The Singareni Collieries Company Limited
(A Govt Company)
Bhupalpalli Area

Ref.No: BHP/ENV/46/2023/ 187

Date: 23.11.2023

To

The Director,
Ministry of Environment, Forests & Climate Change (MoEF & CC),
Integrated Regional Office,
3rd Floor, Room No. 309
Aranya Bhavan, Opp:RBI
Saifabad-500004,
Hyderabad.

Sir,

Sub: Submission of Half yearly Environmental monitoring Reports of KTK 6 Incline of Bhupalpalli Area for the period of **April'2023 to September'2023** – Reg.
Ref: MoEF.Lr.No. J-11015/166/2005-IA.II(M), dtd.11.09.2006(KTK 6 Incline)

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With reference to the subject cited above, please find enclosed herewith the half yearly environmental monitoring report along with soft copy for the period ending **30-09-2023** in respect of Kakatiya Khani 6 Incline of The Singareni Collieries Company Ltd, Bhupalpalli Area.

The report consists of Part–I, which indicates the status of the Implementation of Environmental Clearance conditions, and Part-II & IIA indicates various environmental control measures and analysis of data.

Thanking you,

Yours faithfully,

General Manager
Bhupalpalli Area.

General Manager
The Singareni Collieries Company Ltd
Bhupalpalli Area - 506 169
Dist: Jayashanker Bhupalpalli
Telangana State

Cc to: Environmental Engineer,
TSPCB, R.O. Warangal

THE SINGARENI COLLIERIES COMPANY LIMITED
(A Government Company)
BHUPALPALLI AREA

PART-1

HALF YEARLY COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE CONDITIONS DURING THE PERIOD APRIL-2023 TO SEPTEMBER-2023

A. SALIENT FEATURES OF THE PROJECT:

1	Name of the Project	:	**Kakatiya Khani No.6 Incline**	
2	Organization	:	Singareni Collieries Company Limited	
3	Coalfield	:	Godavari Valley Coal Field	
4	Type of Mine	:	Underground Mine	
5	Technology	:	Board & Pillar	
6	Environmental Clearance	:		
	A Letter No & date	:	J-11015/166/2005-IA.II(M), Dated 11.09.2006	
	B Sanction capacity	:	Normative:	Peak: 0.312 MTPA
	C Mining Lease Area	:	100 Ha	
	D Date of Public Hearing	:	20.05.2005	
7	Location of the Project			
	A Village	:	Bhupalpalli	
	B Tehasil	:	Bhupalpalli	
	C District	:	Jayashankar Bhupalpalli,	
	D State	:	Telangana	
	E Latitude	:	$18^0 24^1 57^{11}$ to $18^0 26^1 55^{11}$	
	F Longitude	:	$79^0 52^1 23^{11}$ to $79^0 54^1 56^{11}$	
	G Topo Sheet	:	56 N	
	H Nearest railway station	:	Uppal/warangal	
	I Nearest Airport	:	Hyderabad	
	J Nearest town	:	Warangal	
8	Address for Correspondence	:		
	A Name	:	Sri N.Venkateshwar Rao	
	B Designation	:	Dy.General Manager	
	C Address		KTK-6 Incline Office	
	D Pin Code	:	506169	
	F E-mail ID	:	agt_ktk1_bhp@scclmines.com	
	G Telephone No.	:	9491144277 (ofc)	
	H Fax No.	:		
9	Life of the Project	:	22 years	
	A Date of Opening		01.03.1996	
	B Total Life of the project as per EMP	:	22 Years	
	C Balance Life	:	03 Years	
10	Seams	:		
	A Total Seams Present	:	7 no.s	
	B Seams being worked	:	3 no.s	
11	Depth			
	A Minimum Depth (m)		40 m	
	B Maximum Depth (m)		340 m	

	C	Present working depth (m)		227 m
12	Reserves			
	A	Total Geological Reserves	:	8.683 MT
	B	Total Extractable Reserves	:	4.012 MT
	C	Reserves already Extracted	:	3.506 MT
	D	Balance Reserves	:	0.507 MT
	E	Coal production during last six months	:	0.066 MT
13	Land Requirement			
	A	Total Requirement (Mine Take Area)		100 Ha
	B	Forestland Involved		--
	C	Non-forestland		100 Ha
	D	Land acquired so far (Surface rights)		83.41 Ha
14	Statutory Clearances		:	
	A	Ground Water Clearance		Ltr No:342/Hg.III(2)/2005,Dt:15-07-2005
	B	Consent for Establishment	:	
	C	Consent for Operation	:	Order No. 200822518201 Dt:13.10.2020 and valid up to 30.06.2025.
	D	Forest Clearance	:	-
	E	Mining Lease	:	Bhupalpalli Mining Lease G.O.MS No.14 dated 09.03.2010 and valid up to 03.08.2029
	F	Others (Specify)		-
15	R & R Involved		:	-

KAKATIYAKHANI 6 INCLINE COMPLIANCE STATUS OF EC CONDITIONS AS ON APRIL-2023 TO SEPTEMBER-2023

MoEF ltr.no.J-11015/166/2005-IA.II.(M), DT.11.09.2006

A. SPECIFIC CONDITIONS:

Sl.No.	Condition	Compliance Status
(i)	All the conditions stipulated by the SPCB in their NOC shall be strictly implemented.	Complied.
(ii)	Mining shall be carried out as per statute at a safe distance from the river and nallah flowing within the lease boundary.	Within the mine lease area there is no River is flowing. Seasonal nallahs are flowing during rainy season. Mining is carried out below the seasonal nallahs after obtaining permission from DGMS
(iii)	Sufficient coal pillars shall be left un-extracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Sufficient Barrier has been left around the Air shaft, Main incline entries, etc., to protect from any damage from subsidence.
(iv)	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	45 m barrier is left against PWD Road passing over the mine property
(v)	No depillaring operation shall be carried out below the village area.	Complied. No depillaring will be done below the village
(vi)	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material Cracks should be effectively plugged with ballast and clayey soil/ suitable material.	So far no subsidence is recorded in any working area. Subsidence survey is being conducted on monthly bases to ascertain the ground moment. The system, frequency and recording of observations is being carried out as per the provisions DGMS Technical circular No.4 of 1988
(vii)	Garland/surface drains (size, gradient and length) around the shaft areas such as mine shaft and low lying areas and sump capacity should be designed keeping 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak	Garland / surface drains were made at low lying areas, Protection bund made around the Air shaft and Two 240 H.P. pumps are installed at Underground sump to pump out water to surface. which can also deal in heavy rain fall situation.

	rainfall.	
(viii)	While extracting panel in lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.	The upper seam 2 seam is virgin and 1seam is also being depillaring with sand stowing however there is no accumulation of water bodies over the working lower seam.
(ix)	Crushers at the CHP should be operated with high efficiency bag fillers, water sprinkling system should be provided to check fugitive emissions from crushing operations, overland conveyor system, and haulage roads transfer points etc.	There is no crusher at CHP in this project. Effective water spraying arrangements were made at unloading, conveyor transfer points. Fixed water sprinklers are being used for sprinkling on roads. Coal transportation roads and permanent internal roads were black topped.
(x)	Drills should be wet operated only.	Wet drilling is being provided for stone drilling. The water spraying on the working face and drilling site as per the provisions of Regulations 146 of Coal Mines Regulation, 2017 are being implemented to avoid the dust generation in the working places
(xi)	Controlled blasting should be practiced with use of delay detonators. The mitigate measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	DGMS approved explosives are being used for safe blasting. There are no fly rock and ground vibration problems as the operations are carried out below ground.
(xii)	A progressive a forestation plan shall be prepared and implemented for the undisturbed area brought under green belt development, areas along roads, infrastructure, over surface where mining is being done below, along ML boundary an township outside the lease areas, etc, by planting native species in consultations with the local DFO/Agriculture department. The density of trees should be around 2500 plants per ha.	55.50 ha of mine take area were planted so far with 43.863 plants. In town ship also above 5000 plants are planted so far Species of saplings planted are Cassisiamia, Karange, Neem, Banian, Peepal, Jamun and Eucalyptus.
(xiii)	Conservation Plan for endangered species found in and around the project area shall be formulated in consultation with the State Forest and Wildlife Departments. A separate fund earmarked for conservation measures shall be maintained and the details of expenditure along with report on the implementation of the conservation Plan submitted regularly to the MOEF, RO at Bangalore.	The project workings are restricted to underground only. As such there will be no impact on the flora and fauna. However, conservation plan will be formulated and implemented if required.
(xiv)	Regular monitoring of groundwater level and quality should be carried out by establishing a net work of existing wells and construction of new peizometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), Post Monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the	Phreatic surface in the area around project is being monitored four times (Pre-monsoon, Monsoon, winter, Post-monsoon) in the year using network of 42 existing observation wells and monitoring report submitted to Regional Office, MoEF & CC, Hyderabad and Regional Office, Telangana State Pollution Control Board. Results of monitoring shows no adverse impact on ground

	Ministry of Environment and Forests and to the Central pollution Control Board quarterly within one month of monitoring. The Company shall put up artificial groundwater recharge measures for augmentation of ground water resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	water levels **The details are shown in Annexure - VIII**
(xv)	The Company shall put up artificial groundwater recharge measures for augmentation of ground water resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	The excess mine discharge water is being diverted to nearby tank/nallah for augmentation of ground water. There is no case of village wells going dry around this project so far **The details are shown in Annexure - VIII**
(xvi)	The company shall obtain approval of CGWA/CGWB Regional Office for use of groundwater, if any, for mining operations.	Ground water clearance was obtained vide lr. No. 1862/T/2003-04/755, Dated 05-11-2005 from the State Ground Water Department.
(xvii)	Sewage treatment plant should be installed in the existing colony. ETP should be also be provided for workshop and CHP waste water.	Two no's of STP are working in Bhupalpalli area, and its capacity is 3 MLD of each. -One STP is in Krishna Colony -One STP is in Subhash colony
(xviii)	Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subject to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	Company doctors are trained in Occupational health hazards. Hence all work persons are regularly examined for occupational diseases and hearing impairment at our Hospital by trained doctors. At present periodic Medical examination (PME) of the workers is being carried out in SCCL as per the schedule stipulated by DGMS mines rules. **76 employees** of KTK 6 incline have undergone periodical medical examination during last six months.
(xix)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional office at Bangalore.	Being Complied.
(xx)	A final Mine closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	A final Mine closure plan will be submitted 5 years in advance.
(xxi)	Consent for operation shall be obtained before expanding mining operations.	Consent Order is obtained and is being renewed in stipulated time .

B. GENERAL CONDITIONS

<table>
<tr><th>SL. No.</th><th>Condition</th><th>Compliance Status</th></tr>
<tr><td>(i)</td><td>No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.</td><td>There is no change in mining technology.</td></tr>
<tr><td>(ii)</td><td>No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.</td><td>There is no change in calendar plan.
<table>
<tr><th rowspan="2">YEAR</th><th colspan="2">Coal (in MT)</th></tr>
<tr><th>As per EC</th><th>Actual</th></tr>
<tr><td>2009-10</td><td>0.312</td><td>0.149</td></tr>
<tr><td>2010-11</td><td>0.312</td><td>0.172</td></tr>
<tr><td>2011-12</td><td>0.312</td><td>0.149</td></tr>
<tr><td>2012-13</td><td>0.312</td><td>0.163</td></tr>
<tr><td>2013-14</td><td>0.312</td><td>0.165</td></tr>
<tr><td>2014-15</td><td>0.312</td><td>0.215</td></tr>
<tr><td>2015-16</td><td>0.312</td><td>0.216</td></tr>
<tr><td>2016-17</td><td>0.312</td><td>0.220</td></tr>
<tr><td>2017-18</td><td>0.312</td><td>0.221</td></tr>
<tr><td>2018-19</td><td>0.312</td><td>0.208</td></tr>
<tr><td>2019-20</td><td>0.312</td><td>0.191</td></tr>
<tr><td>2020-21</td><td>0.312</td><td>0.143</td></tr>
<tr><td>2021-22</td><td>0.312</td><td>0.136</td></tr>
<tr><td>2022-23</td><td>0.312</td><td>0.147</td></tr>
<tr><td>2023-24</td><td>0.312</td><td>0.066 (Upto Apr’23–Sept’23)</td></tr>
</table></td></tr>
<tr><td>(iii)</td><td>Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and Nox monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.</td><td>Four Ambient air quality monitoring stations were installed at 1) KTK-6 Incline (Core Zone), 2) Kamalapur, 3) SCCL colony, 4) Peddakuntapalli. These stations were fixed in consultation with SPCB. The monitoring is being carried out regularly once in a fortnight as per the Coal mine standards, GSR 742 (E), dated 25.09.2000 & NAAQS, dated 18.11.2009 for the parameters PM_{10}, $PM_{2.5}$, SO2 and NO2 through external authorized agency M/s. EPTRI, Hyderabad having MoEF recognized Laboratory
The details are shown in Annexure – I</td></tr>
<tr><td>(iv)</td><td>Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and date recorded properly. Water spraying arrangement on haul roads, wagon loading, and dump trucks (loading and unloading) points should be provided and properly maintained.</td><td>Fugitive dust emissions are being controlled through
i) Wet drilling at roof bolting activity.
ii) Water spraying at coal face and unloading/transfer points.
At the mine water spraying arrangements were made and fixed sprinklers along coal transport road to control the dust.</td></tr>
<tr><td>(v)</td><td>Data on ambient air quality (SPM, RPM, SO2 and Nox) should be regularly submitted to the Ministry including its Regional Office at Bangalore and to the State Pollution Control Board and Central Pollution Control Board once in six months.</td><td>Ambient Air quality and other heavy metals Data is being submitting regularly to the Ministry Regional office and to the State Pollution Control Board and included in Half Yearly Monitoring Reports.</td></tr>
<tr><td>(vi)</td><td>Adequate measures should be taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc should be provided with ear plugs/muffs.</td><td>Noise control measures such as plantation around the fan house & mine take area, Provision of evasee to main mechanical ventilator, reduction in height of fall of coal in the bunkers, preventive maintenance of machinery, etc. are being taken up. All the active work Persons Provided with earplugs who are engaged on drilling, blasting, operation of machinery and noise prone areas.</td></tr>
</table>

(vii)	Industrial waste water (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Mine seepage water is being collected in the underground sumps of adequate capacity to settle the suspended solids and pumped out to the surface slow sand filter beds of 2, 50,000 gallons capacity for further treatment to conform to the prescribed standards. The efficacy of the system is being monitored through fortnight sampling and analysis by external agency M/s EPTRI, Hyderabad having MoEF recognized laboratory.
(viii)	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Vehicles are being tuned regularly for control of emissions and ensured coal is loaded optimally and Trucks are covered with tarpaulin during the coal transportation.
(ix)	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Environmental quality monitoring is being carried out through an MoEF recognized external agency M/s EPTRI, Hyderabad, having adequate pollution monitoring and analysis equipment. Laboratory is established at Godavarikhani-I Area
(x)	Personal working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	Personnel working in dusty areas are being provided dust respirators and adopting job rotation practice. Training and information on safety and health aspects are being given through Internal Safety Organization and Mine Vocational Training Centers. Occupational health surveillance is being carried out periodically through Periodical Medical Examinations (PME) once in every 5 years and above 45 years age work persons are examined once in 3 years. Every year 1/5 of the total manpower will be covered under PME. During the last 6 months period **76** members undergone for PME.
(xi)	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	A separate Environment Management cell has been formed under control of General Manger (Environment) of SCCL, directly report to the Director (P&P)
(xii)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bangalore.	Expenditure on Env. Protection measures and the details of the same are being submitting to Ministry and its Regional Office at Chennai along with Half yearly Monitoring reports.
(xiii)	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/ monitoring reports.	SCCL agrees with this condition
(xiv)	A copy of the clearance letter shall be marked to concerned Panchayat / local NGO, if any from whom any suggestion / representation has been received while processing the proposal.	Complied.
(xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office. District Industry Centre and Collector's Office / Tahasildar' office for 30 days.	Complied.

(xvi)	The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.	Complied.
3.	The ministries are any other competent authority may stipulate any further condition for environmental protection.	SCCL agrees with this condition
4.	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the environment (Protection) act, 1986.	Noted
5.	The above conditions will be enforced inter–alia, under the provision of the water (prevention & control of pollution) act, 1974. The air (prevention & control of pollution) act, 1981. The environment (protection) act, 1988 and the public liability insurance act 1991 along with their amendments and rules.	Noted

KTK 6 INCLINE

PART – II

1. Production Details

Sl. No	Year	Coal (in MTPA)	
		As per EC	Actual
1	2006-07	0.312	0.115
2	2007-08	0.312	0.128
3	2008-09	0.312	0.154
4	2009-10	0.312	0.149
5	2010-11	0.312	0.172
6	2011-12	0.312	0.149
7	2012-13	0.312	0.163
8	2013-14	0.312	0.165
9	2014-15	0.312	0.215
10	2015-16	0.312	0.216
11	2016-17	0.312	0.220
12	2017-18	0.312	0.221
13	2018-19	0.312	0.208
14	2019-20	0.312	0.191
15	2020-21	0.312	0.143
16	2021-22	0.312	0.136
17	2022-23	0.312	0.147
18	2023-24	0.312	0.066 (upto April 2023 to Sept 2023)

2. Plantation:

1	No of plants planted during last six months/ last year	Nil
2	Area covered in Ha	Nil
3	Expenditure incurred in Rs.lakhs	Nil
4	Total area brought under plantation so far in Ha	Nil
5	Total no of plants planted so far since inception	Nil
6	Species of plants planted	Nil
7	Seeds sown so far	Nil
8	Small plants planted so far	Nil
9	Total expenditure in Rs. Lakhs -	Nil

Note: Plan along with details of year wise plantation furnished as Annexure-VII

3. Water Balance Statement:

Sl	Description	Quantity in KLD
1	Average quantity of water pumped out of the mine	7728
2	Water used for drinking/bathing and other industrial requirement	180
3	Water used for dust suppression and other industrial requirement	350
4	Water used for washing of HEMM/sand stowing	3864
5	Water used for plantation	230
6	Water supplied for nearest township/village for domestic purpose	2590
7	Excess water let out	514

4. Micro-meteorological Monitoring:

Micro-meteorological station was installed at Bhupalpalli GM Office: The summary of the monitoring from APRIL-2023 TO SEPTEMBER-2023 as follows:

Month	Wind Speed (m/s)			Temperature (°C)			Relative Humidity (%)			Rainfall (mm)	
	Mean	Max	Calm %	Mean	Max	Min	Mean	Max	Min	Total	Hourly highest
April, 2023	2.2	6.5	22.08	30.6	42.2	18.9	39.8	93.5	10.3	0.0	0.0
May, 2023	2.0	7.0	18.2.8	33.6	46.4	20.5	43.1	99.5	13.8	2.5	1.3
June, 2023	1.8	6.0	20.83	33.5	44.4	19.8	33.3	85.9	7.7	1.5	0.5
July, 2023	1.7	5.8	23.12	28.3	40.2	15.2	70.2	97.2	28.2	26.4	1.3
August, 2023	2.0	6.0	14.92	28.9	39.8	19.8	56.2	99.1	26.0	189.0	5.0
September, 2023	1.9	5.6	19.44	27.9	41.2	17.6	71.6	98.7	20.5	64.5	6.0

5. Ambient Air Quality Monitoring:

Monitoring data:

The summary of the monitoring from APRIL-2023 TO SEPTEMBER-2023 as follows:

Location	Direction & Distance	PM10			
		Min.	Max.	98%tile	STD
KTK 6 Incline	Core Zone	79	173	171.80	250
SCCL colony Bhoopalpalli Village	Buffer Zone	46	91	90.60	100
Mallampally Village	Buffer Zone	43	76	74.60	100
Krishna Colony	Buffer Zone	41	86	85.20	100
Pulluriramaiahpalli / Kompally village	Buffer Zone	47	69	68.80	100
Location	Direction & Distance	PM2.5			
		Min.	Max.	98%tile	STD
KTK 6 Incline	Core Zone	39.7	61.5	61.16	
SCCL colony Bhoopalpalli Village	Buffer Zone	28.4	48.3	48.02	60
Mallampally Village	Buffer Zone	24.5	42.3	41.10	60
Krishna Colony	Buffer Zone	23.4	45.3	44.98	60
Pulluriramaiahpalli / Kompally village	Buffer Zone	23.8	40.6	40.26	60
Location	Direction & Distance	SO2			
		Min.	Max.	98%tile	STD
KTK 6 Incline	Core Zone	8	11.2	11.14	120
SCCL colony Bhoopalpalli Village	Buffer Zone	7.8	9.8	9.76	80
Mallampally Village	Buffer Zone	8.5	10.9	10.76	80
Krishna Colony	Buffer Zone	7.7	10.7	10.48	80
Pulluriramaiahpalli / Kompally village	Buffer Zone	8	10	10.00	80
Location	Direction & Distance	No_2			
		Min.	Max.	98%tile	STD
KTK 6 Incline	Core Zone	12.6	17.7	17.20	120
SCCL colony Bhoopalpalli Village	Buffer Zone	11.6	14.9	14.82	80
Mallampally Village	Buffer Zone	11.2	14.3	14.26	80
Krishna Colony	Buffer Zone	11.4	13.6	13.52	80
Pulluriramaiahpalli / Kompally village	Buffer Zone	11	14.5	14.46	80

Air Pollution Control Measures:

- Effective water spraying is being maintained at Bank heads and also at bunkers and roads.
- LPG gas is supplied free of cost to the employees.
- Sand filter beds of capacity 4,50,000 gallons are maintained at mine premises for treatment of mine discharge. Excess water from filter beds is let out for agriculture lands and village tanks.
- In this area two STPs of capacity 3.0 MLD are working. Around 1800 KLD sewage water treated in the STPs and the same was let out to nearby Forest tank.
- Plantation is developed in the mine premises and in the mine take area.
- Water tanker is arranged for water spraying for dust suppression along the coal transport road.
- Coal transport trucks carrying coal is covered with tarpaulins.

6. Surface Water Quality Monitoring:

Monitoring Data: The summary of the monitoring from APRIL-2023 TO SEPTEMBER-2023 is enclosed as Annexure-II

7. Groundwater Quality Monitoring:

Monitoring Data: The summary of the monitoring from APRIL-2023 TO SEPTEMBER-2023 is enclosed as Annexure-II

Physical-Chemical, Bacteriological Characteristics of Groundwater Collected within the Study Area

Effluent Quality Monitoring Sl. No.	Location	Parameter	Min.	Max.	Standard
1.	KTK 6 incline	P^H	7.3	8.2	5.5 - 9.0
2.	KTK 6 incline	TSS (mg/l)	14	33	100mg/lit
3.	KTK 6 incline	TDS (mg/l)	592	995	
4	KTK 6 incline	COD (mg/l)	11	32	250mg/lit
5.	KTK 6 incline	BOD (mg/l)	1.6	4.2	30mg/lit
6.	KTK 6 incline	Oil & Grease (mg/l)	1	1	10mg/lit

A. Water Pollution Control Measures:

a) Mine discharge water is treated in sand filter bed of capacity 4,50,000 gallons which is in the mine premises.

b) In this area two STPs of each 3.0 MLD capacity are working and dealing with 1800 KLD sewage water. After treatment sewage water is let out to nearby Forest tank.

B. Phreatic surface monitoring: (Depth to water)

The phreatic data monitored during the period APRIL-2023 TO SEPTEMBER-2023 is as given below.

Observation Wells

Sl. No.	Name of village	Location	Type of Well	Period	Depth to water (m) Post-monsoon April-2023 to September-2023
1	Bhupalpalli	KTK-2A inc	Domestic	Winter	5.79
				Pre-monsoon	Dry
				Monsoon	2.57
				Post-monsoon	
2	Phakeergadda	Behind Vivekananda school	Domestic (Govt.well)	Winter	1.30
				Pre-monsoon	3.27
				Monsoon	1.60
				Post-monsoon	
3	Seggampalli	Road side	Domestic	Winter	7.65
				Pre-monsoon	7.70
				Monsoon	0.97
				Post-monsoon	
4	Gaddiganipalli	West side of the village	Domestic	Winter	6.85
				Pre-monsoon	7.87
				Monsoon	4.07
				Post-monsoon	
5	Jangedu	Grama panchayathi office	Domestic (Govt.well)	Winter	4.35
				Pre-monsoon	6.37
				Monsoon	1.14
				Post-monsoon	
6	Kashimpalli	Eastern side of the village	Domestic	Winter	7.75
				Pre-monsoon	11.95
				Monsoon	2.80
				Post-monsoon	
7	Kompalli	West side of the village	Domestic	Winter	2.56
				Pre-monsoon	3.57
				Monsoon	1.40
				Post-monsoon	
8	Beddalapalli	Centre of the village	Agri.well	Winter	2.46
				Pre-monsoon	4.07
				Monsoon	GL
				Post-monsoon	

The summary of the monitoring from APRIL-2023 TO SEPTEMBER-2023 is enclosed.

8. Noise Level Monitoring

Location	Direction & Distance	Day Time			
		Min.	Max.	Avg.	STD
KTK 6 Incline	Core zone	40.3	52.6	45.86	75
Pulluriramaiahpalli / Kompally village	Buffer zone	27	56.2	42.40	55
Mallampally Village	Buffer zone	36.8	52.3	43.34	55
Location	**Direction & Distance**	**Night Time**			
		Min.	**Max.**	**Avg.**	**STD**
KTK 6 Incline	Core zone	30.9	46.5	37.11	75
Pulluriramaiahpalli / Kompally village	Buffer zone	28	35.56	31.92	55
Mallampally Village	Buffer zone	26.5	36.5	31.93	55

Noise Pollution Control Measures:

i) Plantation is grown around the fan house control noise and also evasee is fitted to the fan house.
ii) Noise levels were recorded at various locations.
iii) To dampen the noise levels along the belt conveyor impact rollers are provided at transfer points to reduce the noise.
iv) High level noise intensity working areas/zones earmuffs or earplugs are provided to the workmen.
v) Regular noise level monitoring is being done periodically for taking corrective action where ever required.

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

Environment Expenditure during the period of APRIL-2023 TO SEPTEMBER-2023.

	Capital(in Rupees)	Revenue (in Rupees)
KTK 6 Incline	--	4,83,77,374.00

10.Socio-economic Measures:

- Quarters are constructed on non coal bearing areas with such facilities as Hospitals, Schools, Market place, Post Office, Telegraph Office, Power Supply, Community Halls, Recreation Clubs, Play Grounds and protected water supply and well netted sewage and drainage line systems.
- Free medical treatment to workmen and their families is given and all children of workmen are covered under immunization programme.
- Incentives are being given to the employees to encourage them for undergoing family Planning operations.
- Incentive schemes for popularizing family planning is in vogue where by Rs.1000 paid for the persons undergoing vasectomy operation and Rs.800/- paid for spouse undergoing tubectomy operations in addition to the grant of 6 days special leave.
- Bore wells are provided in colonies. The drinking water which is supplied to the colony is chlorinated to the prescribed standards.
- Recreation clubs are provided with adequate facilities
- Free medical camps are being conducting regularly to the surrounding villagers.
- Encouragement to sports and games is given by forming works people's sports and games association for conducting inters area meets etc. Giving training to the unemployed youth in different types of self employment schemes through Singareni Sewa Samithi
- Environment awareness campaign measures:
- Environmental week celebrated for the year 2023 and environmental awareness classes given to all workmen to maintain eco friendly complications on environment awareness was conducted and the winners were given prizes.
- Energy and Resource conservation measures:
- Steps taken to conserve oil and grease: By arresting and minimizing oil and grease leakages.
- Waste materials generated and waste management practices:
- Army recruitment training, tailoring, computer courses impart to the local unemployed.
- Every Thursday conducting free medical camps in the nearby villages.
- In surrounding villages roads are developed through SHAPE funds.
- Every year plantation program is conducting in the surrounding villages.

11. 76 No's of employees have undergone periodical medical examination during last six months.

12.The minutes of EMC:

MINUTES OF THE PROJECT LEVEL ENVIRONMENTAL MANAGEMENT COMMITTEE MEETING HELD AT THE AGENT'S OFFICE ON 22.09.2023 TO REVIEW THE EC, CFE AND CFO STATUS OF KTK 6 INCLINE.

Agent KTK.1 Group	: Chairman
Colliery Manager KTK.6	: Convener
Executive Engineer KTK.6	: Member
Safety Officer KTK.6	: Member
Survey Officer KTK.6	: Member
Area Env. Officer	: Member Secretary
Area Civil Engineer	: Member
Sr. Forest Officer, RG-I	: Member

13. Minutes of meeting is enclosed in Annexure – V.

AGENT
KAKATIYA KHANI 6 INCLINE
BHUPALPALLI AREA
AGENT
KTK-1 Group