCP III CHP ETP outlet	N 18°43' 4.1"	E 79° 31' 4.0"
3.	EW3	OCP III Base work shop ETP outlet	N 18° 40' 45.1"	E 79° 32' 28.1"
4.	EW5	Pothana Colony STP outlet	N 18° 41' 21.7"	E 79° 31' 25.3"
5.	EW6	Sector III Oxidation Pond Outlet (Near Shirke Quarter)	N 18°40' 29.2"	E 79° 31' 58.9"

#### Parameters:

The ground water quality results are compared with IS: 10500 standards of groundwater quality and surface water quality with IS 2296, 1982 and CPCB Water Quality Criteria, Class- A (Drinking Water Source without conventional treatment but after Disinfection), Class – B (outdoor bathing (organized) and Class – C (Drinking Water Source with conventional treatment and after Disinfection, Class – C (Drinking Water Source with conventional treatment and after Disinfection, Class –D propagation of wild life fisheries and Class-E (Irrigation, Industrial cooling, controlled waste disposal).

Effluent water quality monitoring involves periodical assessment of quality of mine discharge water, treated workshop effluents, CHP effluent, treated colony effluents, ground water and surface water. pH, Total Suspended Solids (TSS), Chemical Oxygen demand (COD) and Oil & Grease are being periodically monitored in effluents as per the Environmental Standards for coalmines, GSR - 742 (E) dated 25.09.2000.

All the parameters as given in Part-A of General Standards for Discharge of Environmental Pollutants, GSR 801 (E) EPA 1986 prescribed by CPCB is being analyzed for all the effluents, in addition to the above parameters, once in a year for assessing the overall quality of effluents.

#### Frequency of monitoring:

Monitoring of effluent water samples for four critical parameters is being done at a frequency of once in a fortnight. Effluents are also analyzed in every fortnight, whereas ground water (all parameters), surface water (all parameters) are being analyzed once in every quarter.

#### Monitoring Data:

The surface water and ground water quality data monitored during April 2018 to Sept, 2018 is enclosed as Annexure-II respectively. The summarized data on effluent water quality in respect of four critical parameters stipulated for coal mines is furnished hereunder. The summary of the monitoring from 01.04.2021 to 30.09.2021 is enclosed as Annexure

**Effluent Quality monitoring data:**

Location	Station Code	p <sup>H</sup>			
		Min.	Max.	98%tile	STD
OCP III mine discharge	EW1	7.3	8.2	8.2	5.5-9.0
RG OCP III CHP ETP outlet	EW2	7.6	8.4	8.4	5.5-9.0
OCP III Base work shop ETP outlet	EW3	7.9	8.4	8.4	5.5-9.0
Pothana Colony STP outlet	EW5	6.6	8.3	8.2	5.5-9.0
Sector III Oxidation Pond Outlet (Near Shirke Quarter)	EW6	6.8	7.9	7.9	5.5-9.0
Location	Station Code	TSS (mg/l)			
		Min.	Max.	98%tile	STD
OCP III mine discharge	EW1	21.0	55.0	53.0	100
RG OCP III CHP ETP outlet	EW2	24.0	76.0	75.3	100
OCP III Base work shop ETP outlet	EW3	76.0	93.0	92.8	100
Pothana Colony STP outlet	EW5	43.0	90.0	89.8	100
Sector III Oxidation Pond Outlet (Near Shirke Quarter)	EW6	43.0	88.0	83.2	100
Location	Station Code	COD (mg/l)			
		Min.	Max.	98%tile	STD
OCP III mine discharge	EW1	19.0	40.0	39.1	250
RG OCP III CHP ETP outlet	EW2	19.0	44.0	41.4	250
OCP III Base work shop ETP outlet	EW3	64.0	97.0	95.9	250
Pothana Colony STP outlet	EW5	44.0	92.0	88.5	250
Sector III Oxidation Pond Outlet (Near Shirke Quarter)	EW6	39.0	69.0	67.9	250
Location	Station Code	Oil & Grease (mg/l)			

		Min.	Max.	98%tile	STD
OCP III mine discharge	EW 1	1.0	2.0	2.0	10
RG OCP III CHP ETP outlet	EW 2	1.2	2.3	2.3	10
OCP III Base work shop ETP outlet	EW 3	2.2	5.2	5.2	10
	EW 5	1.0	5.2	4.7	10
Sector III Oxidation Pond Outlet (Near Shirke Quarters)	EW 6	1.0	2.0	2.0	10
Location	Station Code	TDS(mg/l)			
		Min.	Max.	98%tile	STD
OCP III mine discharge	EW1	710.0	1056	1039.3	--
RG OCP III CHP ETP outlet	EW2	753.0	1044	1033.0	--
OCP III Base work shop ETP outlet	EW3	644.0	1157	1151.1	--
Pothana Colony STP outlet	EW5	776.0	1365	1300.5	--
Sector III Oxidation Pond Outlet (Near Shirke Quarter)	EW6	623.0	1243	1218.6	--
Location	Station Code	BOD (mg/l)			
		Min.	Max.	98%tile	STD
OCP III mine discharge	EW1	3.6	8.0	7.6	30
RG OCP III CHP ETP outlet	EW2	3.1	8.0	7.8	30
OCP III Base work shop ETP outlet	EW3	10.0	24.4	24.0	30
Pothana Colony STP outlet	EW5	11.0	20.4	20.0	30
Sector III Oxidation Pond Outlet (Near Shirke Quarter)	EW6	8.0	15.4	14.9	30

#### Water Pollution Control Measures:

- One ETP of 2.0 Lakh liters capacity is provided at Base workshop to trap 420 Liters of oil and grease in a year before letting out on surface.
- Earth toe walls of 2 x 355 m length are constructed around dump yards to prevent the silt into the run-off water.
- Garland drains and catch drains are provided for safe disposal of run-off water.
- Rock fill dams 10 No. in the garland drains and settling ponds 5 No. are provided to reduce the siltation and suspended solids in run-off water.
- Workshop effluent is treated in 'oil and grease trap' before letting out on surface.



**10. Phreatic surface monitoring: (Range of Water Table)  
monsoon season (Aug) 2021**

Piezometric well no.	Location	Depth (M)	Dia(M)	Measuring point(M)	DTW(m) Monsoon season 2021
RG OC-III-PW 2	Near Veerlapalli Village 18° 42' 55.40" 79° 31' 3.20"	50	0.1	0.2	2.98
RG OC-III-PW 3	Inside Pothana colony 18° 41' 31.80" 79° 31' 0.90"	50	0.1	0.2	2.42
RG OC-III-PW 4	In 8 Inc. colony in front of quarter no.MA-10 18° 41' 34.40" 79° 31' 56.20"	50	0.1	0.2	3.14
RG OC-III-PW 5	Near 11A Incline Chowrastha 18° 43' 43.88", 79° 32' 20.24"	50	0.1	0.2	29.20

Note:-Piezometric well no RGOC-III PW1 was Abandoned

**ATTITUDE OF PHREATIC SURFACE IN RAMAGUNDAM-II AREA**

**Monsoon season-2021**

<b>Well No.</b>	<b>Name of the village</b>	<b>Location</b>	<b>Owner's Name</b>	<b>Type of Well</b>	<b>Dimensions (m)</b>	<b>Total depth (m)</b>	<b>MP (m)</b>	<b>DTW(m) monsoon season 2021</b>
1	Chandanapur	S.C.Colony 18°42'52" 79°34'31"	Dasari shanker	DW	1.00	10.0	0.75	4.52
2	Singireddipalli	18°43'18.92" 79°34'26.41"	Katta Bhumaiah	DW	1.50	9.30	0.65	2.97
3	Chandanapur	Opp: Primary School 18°43'14".5 79°34'49.5	Chilkuru Swamy	DW	1.00	8.50	0.65	5.27
4.	Alluru	Near Pochamma Temple 18°40'51" 79°31'42"	Durgam Pocham	DW	1.00	13.50	0.50	7.72
5	Santosh Nagar 8 incline colony	Santhinikethan 'Degree College 18°44'52.9" 79°31'59.1"	Burla Laxmaiah	DW	1.00	9.30	0.50	1.07
6	New Maredupaka	Near Railway Track 18°41'08" 79°31'06"	Siddarajaiah	DW	1.20	11.10	0.60	3.34
7	Veerlapalli	In Village Centre 18°42'55" 79°31'02"	Kummari Narayana/* Penagonda Chandraiah	DW	1.25	10.00	0.50	1.62
8	K K Nagar	Behind 8 Inc.bunker 18°41'29" 79°32'42"	Choppari Gattaiah	DW	1.00	9.37	0.50	6.57

## 11. Compliance of GW Clearance Conditions

Ground Water Clearance Lr.No: 3050/T/2014 dt.20.11.2014.

S.No.	G.W Clearance Conditions.	Status.
1.	To prevent any adverse impact of mine, periodical monitoring of ground water levels and quality should be undertaken and report must be submitted to the D.D, Ground Water Department and Karimnagar regularly.	Piezometric levels are monitored in 4(Five) piezometric wells constructed around the quarry and were monitored in four times a year (seasonally, i.e. winter, Pre-monsoon, monsoon and post-monsoon). The compliance report is submitted on half yearly basis (i.e. completion of two seasons). to Dy. Director, T.S. Ground water Department, Peddapally The latest monsoon(August) 2021 report sent on vide letter RG-II/ENV/32/2021/ 98 22.10.2021
2.	Purpose built peizometers may be taken up wherever possible in the surrounding project area.	Piezometric levels are monitored in 4 (FIVE) piezometric wells constructed around the quarry
3.	Afforestation may be taken up wherever possible in the surrounding project area.	Plantation is being taken up as per the programme envisaged in the EMP
4.	Artificial recharge structures have to be taken up at suitable locations.	Artificial ground water recharge measures for augmentation of ground water is being carried out through existing Storage Tank in an area of 25.38 acres
5.	Precautions should be taken to prevent pollution of local surface and ground water bodies in the area.	Five settling ponds were made to prevent pollution of local surface water.
6.	Impact of mining on ground water resources such as drastic reduction of water table, deterioration of water quality, degradation of irrigation tanks, discharge of untreated water etc, need to be monitored regularly.	Water table is being monitored by SCCL Hydro Geology Department. Water quality is being monitored by EPTRI, Hyderabad and only treated water is being discharged.

### Water Conservation Measures:

Artificial ground water recharge measures for augmentation of ground water is being carried out through existing Storage Tank in an area of 25.38 acres, adjacent to New Maredupaka village where water is stored for re-charge the ground water table.

### 12. Noise Level Monitoring

Noise levels recorded at different locations in and around the project and they are under the statutory limits.

The summary of the monitoring from 01.04.2021 to 30.09.2021 is enclosed as

Location	Zone	Noise Levels in dB(A) Leq Day			
		Min.	Max.	Avg.	STD
OCP-III Krushi Bavan (CN1)	Core	48.4	59.1	54.0	75
OCP –III Base Workshop(CN2)	Core	50.2	60.3	56.2	75
Pothana colony(BN1)	BUFFER	38.0	49.5	43.8	55
Location	Zone	Noise Levels in dB(A) Leq Night			
		Min.	Max.	Avg.	STD
OCP-III Krushi Bavan(CN1)	Core	39.7	49.9	45.3	70
OCP –III Base Workshop(CN2)	Core	42.3	55.3	54.0	70
Pothana colony(BN1)	BUFFER	27.8	36.6	33.5	45

### Noise Pollution Control Measures:

- Protective devices like acoustic wool, Earplugs/ Ear-muffs have been provided to the operators exposed to high Noise levels.
- Raising of plantation in vacant lands available in between the villages and mine to attenuate noise level
- Regular maintenance of vehicles and heavy earth moving equipment to Minimize the noise level
- Sound proof cabins are provided in all the HEMM.
- Maintenance and tuning of machinery is done regularly
- Controlled blasting is done with the use of Nonels.

Monitoring of ground vibrations and noise levels is done regularly.

## 12. Vehicular Emissions study



### Introduction:6.0

Vehicular Exhaust Emissions study has been monitored for Heavy Earth Moving Machinery (HEMM) **RG OCP-III (EP) PHASE-II** in Ramagundam-II area. The parameter measured is smoke density (K). Smoke density is a function of the number of smoke particles per unit volume, the size distribution of the smoke particles, and the light distribution and the light absorption study. Smoke density is also known as Light Extinction Coefficient and Light Absorption Coefficient. By convention, smoke density is expressed on a per meter basis ( $m^{-1}$ ). Smoke density is measured in HSU % and light absorption coefficient is measured  $K \text{ in } m^{-1}$

The Automotive Exhaust Monitor used in this emissions study (Make: AVL India Private Limited, Model AVL 437C), approved by Automotive Research Association of India (ARAI), Pune. The observed values are compared with standards prescribed by Ministry of Road transport and highway as per Act. CMVR - 115 (2) (C). The standards are presented in Table 6.1 HEMM Vehicular emissions results in Ramagundam-II area are presented in Table 6.2

**Table no.6.1 Standards for Vehicular emissions**

Test Method	Limits for Vehicular emissions	
Free acceleration test for turbo charged engine and naturally aspirated engine	Hatridge Smoke Units (%)	Light absorption Coefficient (K) in m <sup>-1</sup>
	<b>65</b>	<b>2.45</b>

**HEMM August-2021 RG OCP-III (EP) PHASE-II in RG-II Area**

Total no of vehicles	180
No of vehicles tested	178
Passed vehicles	174
Failed vehicles	04
break down vehicle (B/D)	02

**Summary of Vehicular emission data:**

The Total number of HEMM vehicles studied **RG OCP-III (EP) PHASE-II** in Ramagundam-II area was 180. Out of these vehicles studied, for 02 vehicles S.Nos.03 and 101 are breakdown, another 04 vehicles S.Nos.154,155,156 and 157 the Smoke density has exceeded the stipulated limit of 65% Hatridge smoke Units (%), hence these vehicles require suitable servicing at the authorized service station.

**14. Socio-economic Measures:**

A central colony is provided on non-coal bearing area with facilities such as hospitals, schools, banks, post offices, market places, power supply, transport and black topped roadways etc.

- Free medical treatment to workmen and their family is provided and all the children of workmen are covered under immunization programme. 702 employees have undergone Periodical Medical Examination (PME) during last Six months.
- Out of 2141 employees on roll, all employees are provided with housing facility, water and electricity.
- Community taps provided in the colonies. Tap water is treated and chlorinated to the prescribed standards.
- Company has its own schools and also encouraging private parties to start schools for enhancing educational facilities.
- Recreation clubs are provided with adequate facilities.
- Encouragement to sports and games is given by forming Works People's Sports & Games Association for conducting inter-area meets etc.

The following activities were done in RG-II Area during 01.04.2021 to 30.09.2021 by SINGARENI SEVA SAMITHI

S.No	Course	No of Candidates benefited
1	Maggam saree rolling	65
2	Beautician course	60
3	Tailoring course	140
4	Fashion designing	60
	<b>TOTAL</b>	<b>325</b>

**15.Capital and Revenue Expenditure incurred on Environment Management and Pollution Control Measures:**

Sl. No.	Pollution Control Measures	During last 6 months (in Rs.)	
		Capital	Revenue
1.	Maintenance of mobile water sprinklers	-	8323560
2.	Dust suppression	-	44897868
3.	LPG	-	11047560
4.	Water Pollution Control	-	13229031
5.	Post environment monitoring(EPTRI)	-	349362
6.	CFO/CFE	-	6800000
7.	Expenditure on PPEM	-	800000
8.	Plantation	-	1196257
<b>TOTAL</b>		<b>-</b>	<b>86643638</b>

## 16. Environment Management Committee

An environment management committee has been constituted and meeting held on 12.09.2021 with the following officers. The minutes of EMC is enclosed.

1. Project Officer,	RGOCP-III (EP)PH-II - Chairman
2. Mine Environmental Officer	RGOCP-III (EP)PH-II - Secretary
3. Col Manager	RGOCP-III (EP)PH-II -Member
4. Project Engineer	RGOCP-III (EP)PH-II -Member
5. Safety Officer	RGOCP-III (EP)PH-II -Member
6. Dy Mgr (OB)	RGOCP-III (EP)PH-II -Member
7. Dy.Mgr (Coal)	RGOCP-III (EP)PH-II -Member
8. Dy.Mgr (O/L)	RGOCP-III (EP)PH-II -Member
9. DGM ( Stores)	RGOCP-III (EP)PH-II -Member
10. SE(BWS)	RGOCP-III (EP)PH-II -Member
11. Dy.Mgr(Drills)	RGOCP-III (EP)PH-II -Member
12. SE (CHP)	RGOCP-III (EP)PH-II -Member
13. Dy.SSO	RGOCP-III (EP)PH-II -Member
14. Area Environmental Officer	RG-II Area -Member
15. Manager Forestry	RG- Region -Member
17. Area Civil Engineer	RG-II Area -Member
18. Area Estates officer	RG-II Area -Member



**The following points are discussed in the environment  
management committee meeting.**

The Mine Environmental Management Committee meeting was held on 12.09.2021 at Office of the Project Offices RG OCP-III (EP) Phase-2.

**Minutes of the meeting**

1. Chairman reviewed the previous meeting minutes and their implementation
2. Chairman reviewed the New EC conditions with the committee members.
3. Chairman advised pumps engineer to arrange adequate pumps with 4 water filling points to fill the water in water sprinklers and ensure continuous availability of water at filling points to prevent the dust raising and Chairman advised Dy.Manager Coal Bench to arrange water pipeline extended upto the coal face.

**Action:Dy.S.E.(Pump Section)/ Dy.Mgr(Coal Bench)**

4. Project Officer advised all shift in charges and off-loading incharges to engage all the available water tankers in every shift for dust suppression on the haul roads and workplaces.

**Action: SO/Phase-I & Phase-2 in charge/Shift in charges**

5. Chairman advised OCP-3 Environment Officer for desiltation of jallaram nallah and garland drain, siltation ponds before onset of monsoon to prevent water pollution.

**Action: Mine Env. Officer, OCP-III**

6. Chairman asked the Env Officer OCP-III, about to maintaining of Effluents treatment plant (ETP) and Oil, Grease trap arrangement system at Work shop and CHP as per the EC Condition. Also Chairman advised DGM Civil RG-II Area for ETPs at CHP OCP-III and Base Work shop are to be worked efficiently.

**Action: Mine Env.Officer/ DGM Civil, RG-II**

7. Chairman advised SE OCP-III CHP to ensure proper water/ mist spray arrangement at all transfer points and water canon working at surface feeder to control dust.

**Action: S.E. CHP OCP.III**

8. Chairman advised S.E, Stores to dispose solid wastes like batteries, tyres, iron scrap, rejected oils etc.

**Action: DGM Stores.**

9. Chairman advised Dy.Mgr(Drills) for maintenance of wet drilling operations on all drill machines.

**Action:S.E. Drills**

10. Chairman advised Safety Officer to procure dust masks and ear plugs and issue regularly to all employees.

**Action: Safety. Officer, OCP-III**

11. Chairman asked the Env Officer OCP-III, about the ambient air monitoring as per the EC Condition iii of General Condition. He also asked that continuous ambient air monitoring station is connected to TSPCB website.

**Action: Mine Env.Officer**

12. Chairman advised OB Incharge to make arrangements to spread the top soil on the stabilized dumps before on set of monsoon.

**Action:Dy.Manager OB**

13. Chairman advised Survey Officer (Dy.SSO) to locate the places for next year Plantation. Also the chairman instructed the Forest Officer, to plant native spices at 120m height at External Dump Yard and Environment Officer OCP-III to make necessary arrangements for plantation.

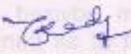
**Action:Survey Officer(Dy.SSO)/Manager Forestry, RG I**

14. Chairman advised DGM, Base Work Shop to monitor the vehicular emissions. If the emissions are not within the prescribed limits take appropriate measures to bring down the emissions within the prescribed limits before allowing operating the equipment.

**Action: DGM, BASE WORK SHOP**

15. Chairman advised Coal transportation trucks transport coal from CSP coal yards to other places to be covered with tarpaulin cloth before leaving for reduce coal dust and coal fell down from truck.

**Action: S.E. CHP OCP.III / S.E(Phase-II CSP)**

  
**PROJECT OFFICER,  
RG OCP III (EP) PH –II project  
Project Officer  
OCP-III, RG.**

## 16. Environment audit cell

A meeting of Environment Audit Cell of Ramagundam Area –II was conducted on 10.09.2021 with the following Officers:

Sl. No.	Name	Designation	Role
01	Sri T. Venkateswara Rao	General Manager	RG II Area
02	Sri S. Sambaiah	So to GM	Member
03	Sri V. Radha Krishna Rao	Area Engineer (E&M)	Member
04	Sri G.Dhananjaya	DGM (Civil)	Member
05	Sri P. Rajareddy	SE(Environment)	Member
06	Sri G. Mohan Reddy	Project Officer	RG OCP-III Exp., PH-II
07	Sri K. Srinivasa Reddy	Project Officer	GDK7 L & VKP Mine
08	Sri D. Ramesh	Manager	RG OCP-III Exp., PH-II
09	Sri K. Durga Prasad	Project Engineer	RG OCP-III Exp., PH-II
10	Sri Kalyan Chakravarthy	(Environmental Officer, RG OC-III)	RG OCP-III Exp., PH-II
11	Sri David Abhilash	Manager(Forestry)	RG region

1. The Area Audit Cell reviewed the compliance of EC conditions of RG OCP-III Exp., Phase-II and VKP Mine in detail.
2. In view of ensuing VKP mine Public hearing scheduled on 24.09.2021, the point wise discussion was done for obtaining new EC for VKP mine and the arrangement for Public Hearing is also discussed in detail.
3. For smooth conduct of public hearing, it is proposed to conduct series of meetings with the concerned villagers and Local people representative, NGOs and Unions.
4. Audit cell appreciated that during the inspection of VKP Mine for certified compliance report by Sri Arockia Lenin ,Dy Director , MoEF&CC Regional Officer Hyderabad on 30.07.2021 satisfied with the compliance of the EC Condition.

5. With regard to compliance of EC conditions RG OCP-III Exp., Phase-II, the conditions were discussed by the committee and advised to comply all the conditions scrupulously and submit the latest compliance status by the project authorities to the committee in next meeting.

::: 2 :::

6. After discussions with project authorities, the audit cell has drawn an action plan for taking corrective measures in the project and assigned the works to the concerned project officials in a phased manner.

7. Accordingly, the following works are proposed to be undertaken on priority basis:

- i) The audit cell advised the project authorities to provide plantation proposal in advance for the coming year on the final dump so that arrangements can be made by the manager Forestry.  
[ **Action** - Project Officer RG-OCP-3 EP Phase-II , Survey officer & Environmental Officer, , RG-OCP-3 EP Phase-II , Manager Forestry ]
- ii) As Per New EC project proponent shall plant only native fruit bearing/medicinal value trees, exotic species the coming monsoon 2021, the details of plantation done in the rainy season on plan to be submitted to the committee in the next meeting, and also advised Eucalyptus plants shall not be planted.  
[ **Action** : Manager (Forestry) RG. region & Survey officer RG-OCP-3 EP Phase-II ]
- iii) The status of procurement of another 4nos mist spray dust fighter for effective dust suppression at all Crushers and coal transfer points CHP  
[ **Action:** Area Engineer, Project Engineer, RG-OCP-3 EP Phase-II, SE(E&M) CHP ]
- iv) The phase-wise restoration and reclamation programme shall be strictly Implemented as per the approved EIA/EMP.  
[ **Action:** Manager, RG-OCP-3 EP Phase-II. ]

Project authorities are advised to take necessary corrective measures for conducting forth coming PH very smoothly for getting new EC to VKP mine



### 17. Land use and Land cover study of core zone of the mine:

The Satellite data of the core zone of 2070.11 Ha. has been presented. The classified data of the Mine Core Zone. The extents of various Land Use/Land Cover classes pertaining to the core zone area are given below

Land use land cover report sent to MoEF &CC Regional office Chennai with ref no - RGM/ENV/03/2020/113 dated 29.05.2020 (Anneure- 02)

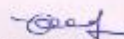
Land use Land Cover Class	Area of Sub Class			Area of Class	
		Area in Ha	Percentage of Usage	Area in Ha	Percentage of Usage
<b>Active mining</b>	Quarry Area	420.65	20.32	635.75	30.71
	Coal dump	22.07	1.07		
	Quarry sump	12.32	0.59		
	Roads	134.78	6.51		
	Service buildings	45.94	2.22		
<b>Over Burden Dump</b>	Over Burden Dump	152.44	7.36	152.44	7.36
<b>Under Reclamation</b>	Back filling Under Reclamation	214.51	10.36	309.02	14.93
	Back Filling Plantation	94.51	4.57		
<b>Plantation</b>	Green Belt	357.74	17.28	751.25	36.29
	Scrubs	196.75	9.50		
	OB dump	196.76	9.50		
<b>Agriculture</b>	Crop Land	90.02	4.35	100.46	4.85
	Fallow Land	0.00	0.00		
<b>Waste Land</b>	Barren Land	10.44	0.50		
<b>Forest Cover</b>		0.00	0.00	0.00	0.00
	Open Forest	0.00	0.00		
	Dense Forest	0.00	0.00		
<b>Water Body</b>		44.27	2.14	44.27	2.14
<b>Settlements</b>		76.90	3.71	76.90	3.71
Total Area		2070.10	100	2070.10	100

### Land use land cover details of Buffer zone:

The satellite imagery of the study area around 10 Km. from mine site (core zone boundary) as captured by satellite. The Land use Land Cover in this study is given

below. The various classes and their respective areas with percentage of coverage are given below:

Land use land cover class	Area of Sub class		Area of Class	
	Area in Ha.	Percentage of usage	Area in Ha.	Percentage of usage
Agriculture	Double Crop	17992.80	32851.25	55.73
	Single Crop	5889.80		
	Follow land	2810.17		
	Plantation	6158.48		
Forest cover	Dense Forest	1940.90	4526.53	7.68
	Open Forest	2585.63		
Waste Land	Land with/without scrub	3538.08	5429.56	9.21
	Barren Land	1891.48		
Others	Mining area	3703.10	18143.40	27.38
	Industrial Establishments	615.92		
	Built up land	5667.74		
	Water Bodies	4340.07		
	Roads	1816.57		
	<b>Total Area</b>	<b>58950.74</b>		

  
 PROJECT OFFICER,  
 RG OCP-III (EP)  
 Project Office PH-II.  
 OCP-III, RG.

## Ambient Air Quality Results

**Readings from April 2021 to September 2021**

### **Ambient Air Quality at RG OCP-III KRUSHI BHAVAN (CA4)**

S.No.	Date of Sampling	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )
Coal mine standards (Commenced after 25.09.2000) GSR 742(E), Dated 25.09.2000		250	*	120	120
1.	01.04.2021	175	54.7	11.9	15.6
2.	16.04.2021	197	58.7	14.2	18.4
3.	03.05.2021	184	52.6	11.4	16.6
4.	17.05.2021	189	48.6	11.7	17.7
5.	04.06.2021	136	43.8	12.8	18.6
6.	21.06.2021	149	46.2	14.8	17.9
7.	06.07.2021	120	40.6	15.7	18.3
8.	21.07.2021	119	44.6	14.5	20.2
9.	06.08.2021	95	40.8	9.1	14.1
10.	20.08.2021	96	40.8	11.7	14.2
11.	07.09.2021	96	42.2	8.5	15.2
12.	21.09.2021	109	40.5	10.2	15.1
<b>98 Percentile</b>		<b>195.2</b>	<b>57.8</b>	<b>15.5</b>	<b>19.8</b>
<b>minimum</b>		<b>95.0</b>	<b>40.5</b>	<b>8.5</b>	<b>14.1</b>
<b>maximum</b>		<b>197</b>	<b>58.7</b>	<b>15.7</b>	<b>20.2</b>
<b>average</b>		<b>138.8</b>	<b>46.2</b>	<b>12.2</b>	<b>16.8</b>



**RG- OCP III Base Work Shop (CA 5)**

<b>S.No</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PM<sub>2.5</sub> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>SO<sub>2</sub> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>NO<sub>2</sub> (<math>\mu\text{g}/\text{m}^3</math>)</b>
<b>Coal mine standards, GSR 742(E), Dated 25.09.2000</b>		<b>250</b>	<b>-</b>	<b>120</b>	<b>120</b>
1	02.04.2021	190	57.3	11.5	14.3
2	17.04.2021	206	62.3	12.1	16.2
3	04.05.2021	195	59.4	12.2	14.0
4	18.05.2021	209	58.6	10.1	17.9
5	05.06.2021	142	47.5	12.2	16.3
6	22.06.2021	152	49.1	16.6	18.4
7	05.07.2021	129	44.2	16.5	20.5
8	22.07.2021	136	41.7	13.9	18.3
9	07.08.2021	102	43.4	13.0	14.5
10	21.08.2021	112	44.9	11.6	14.3
11	08.09.2021	116	45.4	10.0	13.0
12	22.09.2021	102	39.1	11.0	17.9
<b>98 Percentile</b>		<b>208.3</b>	<b>61.7</b>	<b>16.6</b>	<b>20.0</b>
<b>minimum</b>		<b>102.0</b>	<b>39.1</b>	<b>10.0</b>	<b>13.0</b>
<b>maximum</b>		<b>209</b>	<b>62.3</b>	<b>16.6</b>	<b>20.5</b>
<b>average</b>		<b>149.3</b>	<b>49.4</b>	<b>12.6</b>	<b>16.3</b>

**OFF Loading Camp (PC Patel Company) (CA 6)**

<b>S.No.</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (µg/ m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> (µg/ m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/ m<sup>3</sup>)</b>	<b>NO<sub>2</sub> (µg/ m<sup>3</sup>)</b>
<b>Coal mine standards, GSR 742(E), Dated 25.09.2000</b>		<b>250</b>	<b>-</b>	<b>120</b>	<b>120</b>
1.	03.04.2021	129	47.3	12.4	15.5
2.	19.04.2021	137	48.6	13.1	16.4
3.	05.05.2021	139	43.6	13.1	17.9
4.	19.05.2021	153	46.4	11.5	17.1
5.	07.06.2021	102	39.7	13.1	16.4
6.	23.06.2021	119	36.2	11.6	16.1
7.	07.07.2021	103	38.4	13.9	17.3
8.	23.07.2021	94	33.3	14.3	17.9
9.	05.08.2021	82	38.1	11.9	14.7
10.	19.08.2021	82	42.6	10.2	13.6
11.	06.09.2021	89	38.6	11.1	14.2
12.	20.09.2021	93	32.4	8.5	13.7
<b>98 Percentile</b>		<b>149.9</b>	<b>48.3</b>	<b>14.2</b>	<b>17.9</b>
<b>minimum</b>		<b>82</b>	<b>32.4</b>	<b>8.5</b>	<b>13.6</b>
<b>maximum</b>		<b>153.0</b>	<b>48.6</b>	<b>14.3</b>	<b>17.9</b>
<b>average</b>		<b>110.2</b>	<b>40.4</b>	<b>12.1</b>	<b>15.9</b>

**Ambient Air Quality at RG-OC-III CHP (CA7)**

<b>S.No.</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>
<b>NAAQ Standards, CPCB Dated: 18.11.2009</b>		<b>250</b>	<b>--</b>	<b>120</b>	<b>120</b>
1.	03.04.2021	182	53.6	13.0	16.6
2.	19.04.2021	194	51.6	13.7	17.3
3.	05.05.2021	184	58.9	14.5	16.2
4.	19.05.2021	216	56.4	10.0	15.8
5.	07.06.2021	159	48.9	13.5	17.1
6.	23.06.2021	162	50.2	12.2	14.7
7.	07.07.2021	136	44.7	14.8	17.7
8.	23.07.2021	157	52.4	15.0	18.9
9.	05.08.2021	116	42.7	10.4	13.2
10.	19.08.2021	129	46.2	12.1	15.2
11.	06.09.2021	102	45.3	11.0	14.8
12.	20.09.2021	119	42.6	10.0	14.6
<b>98 Percentile</b>		<b>211.2</b>	<b>58.4</b>	<b>15.0</b>	<b>18.6</b>
<b>minimum</b>		<b>102.0</b>	<b>42.6</b>	<b>10.0</b>	<b>13.2</b>
<b>maximum</b>		<b>216</b>	<b>58.9</b>	<b>15</b>	<b>18.9</b>
<b>average</b>		<b>154.7</b>	<b>49.5</b>	<b>12.5</b>	<b>16.0</b>

**Ambient Air Quality at Laxmipuram Village (BA1)**

<b>S.No.</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>
<b>NAAQ Standards, CPCB dated: 18.11.2009</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
1.	02.04.2021	72	38.2	9.1	13.7
2.	17.04.2021	62	36.4	10.5	13.7
3.	04.05.2021	76	39.2	10.5	13.2
4.	18.05.2021	72	41.2	8.5	12.7
5.	05.06.2021	59	31.5	10.7	14.0
6.	22.06.2021	62	35.2	8.3	11.3
7.	05.07.2021	69	39.1	9.3	13.1
8.	22.07.2021	59	34.1	9.2	12.8
9.	05.08.2021	62	35.1	8.1	13.7
10.	19.08.2021	56	36.3	8.7	11.1
11.	06.09.2021	58	34.3	7.9	11.6
12.	20.09.2021	61	33.6	7.2	11.5
<b>98 Percentile</b>		<b>75.1</b>	<b>40.8</b>	<b>10.7</b>	<b>13.9</b>
<b>minimum</b>		<b>56.0</b>	<b>31.5</b>	<b>7.2</b>	<b>11.1</b>
<b>maximum</b>		<b>76</b>	<b>41.2</b>	<b>10.7</b>	<b>14</b>
<b>average</b>		<b>64.0</b>	<b>36.2</b>	<b>9.0</b>	<b>12.7</b>

**Ambient Air Quality at Peddampeta Village (BA3)**

<b>S.No.</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>
<b>NAAQ Standards, CPCB dated: 18.11.2009</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
1	01.04.2021	76	44.7	10.6	15.1
2	16.04.2021	76	40.7	9.3	12.7
3	03.05.2021	86	47.1	11.9	15.1
4	17.05.2021	82	44.2	10.9	13.3
5	04.06.2021	67	38.7	9.2	12.6
6	21.06.2021	71	40.6	8.3	14.0
7	06.07.2021	52	29.4	8.6	12.3
8	21.07.2021	72	33.1	8.3	12.5
9	06.08.2021	66	38.6	10.1	12.8
10	20.08.2021	63	39.6	9.5	12.3
11	07.09.2021	55	31.2	7.6	11.8
12	21.09.2021	63	35.4	9.3	14.0
<b>98 Percentile</b>		<b>85.1</b>	<b>46.6</b>	<b>11.7</b>	<b>15.1</b>
<b>minimum</b>		<b>52.0</b>	<b>29.4</b>	<b>7.6</b>	<b>11.8</b>
<b>maximum</b>		<b>86</b>	<b>47.1</b>	<b>11.9</b>	<b>15.1</b>
<b>average</b>		<b>69.1</b>	<b>38.6</b>	<b>9.5</b>	<b>13.2</b>

**Ambient Air Quality at Pothana Colony (BA4)**

<b>S.No.</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>
<b>NAAQ Standards, CPCB dated: 18.11.2009</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
1.	02.04.2021	70	39.5	9.1	13.6
2.	17.04.2021	79	42.3	11.2	15.0
3.	04.05.2021	75	40.9	9.3	12.0
4.	18.05.2021	68	39.6	9.6	12.2
5.	05.06.2021	66	38.9	10.9	14.6
6.	22.06.2021	69	39.1	9.3	13.8
7.	05.07.2021	61	33.3	8.0	11.9
8.	22.07.2021	63	36.7	9.6	12.5
9.	07.08.2021	59	34.8	9.2	12.9
10.	21.08.2021	60	32.4	8.0	13.7
11.	08.09.2021	57	33.5	8.0	12.5
12.	22.09.2021	59	33.2	8.0	12.2
<b>98 Percentile</b>		<b>78.1</b>	<b>42.0</b>	<b>11.1</b>	<b>14.9</b>
<b>minimum</b>		<b>57.0</b>	<b>32.4</b>	<b>8.0</b>	<b>11.9</b>
<b>maximum</b>		<b>79</b>	<b>42.3</b>	<b>11.2</b>	<b>15</b>
<b>average</b>		<b>65.5</b>	<b>37.0</b>	<b>9.2</b>	<b>13.1</b>

**Ambient Air Quality at PENCHIKALPET VILLAGE (BA5)**

<b>S.No.</b>	<b>Date of Sampling</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>
<b>NAAQ Standards, CPCB dated: 18.11.2009</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
1	02.04.2021	66	39.8	8.7	11.8
2	17.04.2021	59	33.9	10.8	14.8
3	04.05.2021	79	41.4	10.5	13.9
4	18.05.2021	72	40.5	10.3	14.3
5	05.06.2021	55	30.4	10.8	14.8
6	22.06.2021	60	34.0	10.1	14.5
7	05.07.2021	55	31.7	8.5	12.2
8	22.07.2021	67	37.6	9.5	11.9
9	07.08.2021	55	29.6	8.2	12.1
10	21.08.2021	64	37.8	11.0	14.7
11	08.09.2021	63	36.6	8.5	13.2
12	22.09.2021	52	29.4	8.0	11.6
<b>98 Percentile</b>		<b>77.5</b>	<b>41.2</b>	<b>11.0</b>	<b>14.8</b>
<b>minimum</b>		<b>52.0</b>	<b>29.4</b>	<b>8.0</b>	<b>11.6</b>
<b>maximum</b>		<b>79</b>	<b>41.4</b>	<b>11</b>	<b>14.8</b>
<b>average</b>		<b>62.3</b>	<b>35.2</b>	<b>9.6</b>	<b>13.3</b>

**Sampling period from April 2021 to Sept 2021**

**Characteristics of Effluents OCP-III Mine Discharge (EW1)**

S.No.	Date of Sampling	pH (at 25°C)	Total Suspended Solids at 105 °C	TDS at 180°C	Chemical Oxygen Demand	BOD	Oil & Grease
<b>Unit</b>		--	mg/L	mg/L	mg/L	mg/L	mg/L
<b>Test Method</b>		<b>4500-H+B</b>	<b>2540-D</b>	<b>2540-C</b>	<b>5220-D</b>	<b>IS 3025</b>	<b>5520-B</b>
<b>MoEF GSR 742 (E) and GSR 801(E) Effluent Standards for coal mines</b>		<b>5.5 to 9.0</b>	<b>100</b>	<b>--</b>	<b>250</b>	<b>30</b>	<b>10</b>
1.	09.04.2021	8.1	21	906	19	6	<1
2.	24.04.2021	7.3	26	1056	24	4	<1
3.	10.05.2021	8.2	35	731	36	5	1.6
4.	24.05.2021	7.7	44	844	40	8	1.2
5.	08.06.2021	7.5	31	920	24	4.1	1.8
6.	23.06.2021	7.9	38	892	31	6.0	2.0
7.	09.07.2021	7.6	44	911	27	5.1	1.2
8.	27.07.2021	7.9	31	826	32	4.1	1.4
9.	11.08.2021	8.1	55	980	27	3.6	1.6
10.	24.08.2021	8.1	39	710	23	4	1
11.	09.09.2021	7.9	46	911	28	5	1.8
12.	24.09.2021	7.6	31	780	32	6.2	1.4
<b>98 Percentile</b>		<b>8.2</b>	<b>53.0</b>	<b>1039.3</b>	<b>39.1</b>	<b>7.6</b>	<b>2.0</b>
<b>minimum</b>		<b>7.3</b>	<b>21.0</b>	<b>710.0</b>	<b>19.0</b>	<b>3.6</b>	<b>1.0</b>
<b>maximum</b>		<b>8.2</b>	<b>55</b>	<b>1056</b>	<b>40</b>	<b>8</b>	<b>2</b>
<b>average</b>		<b>7.8</b>	<b>36.8</b>	<b>872.3</b>	<b>28.6</b>	<b>5.1</b>	<b>1.5</b>



**Characteristics of Effluents –RG OCP III CHP Settling Tank Outlet (EW 2)**

S.No.	Date of Sampling	pH (at 25°C)	Total Suspended Solids at 105 °C	TDS at 180°C	Chemical Oxygen Demand	BOD	Oil & Grease
<b>Unit</b>		--	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>
<b>Test Method</b>		<b>4500-H+B</b>	<b>2540-D</b>	<b>2540-C</b>	<b>5220-D</b>	<b>IS 3025</b>	<b>5520-B</b>
<b>MoEF GSR 742 (E) and GSR 801(E) Effluent Standards for coal mines</b>		<b>5.5 to 9.0</b>	<b>100</b>	<b>--</b>	<b>250</b>	<b>30</b>	<b>10</b>
1.	09.04.2021	8.0	28	994	19	5	2.2
2.	24.04.2021	7.7	58	753	44	8	2
3.	10.05.2021	7.9	57	893	32	7	2
4.	24.05.2021	7.8	61	780	28	4	1.4
5.	08.06.2021	7.6	29	841	20	3.1	1.2
6.	23.06.2021	8.4	76	1044	23	4.0	1.4
7.	09.07.2021	7.9	73	952	23	3.1	2.3
8.	27.07.2021	8.1	64	981	28	3.1	1.8
9.	11.08.2021	7.7	36	783	23	4.1	1.4
10.	24.08.2021	8.3	24	894	23	3.1	1.2
11.	09.09.2021	8.1	71	820	20	3.6	1.8
12.	24.09.2021	8.2	54	924	23	5.1	1.6
<b>98 Percentile</b>		<b>8.4</b>	<b>75.3</b>	<b>1033.0</b>	<b>41.4</b>	<b>7.8</b>	<b>2.3</b>
<b>minimum</b>		<b>7.6</b>	<b>24.0</b>	<b>753.0</b>	<b>19.0</b>	<b>3.1</b>	<b>1.2</b>
<b>maximum</b>		<b>8.4</b>	<b>76</b>	<b>1044</b>	<b>44</b>	<b>8</b>	<b>2.3</b>
<b>average</b>		<b>8.0</b>	<b>52.6</b>	<b>888.3</b>	<b>25.5</b>	<b>4.4</b>	<b>1.7</b>

**Characteristics of Effluents –RG OCP III BWS ETP Outlet (EW 3)**

S.No.	Date of Sampling	pH (at 25°C)	Total Suspended Solids at 105 °C	TDS at 180°C	Chemical Oxygen Demand	BOD	Oil & Grease
<b>Unit</b>		--	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>
<b>Test Method</b>		<b>4500-H+B</b>	<b>2540-D</b>	<b>2540-C</b>	<b>5220-D</b>	<b>IS 3025</b>	<b>5520-B</b>
<b>MoEF GSR 742 (E) and GSR 801(E) Effluent Standards for coal mines</b>		<b>5.5 to 9.0</b>	<b>100</b>	<b>--</b>	<b>250</b>	<b>30</b>	<b>10</b>
1.	09.04.2021	8.3	89	1083	97	21	5
2.	24.04.2021	7.9	78	1130	80	10	4.8
3.	10.05.2021	8.3	88	1102	88	19	4.2
4.	24.05.2021	7.9	76	994	92	20	4.6
5.	08.06.2021	8.04	89	1126	88	16.4	4.8
6.	23.06.2021	8.1	81	1029	79	16.4	5.2
7.	09.07.2021	7.9	93	1157	86	24.4	4.4
8.	27.07.2021	8.3	78	1066	80	22.4	4
9.	11.08.2021	8.4	89	992	78	18.4	2.2
10.	24.08.2021	7.9	92	644	71	14.4	4.4
11.	09.09.2021	8.2	78	1044	64	16.4	2.6
12.	24.09.2021	8.1	89	1078	79	18.4	4.8
<b>98 Percentile</b>		<b>8.4</b>	<b>92.8</b>	<b>1151.1</b>	<b>95.9</b>	<b>24.0</b>	<b>5.2</b>
<b>minimum</b>		<b>7.9</b>	<b>76.0</b>	<b>644.0</b>	<b>64.0</b>	<b>10.0</b>	<b>2.2</b>
<b>maximum</b>		<b>8.4</b>	<b>93</b>	<b>1157</b>	<b>97</b>	<b>24.4</b>	<b>5.2</b>
<b>average</b>		<b>8.1</b>	<b>85.0</b>	<b>1037.1</b>	<b>81.8</b>	<b>18.1</b>	<b>4.3</b>

**Characteristics of Effluents –STP Pothana Colony (EW 5)**

S.No.	Date of Sampling	pH (at 25°C)	Total Suspended Solids at 105 °C	TDS at 180°C	Chemical Oxygen Demand	BOD	Oil & Grease
<b>Unit</b>		--	mg/L	mg/L	mg/L	mg/L	mg/L
<b>Test Method</b>		<b>4500-H+B</b>	<b>2540-D</b>	<b>2540-C</b>	<b>5220-D</b>	<b>IS 3025</b>	<b>5520-B</b>
<b>MoEF GSR 742 (E) and GSR 801(E) Effluent Standards for coal mines</b>		<b>5.5 to 9.0</b>	<b>100</b>	<b>--</b>	<b>250</b>	<b>30</b>	<b>10</b>
1.	09.04.2021	7.3	43	1021	62	12	1.2
2.	24.04.2021	7.3	58	1365	72	13	1
3.	10.05.2021	7.6	82	872	76	18	2.6
4.	24.05.2021	7.8	78	917	49	11	2.4
5.	08.06.2021	7.9	90	1072	92	20.4	5.2
6.	23.06.2021	8.3	74	1070	75	14.4	1.2
7.	09.07.2021	7.8	89	890	70	18.4	1.4
8.	27.07.2021	6.9	68	991	68	14.4	1
9.	11.08.2021	6.6	53	776	50	12.4	1.6
10.	24.08.2021	6.9	66	926	75	18.4	1.2
11.	09.09.2021	6.8	71	1055	44	13.2	<1
12.	24.09.2021	6.7	83	986	55	12.4	1.8
<b>98 Percentile</b>		<b>8.2</b>	<b>89.8</b>	<b>1300.5</b>	<b>88.5</b>	<b>20.0</b>	<b>4.7</b>
<b>minimum</b>		<b>6.6</b>	<b>43.0</b>	<b>776.0</b>	<b>44.0</b>	<b>11.0</b>	<b>1.0</b>
<b>maximum</b>		<b>8.3</b>	<b>90</b>	<b>1365</b>	<b>92</b>	<b>20.4</b>	<b>5.2</b>
<b>average</b>		<b>7.3</b>	<b>71.3</b>	<b>995.1</b>	<b>65.7</b>	<b>14.8</b>	<b>1.9</b>

**Characteristics of Effluents –Sector III Oxidation Pond Outlet(Near Shirke Quarter) (EW6)**

S.No.	Date of Sampling	pH (at 25°C)	Total Suspended Solids at 105 °C	TDS at 180°C	Chemical Oxygen Demand	BOD	Oil & Grease
	Unit	--	mg/L	mg/L	mg/L	mg/L	mg/L
	Test Method	4500-H+B	2540-D	2540-C	5220-D	IS 3025	5520-B
	<b>MoEF GSR 742 (E) and GSR 801(E) Effluent Standards for coal mines</b>	<b>5.5 to 9.0</b>	<b>100</b>	<b>--</b>	<b>250</b>	<b>30</b>	<b>10</b>
1.	09.04.2021	7.8	47	923	47	12	1.6
2.	24.04.2021	7.4	51	741	56	8	1.4
3.	10.05.2021	7.9	49	623	56	13	2
4.	24.05.2021	7.7	58	794	44	11	1.6
5.	08.06.2021	7.1	53	877	52	9.2	20.4
6.	23.06.2021	7.8	66	948	43	10.2	1.6
7.	09.07.2021	7.5	88	1243	63	12.2	1.2
8.	27.07.2021	7.1	59	1132	64	11.2	1
9.	11.08.2021	6.8	43	835	39	8.2	1.4
10.	24.08.2021	7.4	51	964	43	11.2	1
11.	09.09.2021	7.8	54	980	40	13.2	<1
12.	24.09.2021	6.9	61	1014	69	15.4	1
	<b>98 Percentile</b>	<b>7.9</b>	<b>83.2</b>	<b>1218.6</b>	<b>67.9</b>	<b>14.9</b>	<b>16.7</b>
	<b>minimum</b>	<b>6.8</b>	<b>43.0</b>	<b>623.0</b>	<b>39.0</b>	<b>8.0</b>	<b>1.0</b>
	<b>maximum</b>	<b>7.9</b>	<b>88</b>	<b>1243</b>	<b>69</b>	<b>15.4</b>	<b>20.4</b>
	<b>average</b>	<b>7.4</b>	<b>56.7</b>	<b>922.8</b>	<b>51.3</b>	<b>11.2</b>	<b>3.1</b>

**Noise Quality Data**  
**Sampling Period: April 2021 to June2021**

Name of the Location	Date of Sampling	Noise levels in dB (A)	
		Leq Day	Leq Night
<b>GSR 742 (E) Standards</b>		<b>75</b>	<b>70</b>
<b>OCP III Krushi Bhavan CN1</b>	<i>02.04.2021</i>	<i>59.1</i>	<i>48.9</i>
	<i>19.04.2021</i>	<i>52.4</i>	<i>45.8</i>
	<i>04.05.2021</i>	<i>54.7</i>	<i>48.6</i>
	<i>18.05.2021</i>	<i>56.7</i>	<i>45.5</i>
	<i>05.06.2021</i>	<i>52.7</i>	<i>48.2</i>
	<i>22.06.2021</i>	<i>56.7</i>	<i>48.4</i>
	<i>05.07.2021</i>	<i>53.7</i>	<i>49.9</i>
	<i>22.07.2021</i>	<i>56.5</i>	<i>41.2</i>
	<i>05.08.2021</i>	<i>55.2</i>	<i>42.4</i>
	<i>19.08.2021</i>	<i>51.6</i>	<i>43.4</i>
	<i>06.09.2021</i>	<i>50.3</i>	<i>42.1</i>
	<i>20.09.2021</i>	<i>48.4</i>	<i>39.7</i>
	<b>98 Percentile</b>	<b>58.6</b>	<b>49.7</b>
	<b>minimum</b>	<b>48.4</b>	<b>39.7</b>
	<b>maximum</b>	<b>59.1</b>	<b>49.9</b>
<b>average</b>	<b>54.0</b>	<b>45.3</b>	

Name of the Location	Date of Sampling	Noise levels in dB (A)	
		Leq Day	Leq Night
<b>GSR 742 (E) Standards</b>		<b>75</b>	<b>70</b>
<b>OCP III Base workshop CN2</b>	<i>01.04.2021</i>	<i>60.0</i>	<i>46.2</i>
	<i>16.04.2021</i>	<i>60.3</i>	<i>55.3</i>
	<i>03.05.2021</i>	<i>59.9</i>	<i>49.5</i>
	<i>17.05.2021</i>	<i>52.9</i>	<i>45.4</i>
	<i>04.06.2021</i>	<i>58.5</i>	<i>49.0</i>
	<i>21.06.2021</i>	<i>59.1</i>	<i>48.8</i>
	<i>06.07.2021</i>	<i>53.1</i>	<i>42.8</i>
	<i>21.07.2021</i>	<i>50.2</i>	<i>42.4</i>
	<i>06.08.2021</i>	<i>51.4</i>	<i>43.5</i>
	<i>20.08.2021</i>	<i>53.8</i>	<i>48.5</i>
	<i>07.09.2021</i>	<i>56.7</i>	<i>42.3</i>
	<i>21.09.2021</i>	<i>58.4</i>	<i>43.8</i>
	<b>98 Percentile</b>	<b>60.2</b>	<b>54.0</b>
	<b>minimum</b>	<b>50.2</b>	<b>42.3</b>
	<b>maximum</b>	<b>60.3</b>	<b>55.3</b>
<b>Average</b>	<b>56.2</b>	<b>46.5</b>	

Name of the Location	Date of Sampling	Noise levels in dB (A)	
		Leq Day	Leq Night
<b>GSR 742 (E) Standards</b>		<b>75</b>	<b>70</b>
<b>Pothana Colony BN1</b>	<i>03.04.2021</i>	<i>45.3</i>	<i>36.3</i>
	<i>16.04.2021</i>	<i>42.3</i>	<i>31.4</i>
	<i>05.05.2021</i>	<i>41.3</i>	<i>35.0</i>
	<i>19.05.2021</i>	<i>40.1</i>	<i>35.3</i>
	<i>07.06.2021</i>	<i>38.0</i>	<i>27.8</i>
	<i>23.06.2021</i>	<i>49.2</i>	<i>34.1</i>
	<i>07.07.2021</i>	<i>49.5</i>	<i>34.4</i>
	<i>23.07.2021</i>	<i>42.2</i>	<i>33.5</i>
	<i>05.08.2021</i>	<i>42.2</i>	<i>32.2</i>
	<i>19.08.2021</i>	<i>45.4</i>	<i>36.6</i>
	<i>06.09.2021</i>	<i>43.1</i>	<i>31.4</i>
	<i>20.09.2021</i>	<i>46.8</i>	<i>34.1</i>
	<b>98 Percentile</b>	<b>49.4</b>	<b>36.5</b>
	<b>minimum</b>	<b>38.0</b>	<b>27.8</b>
	<b>maximum</b>	<b>49.5</b>	<b>36.6</b>
<b>average</b>	<b>43.8</b>	<b>33.5</b>	

## Vehicular Emissions study



### Introduction:6.0

Vehicular Exhaust Emissions study has been monitored for Heavy Earth Moving Machinery (HEMM)RG OCP-III (EP) PHASE-II in Ramagundam-II area. The parameter measured is smoke density (K). Smoke density is a function of the number of smoke particles per unit volume, the size distribution of the smoke particles, and the light distribution and the light absorption study. Smoke density is also known as Light Extinction Coefficient and Light Absorption Coefficient. By convention, smoke density is



expressed on a per meter basis ( $m^{-1}$ ). Smoke density is measured in HSU % and light absorption coefficient is measured  $K \text{ in } m^{-1}$

The Automotive Exhaust Monitor used in this emissions study (Make: AVL India Private Limited, Model AVL 437C), approved by Automotive Research Association of India (ARAI), Pune. The observed values are compared with standards prescribed by Ministry of Road transport and highway as per Act. CMVR - 115 (2) (C). The standards are presented in Table 6.1 HEMM Vehicular emissions results in Ramagundam-II area are presented in Table 6. 2

**Table no.6.1 Standards for Vehicular emissions**

Test Method	Limits for Vehicular emissions	
Free acceleration test for turbo charged engine and naturally aspirated engine	Hatridge Smoke Units (%)	Light absorption Coefficient (K) in $m^{-1}$
	65	2.45

**Table no 6. 2 Vehicular Emissions Study in RG OCP-III (EP) PHASE-II in RG-II Area**

Sl.No	Eqpt Type/Capacity	Eqpt Name	Make	D.O.C	HRS RUNN ED	Tested Date	HSU % 65	$K \text{ m}^{-1}$ 2.45	Test Status
<b>HEMM AT, RG OCP-III (EP) PHASE-II</b>									
1	DUMPER-100T	K-378	KOMATSU	05.08.2019	10121	12.08.2021	40.5	1.24	PASS
2	DUMPER-100T	K-379	KOMATSU	05.08.2019	9953	12.08.2021	35.4	1.10	PASS
3	DUMPER-100T	K-303	KOMATSU	24.08.2009	-	12.08.2021	-	-	BD
4	DUMPER-100T	K-380	KOMATSU	28.08.2019	10142	12.08.2021	28.4	0.13	PASS
5	DUMPER-100T	K-381	KOMATSU	28.08.2019	9907	12.08.2021	26.5	0.28	PASS
6	DUMPER-100T	K-382	KOMATSU	28.11.2019	9502	12.08.2021	26.2	0.51	PASS
7	DUMPER-100 T	K-308	KOMATSU	11.09.2009	41967	12.08.2021	45.4	0.81	PASS
8	DUMPER-100T	K-310	KOMATSU	19.10.2009	43544	12.08.2021	39.4	0.71	PASS
9	DUMPER-100T	K-311	KOMATSU	19.10.2009	43004	12.08.2021	37.2	0.32	PASS
10	DUMPER-100T	K-312	KOMATSU	19.10.2009	41099	12.08.2021	42.4	1.34	PASS
11	DUMPER-100 T	K-313	KOMATSU	18.11.2009	39201	12.08.2021	36.4	1.27	PASS
12	DUMPER-100T	K-314	KOMATSU	18.11.2009	41506	13.08.2021	38.2	0.87	PASS
13	DUMPER-100 T	K-315	KOMATSU	19.06.2010	40185	13.08.2021	41.4	1.41	PASS
14	DUMPER-100T	K-316	KOMATSU	19.06.2010	38655	13.08.2021	45.1	0.91	PASS

15	DUMPER-100T	K-317	KOMATSU	19.06.2010	40451	13.08.2021	43.1	0.71	PASS
16	DUMPER-100T	K-318	KOMATSU	18.10.2012	35747	13.08.2021	39.4	0.85	PASS
17	DUMPER-100T	K-319	KOMATSU	02.03.2013	35883	13.08.2021	34.1	0.72	PASS
18	DUMPER-100T	K-320	KOMATSU	02.03.2013	34966	13.08.2021	29.4	1.54	PASS
19	DUMPER-100T	K-321	KOMATSU	02.03.2013	35421	13.08.2021	33.8	0.64	PASS
20	DUMPER-100T	K-322	KOMATSU	02.03.2013	37011	13.08.2021	37.2	0.94	PASS
21	DUMPER-100T	K-323	KOMATSU	02.03.2013	32966	13.08.2021	38.5	0.72	PASS
22	DUMPER-100T	K-324	KOMATSU	02.03.2013	34641	13.08.2021	42.1	0.75	PASS
23	DUMPER-100T	K-325	KOMATSU	02.03.2013	36695	14.08.2021	39.2	0.78	PASS
24	DUMPER-100T	K-326	KOMATSU	02.03.2013	31929	14.08.2021	45.9	0.87	PASS
25	DUMPER-100T	K-327	KOMATSU	16.03.2013	36968	14.08.2021	41.2	0.72	PASS
26	DUMPER-100T	K-328	KOMATSU	16.03.2013	36809	14.08.2021	45.4	0.92	PASS
27	DUMPER-100T	K-329	KOMATSU	16.03.2013	32700	14.08.2021	38.4	1.41	PASS
28	DUMPER-100T	K-330	KOMATSU	16.03.2013	36490	14.08.2021	45.1	0.81	PASS
29	DUMPER-100T	K-331	KOMATSU	16.03.2013	36375	14.08.2021	42.8	0.98	PASS
30	DUMPER-100T	K-332	KOMATSU	09.10.2015	26872	14.08.2021	28.9	0.61	PASS
31	DUMPER-100T	K-333	KOMATSU	09.10.2015	24680	14.08.2021	29.8	0.43	PASS
32	DUMPER-100T	K-334	KOMATSU	09.10.2015	27633	14.08.2021	27.8	1.04	PASS
33	DUMPER-100T	K-335	KOMATSU	12.11.2015	26437	14.08.2021	28.8	1.12	PASS
34	DUMPER-100T	K-336	KOMATSU	25.11.2015	26167	14.08.2021	34.8	0.18	PASS
35	DUMPER-100T	K-337	KOMATSU	07.02.2018	16501	14.08.2021	29.4	0.58	PASS
36	DUMPER-100T	K-338	KOMATSU	07.02.2018	16625	14.08.2021	35.8	1.21	PASS
37	DUMPER-100T	K-339	KOMATSU	07.02.2018	16505	16.08.2021	24.8	0.19	PASS
38	DUMPER-100T	K-340	KOMATSU	11.02.2018	16132	16.08.2021	27.4	0.51	PASS
39	DUMPER-100T	K-341	KOMATSU	17.02.2018	15572	16.08.2021	26.4	0.41	PASS
40	DUMPER-100T	K-342	KOMATSU	11.02.2018	16103	16.08.2021	29.8	0.91	PASS
41	DUMPER-100T	K-343	KOMATSU	13.02.2018	15702	16.08.2021	28.1	0.89	PASS
42	DUMPER-100T	K-344	KOMATSU	02.03.2018	16389	16.08.2021	28.1	0.92	PASS
43	DUMPER-100T	K-345	KOMATSU	02.03.2018	16545	16.08.2021	36.4	1.28	PASS
44	DUMPER-100T	K-346	KOMATSU	10.03.2018	15948	16.08.2021	26.8	1.41	PASS
45	DUMPER-100T	K-347	KOMATSU	14.03.2018	16373	16.08.2021	34.4	1.10	PASS
46	DUMPER-100T	K-348	KOMATSU	07.03.2018	16081	16.08.2021	35.4	1.04	PASS
47	DUMPER-100T	K-349	KOMATSU	02.03.2018	16103	16.08.2021	26.7	0.51	PASS
48	DUMPER-100T	K-350	KOMATSU	07.03.2018	16063	16.08.2021	29.7	0.41	PASS
49	DUMPER-100T	K-377	KOMATSU	05.08.2019	10207	16.08.2021	24.6	0.43	PASS
50	DUMPER-100T	K-351	KOMATSU	10.03.2018	16357	17.08.2021	29.8	0.71	PASS
51	DUMPER-100T	K-352	KOMATSU	24.12.2018	12662	17.08.2021	23.8	0.14	PASS
52	DUMPER-100T	K-353	KOMATSU	24.12.2018	12951	17.08.2021	26.8	1.10	PASS
53	DUMPER-100T	K-354	KOMATSU	24.12.2018	12710	17.08.2021	23.8	1.54	PASS
54	DUMPER-100T	K-355	KOMATSU	24.12.2018	12777	17.08.2021	24.1	0.41	PASS
55	DUMPER-100T	K-356	KOMATSU	24.12.2018	13002	17.08.2021	22.6	0.04	PASS
56	DUMPER-100T	K-357	KOMATSU	27.12.2018	13100	17.08.2021	23.5	0.18	PASS
57	DUMPER-100T	K-358	KOMATSU	25.02.2019	11600	17.08.2021	23.8	1.04	PASS
58	DUMPER-100T	K-359	KOMATSU	25.02.2019	11496	17.08.2021	23.9	0.43	PASS

59	DUMPER-100T	K-360	KOMATSU	25.02.2019	12073	17.08.2021	19.8	0.18	PASS
60	DUMPER-100T	K-361	KOMATSU	17.03.2019	11814	17.08.2021	26.2	0.64	PASS
61	DUMPER-100T	K-362	KOMATSU	17.03.2019	11891	17.08.2021	29.0	0.94	PASS
62	DUMPER-100T	K-363	KOMATSU	17.03.2019	11844	17.08.2021	27.8	0.45	PASS
63	DUMPER-100T	K-364	KOMATSU	26.03.2019	11444	18.08.2021	26.2	0.97	PASS
64	DUMPER-100T	K-365	KOMATSU	26.03.2019	11479	18.08.2021	27.0	1.05	PASS
65	DUMPER-100T	K-366	KOMATSU	06.04.2019	11692	18.08.2021	19.8	0.45	PASS
66	DUMPER-100T	K-367	KOMATSU	09.04.2019	10750	18.08.2021	23.5	0.41	PASS
67	DUMPER-100T	K-368	KOMATSU	13.05.2019	10706	18.08.2021	23.8	1.01	PASS
68	DUMPER-100T	K-369	KOMATSU	13.05.2019	11289	18.08.2021	20.4	0.14	PASS
69	DUMPER-100T	K-370	KOMATSU	20.05.2019	10900	18.08.2021	24.1	1.20	PASS
70	DUMPER-100T	K-371	KOMATSU	27.06.2019	10406	18.08.2021	28.1	0.67	PASS
71	DUMPER-100T	K-372	KOMATSU	27.06.2019	5499	18.08.2021	16.1	0.05	PASS
72	DUMPER-100T	K-373	KOMATSU	27.06.2019	10485	18.08.2021	23.4	1.02	PASS
73	DUMPER-100T	K-374	KOMATSU	27.06.2019	10555	18.08.2021	21.6	1.04	PASS
74	DUMPER-100T	K-375	KOMATSU	06.07.2019	10181	18.08.2021	28.4	1.54	PASS
75	DUMPER-100T	K-376	KOMATSU	06.07.2019	7724	19.08.2021	15.1	0.21	PASS
76	SHOVEL	MANNER	BEML	28.11.2019	9384	19.08.2021	24.1	1.25	PASS
77	DOZER	D-336	BEML	29.05.2013	11373	19.08.2021	27.5	1.10	PASS
78	DOZER	D-357	KOMAT	13.05.2019	4983	19.08.2021	17.7	0.24	PASS
79	DOZER	D-358	KOMAT	28.08.2019	6369	19.08.2021	16.5	0.25	PASS
80	CRANE 27	C 27	DL	20.09.2018	NA	19.08.2021	25.7	0.17	PASS
81	DOZER	D-342	BEML	25.04.2014	12569	19.08.2021	18.7	0.64	PASS
82	DOZER	D-343	BEML	25.04.2014	12666	19.08.2021	35.2	0.91	PASS
83	DOZER	D-345	BEML	16.04.2015	10388	19.08.2021	29.1	0.51	PASS
84	DOZER	D-346	BEML	16.04.2015	11593	19.08.2021	36.7	0.94	PASS
85	DOZER	D-347	KOMAT	05.10.2016	10971	19.08.2021	16.8	0.41	PASS
86	DOZER	D-348	KOMAT	23.11.2016	13574	19.08.2021	19.8	0.54	PASS
87	DOZER	D-349	KOMAT	26.11.2016	12991	20.08.2021	40.5	0.61	PASS
88	DOZER	D-350	KOMAT	27.05.2017	11073	20.08.2021	19.8	0.34	PASS
89	DOZER	D-352	KOMAT	03.06.2017	13929	20.08.2021	34.2	0.54	PASS
90	DOZER	D-354	KOMAT	28.09.2017	12535	20.08.2021	22.8	0.71	PASS
91	DOZER	D-355	KOMAT	28.09.2017	12650	20.08.2021	19.7	1.04	PASS
92	DOZER	D-356	KOMAT	16.11.2017	11653	20.08.2021	26.1	0.75	PASS
93	DOZER	D-340	BEML	29.12.2013	1339	20.08.2021	24.5	0.81	PASS
94	DOZER	D-350	KOMAT	27.05.2017	11073	20.08.2021	26.7	0.94	PASS
95	DOZER	D-353	KOMAT	03.06.2017	10660	20.08.2021	24.2	0.32	PASS
96	DUMPER-60T	BC-313	BEML	30.01.2017	13777	20.08.2021	24.8	0.71	PASS
97	DUMPER-60T	BC-314	BEML	30.01.2017	14131	20.08.2021	27.8	0.41	PASS
98	DUMPER-60T	BC-315	BEML	28.09.2017	13740	20.08.2021	28.9	0.51	PASS
99	DUMPER-60T	BC-316	BEML	14.10.2017	12552	21.08.2021	23.7	0.31	PASS
100	DUMPER-60T	BC-318	BEML	14.10.2017	12631	21.08.2021	24.5	0.84	PASS
101	DUMPER-60T	BC-319	BEML	14.10.2017	10803	21.08.2021	-	-	BD
102	DUMPER-60T	BC-320	BEML	28.09.2017	12797	21.08.2021	34.2	0.45	PASS
103	DUMPER-60T	BC-321	BEML	14.10.2017	12869	21.08.2021	29.4	0.16	PASS

104	DUMPER-60T	BC-322	BEML	14.10.2017	13873	21.08.2021	27.8	0.61	PASS
105	DUMPER-60T	BC-323	BEML	14.10.2017	12195	21.08.2021	37.4	0.81	PASS
106	DUMPER-60T	BC-324	BEML	30.10.2017	13280	21.08.2021	34.7	0.34	PASS
107	DUMPER-60T	BC-325	BEML	30.10.2017	13265	21.08.2021	28.9	0.48	PASS
108	DUMPER-60T	BC-326	BEML	30.10.2017	12047	21.08.2021	26.8	0.15	PASS
109	DUMPER-60T	BC-327	BEML	07.02.2019	8209	21.08.2021	24.7	0.18	PASS
110	DUMPER-60T	BC-328	BEML	07.02.2019	9112	21.08.2021	23.5	0.19	PASS
111	DUMPER-60T	BC-329	BEML	07.02.2019	7921	23.08.2021	24.5	0.64	PASS
112	DUMPER-60T	BC-311	BEML	12.04.2013	17052	23.08.2021	29.8	0.64	PASS
113	DUMPER-60T	BC-312	BEML	30.01.2017	10856	23.08.2021	26.8	1.21	PASS
114	CRANE 25	C 25	NA	05.10.2018	NA	23.08.2021	20.8	0.51	PASS
115	CRANE 26	C 26	CHP	11.09.2018	NA	23.08.2021	27.6	0.57	PASS
116	CRANE 24	C 24	PS	09.08.2018	NA	23.08.2021	29.3	0.16	PASS
117	DUMPER-60T	CP-308	CAT	20.08.2016	18253	23.08.2021	24.9	0.32	PASS
118	DUMPER-60T	CP-309	CAT	20.08.2016	19163	23.08.2021	34.8	1.18	PASS
119	DUMPER-60T	CP-310	CAT	20.08.2016	18582	23.08.2021	29.4	1.41	PASS
120	DUMPER-60T	CP-311	CAT	20.08.2016	17733	23.08.2021	34.1	0.58	PASS
121	DUMPER-60T	CP-313	CAT	25.08.2016	18816	23.08.2021	35.4	0.93	PASS
122	DUMPER-60T	CP-314	CAT	25.08.2016	18286	24.08.2021	34.5	0.92	PASS
123	DUMPER-60T	CP-315	CAT	25.08.2016	19128	24.08.2021	34.3	0.91	PASS
124	DUMPER-60T	CP-316	CAT	31.08.2016	19763	24.08.2021	40.4	0.52	PASS
125	DUMPER-60T	CP-317	CAT	31.08.2016	20591	24.08.2021	34.8	0.42	PASS
126	DUMPER-60T	CP-318	CAT	31.08.2016	20501	24.08.2021	28.9	0.34	PASS
127	DUMPER-60T	CP-319	CAT	31.08.2016	19532	24.08.2021	33.8	0.21	PASS
128	DUMPER-60T	CP-320	CAT	31.08.2016	19772	24.08.2021	26.1	0.41	PASS
129	DUMPER-60T	CP-321	CAT	05.10.2016	18995	24.08.2021	29.7	0.31	PASS
130	DUMPER-60T	CP-322	CAT	05.10.2016	17670	24.08.2021	29.8	0.51	PASS
131	DUMPER-60T	CP-323	CAT	05.10.2016	19603	24.08.2021	40.5	1.21	PASS
132	DUMPER-60T	CP-325	CAT	12.10.2016	19615	24.08.2021	29.8	0.12	PASS
133	DUMPER-60T	CP-326	CAT	12.10.2016	20440	24.08.2021	35.4	0.87	PASS
134	DUMPER-60T	CP-327	CAT	12.10.2016	19624	25.08.2021	29.8	0.91	PASS
135	DUMPER-60T	CP-328	CAT	26.11.2016	18842	25.08.2021	28.2	0.71	PASS
136	DUMPER-60T	CP-312	CAT	25.08.2016	17738	25.08.2021	25.1	0.38	PASS
137	CRANE 30	C 30	ACE	17.07.2019	NA	25.08.2021	23.5	0.28	PASS
138	LOADER	LT-9	CAT	10.02.2016	6030	25.08.2021	21.4	0.28	PASS
139	SHOVEL	HARITHA	TATA	21.07.2017	20594	25.08.2021	45.8	0.94	PASS
140	SHOVEL	PRAGAT HI	TATA	14.05.2018	16063	25.08.2021	39.1	0.96	PASS
141	SHOVEL	KAKATIY A	TATA	12.03.2015	32621	25.08.2021	34.7	0.79	PASS
142	SHOVEL	SHATHAV AHANA	TATA	23.02.2015	31812	25.08.2021	39.0	0.86	PASS
143	SHOVEL	MANJEE	HITACHI	18.11.2015	30907	25.08.2021	31.0	0.57	PASS

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144	DRILL	DM-29	REL	07.09.2015	10816	25.08.2021	27.2	0.32	PASS
145	DRILL	DM-39	IDM	03.12.2018	9394	25.08.2021	23.6	0.74	PASS
146	DRILL	DM-30	RECP	09.09.2015	9532	25.08.2021	34.1	0.41	PASS
147	DRILL	DM-35	REL	14.04.2017	11523	25.08.2021	26.8	0.52	PASS
148	SHOVEL	AMRUTH A	EX-1200	07.03.2018	17537	26.08.2021	32.0	1.64	PASS
149	MOTORGRADER	MG-11	VOLVO	13.04.2011	21712	26.08.2021	32.4	0.67	PASS
150	MOTORGRADER	MG-17	KOMATS	13.05.2019	7835	26.08.2021	26.7	0.74	PASS
151	MOTORGRADER	MG-15	KOMATS	19.03.2018	8776	26.08.2021	25.4	0.12	PASS
152	MOTORGRADER	MG-16	KOMATS	31.03.2018	7712	26.08.2021	19.8	0.10	PASS
153	WATERTANKER	WT-13	HINDUSTAN	25.01.2012	22493	26.08.2021	54.5	0.96	PASS
154	WATERTANKER	WT-15	BEML	25.10.2012	20073	26.08.2021	69.4	2.52	FAIL
155	WATERTANKER	WT-16	BEML	14.06.2014	18100	26.08.2021	74.5	2.54	FAIL
156	WATERTANKER	WT-17	BEML	02.02.2015	15628	26.08.2021	74.8	2.61	FAIL
157	WATERTANKER	WT-18	BEML	30.07.2015	16338	26.08.2021	68.4	2.48	FAIL
158	WATERTANKER	WT-19	BEML	30.07.2015	13117	26.08.2021	54.8	0.96	PASS
159	WATERTANKER	WT-20	BEML	06.11.2017	10482	26.08.2021	59.8	2.04	PASS
160	WATERTANKER	WT-21	BEML	08.11.2017	10703	26.08.2021	60.4	2.12	PASS
161	WATERTANKER	WT-22	BEML	29.11.2017	11564	26.08.2021	57.5	1.68	PASS
162	WATERTANKER	WT-23	BEML	27.12.2017	10390	27.08.2021	60.4	0.91	PASS
163	WATERTANKER	WT-24	CAT	22.05.2018	5588	27.08.2021	39.5	0.74	PASS
164	CRANE-21	12-T	ESCORT	02.07.2016	NA	27.08.2021	40.4	0.41	PASS
165	CRANE-22	12-T	ESCORT	02.07.2016	NA	27.08.2021	34.8	1.24	PASS
166	CRANE-23	12-T	ESCORT	02.07.2016	NA	27.08.2021	26.8	0.82	PASS
167	SHOVEL	RUDRAM MA	HITACHI	01.04.2018	17050	28.08.2021	35.8	0.74	PASS
168	SHOVEL	SHATAKA RNI	HITACHI	01.04.2018	17678	28.08.2021	35.2	0.99	PASS
169	MOTOR GRADER	MG-13	BEML	16.04.2015	10471	28.08.2021	30.7	1.22	PASS
170	MOTOR GRADER	MG-14	BEML	16.04.2015	8562	29.08.2021	28.3	0.42	PASS
171	DRILL	DM-36	IDM	05.06.2017	12915	29.08.2021	24.6	0.72	PASS
172	DRILL	DM-37	IDM	10.08.2017	12007	29.08.2021	29.8	0.96	PASS
173	DRILL	DM-39	IDM	03.12.2018	9394	29.08.2021	24.7	0.18	PASS
174	DRILL	DM-40	REL	26.06.2017	8317	29.08.2021	26.5	1.23	PASS
175	MOTOR GRADER	MG-18	KOMATSU	28.08.2019	6842	30.08.2021	19.6	0.52	PASS
176	SHOVEL	PRITHVI	HITACHI	13.11.2017	19200	30.08.2021	28.7	0.44	PASS
177	SHOVEL	KRISHNA	EX	23.11.2016	23860	30.08.2021	27.6	0.81	PASS
178	SHOVEL	BHAGIRA THA	EX	23.11.2016	23926	30.08.2021	35.8	0.90	PASS
179	SHOVEL	SURYA	HITACHI	13.11.2017	18749	30.08.2021	40.2	1.52	PASS
180	CRANE 28	C 28	ACE	16.02.2011	17719	30.08.2021	24.6	0.12	PASS

**HEMM August-2019RG OCP-III (EP) PHASE-II in RG-II Area**

Total no of vehicles	180
No of vehicles tested	178
Passed vehicles	174
Failed vehicles	04
break down vehicle (B/D)	02

**Summary of Vehicular emission data:**

The Total number of HEMM vehicles studied **RG OCP-III (EP) PHASE-II** in Ramagundam-II area was 180. Out of these vehicles studied, for 02 vehicles S.Nos.03 and 101 are breakdown, another 04 vehicles S.Nos.154,155,156 and 157 the Smoke density has exceeded the stipulated limit of 65% Hatridge smoke Units (%), hence these vehicles require suitable servicing at the authorized service station.

HANS INDIA

26-7-3-2021

THE HANS INDIA



## The Singareni Collieries Company Limited

(A Government Company)

Regd. Office: KOTHAGUDEM - 507101, Telangana.

### PUBLIC NOTIFICATION

In compliance to the condition No.4.0 (J) (i) of the Environment Clearance (EC) issued by The Ministry of Environment, Forest & Climate Change (MoEF & CC), Gol, New Delhi, vide its EC letter F.No.J-11015/43/2014-IA.II(M), Dated;02nd March, 2021 for Ramagundam Opencast-III Expansion-II Coal Mine Project, it is hereby notified that approval has been accorded by MoEF&CC, New Delhi for an annual coal production of 8.16 MTPA from Ramagundam Opencast-III Expansion-II Coal Mine Project of The Singareni Collieries Company Limited located near Jallaram village of Kamanpur Mandal, Peddapalli District of Telangana State. Accordingly, it is to inform that, The Singareni Collieries Company Limited is now entitled for coal production capacity of 8.16 MTPA in total mine lease area of 2070.10 ha, subject to the conditions mentioned therein.

A copy of the Environment Clearance (EC) letter is available with The Environmental Engineer, Telangana State Pollution Control Board, Regional Office, Ramagundam, Q.No.Spl.C-3, NTPC, TTS, Near Z.P. High School, Jyothi nagar, Ramagundam, Peddapalli dist- 505 215.Telangana State. The Environment Clearance (EC) letter can also be seen (soft EC copy is uploaded) on the website of MoEF&CC & Climate Change, New Delhi at <https://parivesh.nic.in/> and on the website of SCCL at. <http://sccclmines.com/env>.

Further, in compliance to the condition No. 4.0 (j) (ii), the copies of the Environmental Clearance(EC) letter will be submitted by The Singareni Collieries Company Limited to the Heads of Local Bodies, Panchayats and Municipal Bodies for displaying the same for a period of 30 days.

Director  
(Planning & Projects)

PR/2020-21/ENV/99

DIPR No.: 1557-PP/CL-AGENCY/ADVT/1/2020-21

