The Singareni Collieries Company Limited
(A Govt Company)
Bhupalpalli

Ref.No:BHP/ENV/46/2023/ 185

Dt. 21.11.2023

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 1&1A Incline of Bhupalpalli Area for the period of **April' 2023 to September' 2023**– Reg.

Ref : MOEF.lr.no. J-11015/307/2007-IA.II (M), dtd. 31.10.2008 (KTK 1&1A 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 1&1A 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,

23/11/23

General Manager
Bhupalpalli Area

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

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

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. 1 &1A Incline**
2	Organization		:	The 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-11015/307/2007-IA.II(M), Dated 31.10.2008
	B	Sanction capacity	:	0.6 MTPA
	C	Mining Lease Area	:	506.75 Ha
	D	Date of Public Hearing	:	11.04.2008
7	Location of the Project			
	A	Village	:	Bhupalpalli
	B	Tehasil	:	Bhupalpalli
	C	District	:	Jayashanker Bhupalpalli
	D	State	:	Telangana State
	E	Latitude	:	N 18^0 27' 43" to 18^0 28' 49"
	F	Longitude	:	N 79^0 49' 57" to 79^0 51' 56"
	G	Topo Sheet	:	56 N/15
	H	Nearest railway station	:	Jammikunta
	I	Nearest Airport	:	Hyderabad
	J	Nearest town	:	Warangal
8	Address for Correspondence		:	
	A	Name	:	Sri Jingiti Raja Sekhar
	B	Designation	:	Deputy General Manager
	C	Address		O/o: Agent, KTK 1& 1A incline
	D	Pin Code	:	506169
	F	E-mail ID	:	Agt_ktk1_bhp@scclmines.com
	G	Telephone No.	:	08713-200010
	H	Fax No.	:	08713-220208
9	Life of the Project		:	39 years(2013-2014)
	A	Date of Opening		15.7.1988
	B	Total Life of the project as per EMP	:	39 years
	C	Balance Life	:	31 years
10	Seams		:	
	A	Total Seams Present	:	3 Nos.
	B	Seams being worked	:	1&3
11	Depth			
	A	Minimum Depth (m)		45 m
	B	Maximum Depth (m)		340 m
	C	Present working depth (m)		1 Seam:170m; 3 Seam:199m
12	Reserves			
	A	Total Geological Reserves	:	80.376 MT
	B	Total Extractable Reserves	:	27.11 MT

	C	Reserves already Extracted	:	8.887 MT
	D	Balance Reserves.	:	18.223 MT
	E	Coal production during last six months	:	0.12315 MT
13	Land Requirement			
	A	Total Requirement (Mine Take Area)		506.75 Ha
	B	Forestland Involved		350.78 Ha
	C	Non-forestland		155.97 Ha
	D	Land acquired so far (Surface rights)		---
14	Statutory Clearances		:	
	A	Mining plan	:	Mining plan was approved by MoC on 08.01.2008.
	B	Ground Water Clearance		Ground water clearance from Ground Water Department Government of Andhra Pradesh was accorded vide lr. No. 1862/T/2003-04/755, Dated 05-11-2005.
	C	Consent for Establishment	:	Order No.61/PCB/CFE/RO-WGL/HO/2009 dt.04.06.2009
	D	Consent for Operation	:	Order No.: 200822517979, DT. 13.10.2020, valid up to 30.06.2025.
	E	Forest Clearance	:	Forest clearance was obtained for 235 Ha vide Lr No.8-40/99 dt.16.10.2010
	F	Mining Lease	:	Bhupalpalli Mining Lease G.O.MS No.14 dated 09.03.2010 and valid up to 03.08.2029
	G	Others (Specify)		
15	R & R Involved		:	Not applicable

KTK 1&1A INCLINE COMPLIANCE STATUS OF EC CONDITIONS DURING THE PERIOD APRIL'2023 TO SEPTEMBER' 2023.
MOEF ltr.No: J-11015/307/2007-IA.II (M), Dated 31.10.2008

2 A. SPECIFIC CONDITIONS:

Sl. No.	Condition	Compliance Status
(i)	No mining shall be undertaken in forest land for which no clearance has been obtained under FC Act, 1980	The mine take area of KTK 1&1A Incline is 506.75 Ha. A part of the Non Forest land i.e., 155.97Ha is covered under Bhupalpalli Mining Lease and 235Ha of Forest land is covered in additional mining lease 117 Ha of Forest land lease is under process. No mining is undertaken in forest land for which no clearance has been obtained under the provisions of FC Act, 1980.
(ii)	Sufficient coal Pillars shall be un extracted around the Airshaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Sufficient coal pillars were left un extracted around the Air shaft Main incline entries, etc., to protect from any damage from subsidence. Shown in **ANNEXURE-XIII**
(iii)	Solid barriers shall be left below the road falling within the blocks to avoid any damage to the roads.	No public road is falling within the mine take area.
(iv)	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains	No subsidence is recorded till date. All low lying areas were filled with suitable material. Garland drains were made around the depillaring panel before extraction. Subsidence survey is being conducted on monthly basis to ascertain the ground movement.
(v)	While extracting the panels in the lower seam, all water bodies in the low-lying /subsidence area shall be drained. Dewatering of old goaves of the upper seams shall be continued as long as the lower seam is worked to prevent the accumulation of large water bodies over working area.	Before commencement of extraction of panels in lower seam, all the water bodies in the subsidence area if any, old goaved out panels in the upper seam are de-watered and arrangements are made to pump out continuously to ensure free of water and all precautions under the provisions of Regulations 149 and 150 of Coal Mines Regulation, 2017 are being taken.
(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 the loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.	Subsidence survey is being carried out during extraction of the caving panel once in every month till the life of the panel and after completion of extraction of the panel. Subsidence survey is carried out once in every month for a period of 1 year. The system, frequency and recording of observations is being carried out as per the provisions DGMS Technical circular No.4 of 1988. Suitable measures will be taken if any subsidence observed.
(vii)	Garland/surface drains (size, gradient	The HFL of the area is 880.33

<table>
<tr><th>Sl. No.</th><th>Condition</th><th>Compliance Status</th></tr>
<tr><td></td><td>and length) around the safety areas such as mine shaft and low lying areas and sump capacity should be designed keeping 50% safety margin over and above 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 rainfall.</td><td>Pit entries MID 1 seam RL 889.35
MWD 1 seam RL 889.50
MID 3 seam RL 886.30
MWD 3 seam RL 885.55
Fan shaft RL 889.52
The pit entries such as air shaft and main incline and man way dip was designed minimum 5.2 m to 9m above the HFL of the area. Garland drains around the proposed depillaring panels and low-lying areas are made. The sumps are designed keeping the highest seepage calculations and retention time to settle the silt material. pumps of sufficient number and adequate capacity were deployed to pump out mine water during peak rainfall</td></tr>
<tr><td>(viii)</td><td>Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system , haulage roads, and transfer points etc.</td><td>Not Applicable</td></tr>
<tr><td>(ix)</td><td>Drills should be wet operated.</td><td>Wet drilling is provided for stone and roof bolting in under ground.
  </td></tr>
<tr><td>(x)</td><td>A progressive afforestation plan shall be prepared and implemented for the undistributed area and shall include area brought under greenbelt development, areas along the roads , infrastructure, over surface where mining is being done below , along ML boundary an town ship outside the lease area , etc., by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per Ha.</td><td>A progressive afforestation plan has been prepared and envisaged in the EIA/EMP. Plantation in an area of 151 Ha was completed with native species as on date in the available lease area.
<table>
<tr><th rowspan="2">Year</th><th colspan="2">Area in Ha</th></tr>
<tr><th>Vacant land</th><th>Forest Land</th></tr>
<tr><td>2003</td><td>20</td><td>-</td></tr>
<tr><td>2005</td><td>15</td><td>28</td></tr>
<tr><td>2010</td><td>15</td><td>-</td></tr>
<tr><td>2012</td><td>-</td><td>20</td></tr>
<tr><td>2013</td><td>10</td><td>18</td></tr>
<tr><td>2014</td><td>--</td><td>--</td></tr>
<tr><td>2015</td><td>--</td><td>25</td></tr>
<tr><td>2016</td><td>---</td><td>--</td></tr>
<tr><td>2017</td><td>--</td><td>--</td></tr>
</table></td></tr>
</table>

Sl. No.	Condition	Compliance Status
		<table><tr><td>2018</td><td>--</td><td>--</td></tr><tr><td>2019</td><td>--</td><td>--</td></tr><tr><td>2020</td><td>--</td><td>--</td></tr><tr><td>2021</td><td>--</td><td>--</td></tr><tr><td>2022</td><td>--</td><td>--</td></tr><tr><td>2023</td><td>--</td><td>--</td></tr><tr><td>Total</td><td>60</td><td>91</td></tr></table> Gap Plantation in forest lease area taken in consultation with local DFO, Karimnagar.
(xi)	Conservation plan for endangered species found in and around the project area shall be formulated in consultation with the State Forest and Wild life departments.	Not applicable
(xii)	Regular monitoring of ground water level and quality should be carried out by establishing a network of exiting wells and construction of new peizometers. The monitoring for quantity shall 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 shall be submitted to the Ministry of Environment & Forests and to the Control Pollution Board quarterly within one month of monitoring.	Phreatic surface in the area around the 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 is submitted to Integrated Regional Office, MoEF & CC, Hyderabad and Regional Office, TS Pollution Control Board. Results of the monitoring show no adverse impact on ground water levels. **Ground water level and quality, Surface water quality monitoring results are enclosed as Annexure-II**
(xiii)	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 (about 430 KLD) to nearby tank/ nallah for augmentation of ground water and rainwater harvesting structure are being taken up in the colony, office complexes and nearby villages. The Company is supplying 138 KLD of drinking and domestic water to the nearby village Beddalonipalli.
(xiv)	The company shall obtain approval of CGWA/CGWB Regional Office for use of ground water if any, for mining operations	Ground water clearance obtained from State Ground Water Department, vide lr. No. 1862/T/2003-04/755, Dated 05-11-2005. Ground water quality and Surface water quality monitoring results are enclosed as annexure-II.
(xv)	Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP wastewater.	Two Sewage Treatment Plants (3 MLD Capacity each) are already installed and operating to treat the sewage water from existing townships.
(xvi)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) on the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for; any one particular season which is consistent in the time series.) and	It is being complied and enclosed the report on land use land cover study of core & buffer zone of KTK 1 &1A incline underground coal mine expansion project in the year of study-2020.

Sl. No.	Condition	Compliance Status
	the report submitted to MOEF and its Regional office at Bangalore.	
(xvii)	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 of final mine closure.
(xviii	Monitoring of impact of R&R and CSR over the life of the project shall be based on key; indices of UNDP Human Development Report using pre-project status; of socio-economic and human development as the base line.	No Rehabilitation and Resettlement (R&R) is involved in the project. The company is undertaking various developmental activities in the area under Corporate Environment Responsibility and DMFT and impact of these activities are being monitored by taking key parameters.

B. General Conditions

<table>
<tr><td>i.</td><td>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.</td><td>The mine is being developed with Board and Pillar method and depillaring with Caving Hydraulic sand stowing. Any changes in mining technology and scope of working will be done with prior approval of the MoEF &CC.</td></tr>
<tr><td>ii.</td><td>No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.</td><td>It is being complied.
During the year 2023-24 coal production is 0.123150 MT
<table>
<tr><td rowspan="2">Year</td><td colspan="2">Coal (in MTPA)</td></tr>
<tr><td>As per EC</td><td>Actual</td></tr>
<tr><td>2009-10</td><td>0.6</td><td>0.308</td></tr>
<tr><td>2010-11</td><td>0.6</td><td>0.332</td></tr>
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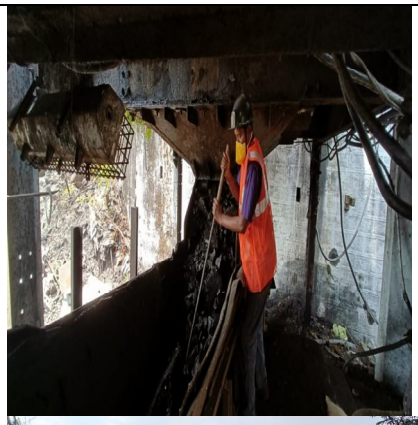
<tr><td>2013-14</td><td>0.6</td><td>0.452</td></tr>
<tr><td>2014-15</td><td>0.6</td><td>0.344</td></tr>
<tr><td>2015-16</td><td>0.6</td><td>0.394</td></tr>
<tr><td>2016-17</td><td>0.6</td><td>0.436</td></tr>
<tr><td>2017-18</td><td>0.6</td><td>0.413</td></tr>
<tr><td>2018-19</td><td>0.6</td><td>0.364</td></tr>
<tr><td>2019-20</td><td>0.6</td><td>0.338</td></tr>
<tr><td>2020-21</td><td>0.6</td><td>0.247</td></tr>
<tr><td>2021-22</td><td>0.6</td><td>0.259469</td></tr>
<tr><td>2022-23</td><td>0.6</td><td>0.251608</td></tr>
<tr><td>2023-24 (April’23-Sep’23)</td><td>0.6</td><td>0.123150</td></tr>
</table></td></tr>
<tr><td>iii.</td><td>Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and NOx, Hg and other heavy metals such as Rb, Cr, As etc. Location of the stations shall 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 namely at KTK 1&1A Incline (Core Zone) Kasimpalli Village (SW- 1.0Km), Beddalonipalli Village (W – 1.0Km) and Gaddiganipalli / Anasanpalli Village (S 2.0 Km) in consultation with Regional Officer, T.S. Pollution Control Board, Warangal were established considering the meteorological data. 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 &CC recognized Laboratory. Monitoring reports during the last six months is enclosed in as Annexure-I.</td></tr>
<tr><td>iv.</td><td>Fugitive dust emissions (SPM and RSPM, Hg and other heavy metals) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading points shall be provided and properly maintained.</td><td>Fugitive dust emissions are being monitored regularly at mines KTK1&1A Inclines by M/S EPTRI Hyderabad and the data is being recorded. At the mine water spraying is done with pipe line arrangements and high pressure to control the dust.</td></tr>
</table>

		 
v.	Data on ambient air quality (SPM, RSPM, SO2 and NOx Hg and other heavy metals shall be regularly submitted to the Ministry including its Regional Office at Bangalore and to the State Pollution Control Board and the Central Pollution Control Board once in six months.	Ambient Air quality and other heavy metals Data is being submitted regularly to the Ministry Regional office and to the State Pollution Control Board and included in Half Yearly Monitoring Reports. The ambient air quality monitoring data is enclosed as **Annexure-I of part-II**
vi.	Adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in blasting and drilling operation, operation of HEMM, etc shall be provided with ear plugs/muffs.	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 mineral coal in the bunkers, preventive maintenance of machinery, etc., are being taken up. All the persons working in the active area were provided with earplugs who are engaged on noise prone areas.

		
vii.	Industrial wastewater (workshop and wastewater from the mine) shall 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 shall be installed before discharge of workshop effluents.	Not applicable
viii.	Vehicles emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Trucks having PUC certificate are only being allowed for coal transportation. Coal is loaded optimally and trucks are covered with tarpaulin during the coal transportation 
ix.	Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Post Project Environmental Monitoring is being carried out through external agency M/s. Environment Protection Training and Research Institute (EPTRI), Hyderabad. A laboratory with adequate staff has been established at Ramagundam by EPTRI for analysis of critical parameters in the field.

		 
x.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall 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 Centres.

		 Occupational health surveillance is being carried out periodically through Periodical Medical Examinations (PME) once in every 5 years is 74 No.s and 3 years to the workmen above 45years of age is 107 No.s respectively. During the last six months 181 nos. of workmen are sent for PME.
xi.	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the Company.	A company level environment cell with qualified personnel headed by GM (ENV.) is established to monitor and guide in implementation of the environmental safeguards. An area level environmental cell headed by qualified environmental officer is established and functioning under the control of area General Manager to monitor and guide in implementation of the environmental safeguards. Apart from this, an area level Environmental Management Committee with multi disciplinary team has been constituted under the chairmanship of SO to GM.

<table>
<tr><td></td><td></td><td>The area level Environmental Management committee has been constituted with following members.
<table><tr><td>1</td><td>SO to GM</td><td>Chairman</td></tr><tr><td>2</td><td>Project Officer</td><td>Member</td></tr><tr><td>3</td><td>Area Engineer (E&M)</td><td>Member</td></tr><tr><td>4</td><td>Area Civil Engineer</td><td>Member</td></tr><tr><td>5</td><td>Area Forest Officer</td><td>Member</td></tr><tr><td>6</td><td>Area Estates Officer</td><td>Member</td></tr><tr><td>7</td><td>Project Manager</td><td>Member</td></tr><tr><td>8</td><td>Project Engineer</td><td>Member</td></tr><tr><td>9</td><td>Project Surveyor</td><td>Member</td></tr><tr><td>10</td><td>Project Env.Officer</td><td>Member</td></tr><tr><td>11</td><td>Area Env. Officer</td><td>Secretary</td></tr></table></td></tr>
<tr><td>xii.</td><td>The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bangalore.</td><td>The funds earmarked for environmental protection measures are being budgeted and approved separately and utilized for environmental related works only. Year-wise expenditure is being reported to the Ministry and its Regional Office at Hyderabad through half yearly monitoring reports.
The details of expenditure incurred on environmental protection works is furnished in table of 10 part-II of report.</td></tr>
<tr><td>xiii.</td><td>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 requisitedata/information/monitoring reports.</td><td>The project authorities are extending full cooperation to office(s) of the Regional office, Hyderabad by furnishing the requisite data/information/monitoring reports and during their visit/inspections to the project.</td></tr>
<tr><td>xiv.</td><td>A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal.</td><td>The copy of the Environmental Clearance letter was marked to the following Panchayats vide Lr.No.BHP/ENV/2008/80, dt.28.11.2008
i) Mandal Revenue Office, Bhupalpalli.
ii) Jangedu Grampanchayat
iii) Kompally Grampanchayat
iv) Bhupalpalli Grampanchayat</td></tr>
<tr><td>xv.</td><td>State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector’s Office/ Tahsildar’s Office for 30 days.</td><td>Not Applicable</td></tr>
<tr><td>xvi.</td><td>The Project authorities shall 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 as 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.</td><td>The advertisement was given on 18-11-2008 in Deccan chronicle (English Daily) and Vartha (Telugu Daily) news papers widely circulated around the project.</td></tr>
</table>

3.	The ministry or any other competent authority may stipulate any further condition for environmental protection.	Any additional condition if stipulated by the ministry or any other competent authority will be complied.
4.	Failure to comply with any of the conditions mentioned above may result in with drawl of this clearance and attract the provisions of the environment (protection) Act 1986.	All the conditions are being complied.
5.	The above conditions will be enforced inter-allia under the provisions of the water (prevention and control of pollution) Act, 1974, the air (prevention and control of pollution) Act, 1981, The environment (protection) Act, 1986 and the public liability insurance Act, 1991 along with their amendments and rules.	Noted

Additional E.C condition vide letter no: F. No. 22-34/2018-IA.III Dated: 16th January 2020

1.	The mining lease holder shall, after ceasing mining operation, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc."	Will be complied

KTK 1&1A INCLINE

PART – II

1. Production Details

Sl. No	Year	Coal (in MTPA)	
		As per EC	Actual
1	2007-08	0.6	0.240
2	2008-09	0.6	0.254
3	2009-10	0.6	0.308
3	2010-11	0.6	0.332
4	2011-12	0.6	0.347
5	2012-13	0.6	0.404
6	2013-14	0.6	0.452
7	2014-15	0.6	0.344
8	2015-16	0.6	0.394
9	2016-17	0.6	0.436
10	2017-18	0.6	0.413
11	2018-2019	0.6	0.364
12	2019-2020	0.6	0.338
13	2020-2021	0.6	0.247
14	2021-2022	0.6	0.259
15	2022-2023	0.6	0.252
16	2023-2024	0.6	0.123 (Up to Sep.)

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	151 Ha
5	Total no of plants planted so far since inception	2,14,747
6	Species of plants planted	Clones, Sinduga, Kanuga, Neem, Naravepa, Naredu, Ravi, Buruga, Usiri, Nemali nara, Veduru, Eppa etc.
7	Seeds sown so far	-
8	Small plants planted so far	-
9	Total expenditure in Rs. lakhs -	Rs. 74,36,668.00

3. Water Balance Statement:

Sl	Description	Quantity in KLD
1	Average quantity of water pumped out of the mine	6686
2	Water used for drinking/bathing and other industrial requirement	138
3	Water used for washing of HEMM /Stowing/ other mines	2896
4	Water used for plantation	2719
5	Water used for dust suppression	173
6	Excess water let out for irrigation	430
7	Water given for drinking and domestic purpose to the nearby village.	330

4. Micro-meteorological Monitoring:

Micro-meteorological station was installed at Bhoopalpalli 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:

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 (PM10 and PM2.5), Sulphur Dioxide (SO2) and Oxides of Nitrogen (NOx) 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 PM10, SO2 and NOx and Ambient Fine Dust Sampler is being used for monitoring of PM2.5. 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.

Post project Ambient 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 1&1A incline	Core zone	76	184	179.60	**250**
Kasimpalli Village	Buffer zone	48	82	81.40	**100**
Gaddiganipalli Village	Buffer zone	49	76	75.20	**100**
Kamalapuram Village	Buffer zone	49	82	80.60	**100**
Beddalonipalli Village	Buffer zone	44	77	75.40	**100**
Location	Direction & Distance	PM2.5			
		Min.	Max.	98%tile	**STD**
KTK 1&1A incline	Core zone	32.6	63.2	63.06	-

Kasimpalli Village	Buffer zone	25.2	44.6	43.92	**60**
Gaddiganipalli Village	Buffer zone	26.7	39.4	39.24	**60**
Kamalapuram Village	Buffer zone	26.4	43.4	43.26	**60**
Beddalonipalli Village	Buffer zone	23.4	42.6	42.06	**60**
Location	Direction & Distance	**SO2**			
		Min.	Max.	98%tile	**STD**
KTK 1&1A incline	Core zone	8.2	12.1	12.08	**120**
Kasimpalli Village	Buffer zone	7.6	9.3	9.30	**80**
Gaddiganipalli Village	Buffer zone	8.1	10.9	10.8	**80**
Kamalapuram Village	Buffer zone	8.3	10.6	10.48	**80**
Beddalonipalli Village	Buffer zone	8.3	10.5	10.48	**80**
Location	**Direction & Distance**	**NO2**			
		Min.	Max.	98%tile	**STD**
KTK 1&1A incline	Core zone	12.7	16	15.88	**120**
Kasimpalli Village	Buffer zone	11.3	14.1	14.06	**80**
Gaddiganipalli Village	Buffer zone	11.	15.2	14.96	**80**
Kamalapuram Village	Buffer zone	11.9	15	14.98	**80**
Beddalonipalli Village	Buffer zone	11.7	14.6	14.58	**80**

Air Pollution Control Measures:

- Water spraying arrangements is done at discharge points, transfer points at bunkers.
- At coal yards effective water spraying arrangements were done to suppress dust raised by movement of trucks and loaders
- Coal transport trucks are being maintained with tarpaulin sheets to cover coal on trucks.
- Water sprinklers tanker arrangement is done to suppress dust along the coal transportation roads.

6. Water Quality Monitoring:

The impact of the mining activities on the water environment was assessed by studying the quality of groundwater and surface water bodies in the study area. The sampling locations were selected considering their proximity to the project sites. A total of 10 water samples i.e., 4 samples from surface and 4 samples from groundwater and one sample from effluent were collected and analyzed for various physico-chemical and bacteriological parameters.

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:

Surface Water Quality Monitoring:
Monitoring Data: The summary of the monitoring from April 2023 to September 2023 is enclosed as Annexure-2
Physical-Chemical and Bacteriological Characteristics of Surface Water at Selected Locations in the Study Area

Groundwater Quality Monitoring:
Monitoring Data: The summary of the monitoring from April 2023 to September 2023 is enclosed as Annexure-2

Effluent Quality Monitoring

Sl. No.	Location	Parameter	Min.	Max.	98%	Standard
1.	KTK 1 Incline	**P^H**	7.3	8.18	8.06	5.5 - 9.0
2.	KTK 1 Incline	**TSS**	14	32	31.80	100mg/lit
3.	KTK 1 Incline	**TDS (AT 180^0 mg/l)**	734	1082	1052.2	-
4.	KTK 1 Incline	**COD (mg/l)**	15	31	30.4	250mg/lit
5.	KTK 1 Incline	**BOD**	1.6	4.2	4.04	30
6.	KTK 1 Incline	**Oil & Grease (mg/l)**	1	1	1	10mg/lit

Water Pollution Control Measures:
a) Mine discharge water is treated in sand filter bed of capacity 80,000 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.

7. Phreatic surface monitoring: (Range of Water Table)
The phreatic data monitored during the year 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) Pre-monsoon Monsoon, Post Monsoon &Winter (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	Domestic	Winter	1.30
				Pre-monsoon	3.27

Sl. No.	Name of village	Location	Type of Well	Period	Depth to water (m) Pre-monsoon Monsoon, Post Monsoon &Winter (April 2023 to September 2023)
		Vivekananda school	(Govt.well)	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	Chelpur	Centre of the village	Domestic	Winter	4.75
				Pre-monsoon	6.47
				Monsoon	1.50
				Post-monsoon	

8. Noise Level Monitoring

Location	Direction & Distance	Day Time			
		Min.	Max.	Avg.	STD
KTK 1 Incline	Core zone	41.2	54.1	47.60	75
Kashimpalli Village	W	32.3	48.1	41.11	55
Beddalonipalli Village	SE	33.6	49.4	40.41	55
Location	Direction & Distance	Night Time			
		Min.	Max.	Avg.	STD
KTK 1 Incline	Core zone	31.7	42.8	36.93	70
Kashimpalli Village	W	22.4	35.5	29.66	45
Beddalonipalli Village	SE	23	35.9	29.03	45

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. 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.
- 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 2021-22 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.

- 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.

10. **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 Rs.)	Revenue (in Rs.)
KTK 1 &1A Incline	--	3,00,60,696.00

11. **Periodical Medical checkup details:** 181 members PME completed during last six months.

12. **EMC meeting details:**

The minutes of EMC is enclosed as **Annexure-XII.**

The below members were participated in the meeting.

	S/Shri
1	AGENT
2	Mine Manager
3	Mine Safety Officer
4	Area Env. Officer
5	Mine Env. Officer
6	Sr. Forest officer
7	Survey Officer
8	Mine Engineer
9	Civil Engineer

Ground Water Compliances enclosed in Annexure – V

AGENT
KAKATIYAKHANI NO. 1 &1A Incline
BHUPALAPALLI AREA

AGENT
KTK-1 Group,SRP