

THE SINGARENI COLLIERIES COMPANY LIMITED (A Government Company) Environment Department KOTHAGUDEM AREA

Ref.No: KGM/ENV/404/3(0

Date: 29.11.2021

To Director, Ministry of Environment, Forests & Climate Change (MoEF &CC), Regional Office (South Eastern Zone), 1st & 2nd Floor, HEPC Building, No. 34, Cathedral Garden Road, Nungambakkam, <u>Chennai - 600 034.</u>

Sir,

Sub: Half Yearly Environmental Monitoring report (Apr'2021 to Sep'2021) of Jalagam Vengal Rao Opencast Project – II (Coal Mine Project) of SCCL – Reg. Ref: MoEF&CC, Gol Lr. No.1) J-11015/268/2007-IA.II (M) dated 28th March 2010 2) J-11015/268/2007-IA.II (M) dated 19th April 2021

With reference to the subject and environmental clearance letters cited, please find enclosed both hard and soft copies of the status of implementation of environmental conditions vis-à-vis project progress of Jalagam Vengal Rao Opencast Project – II (Coal Mine Project) for the half yearly period ending on 30th Sep' 2021.

Yours faithfully

General Manager Kothagudem Area The S.C.Co.Ltd Venkateshkhani - (P.O) Bhadradri Kothagudem - (Dist) Telangana(state) Pin - 507 103.

Encl: Half yearly compliance report of Jalagam Vengal Rao Opencast Project - II.

CC: Dy Director, IRO, MoEF&CC, Hyderabad, EE, TSPCB, RO, Kothagudem. GM (Env.),Corp. PO, JVR OC Project – II.

HALF-YEARLY MONITORING REPORT

(In compliance with EIA notification 2006 under Environment (Protection) Act)

FOR

JALAGAM VENGAL RAO OPEN CAST PROJECT-II

(KOTHAGUDEM AREA)

(For the period 1st April'2021 to 30th Sep'2021)



THE SINGARENI COLLIERIES COMPANY LIMITED (A GOVERNMENT COMPANY)

KOTHAGUDEM AREA

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THE SINGARENI COLLIERIES COMPANY LIMITED (A Govt. Company) Kothagudem Area

PART – I

A. SALIENT FEATURES OF THE PROJECT:

1.	Name of the Project	:	Jalagam Vengal Rao Opencast Project – II
2.	Organization	:	Singareni Collieries Company Limited
3.	Coalfield	:	Godavari Valley Coal Field
4.	Type of Mine	:	Opencast Coal Mining Project
5.	Technology	:	Shovel Dumper Combination
6.	Environmental Clearance		
	A. Letter No & date	:	J-11015/268/2007-IA.II (M) dated 28 th March 2010.
	В.	:	J-11015/268/2007-IA.II (M) dated 19th April 2021.
	C. Sanctioned Capacity	:	5 MTPA
	D. Mining Lease Area.	:	1409.81 Ha.
	E. Date of Public Hearing	:	21.05.2009
7.	Location of the Project		
	A. Village	:	Kommepalli village
	B. Tehasil / Mandal	:	Sathupalli
	C. District	:	Khammam
	D. State	:	Telangana.
	E. Latitude	:	N 17 ⁰ 10'24" to 17 ⁰ 12'11"
	F. Longitude	:	E 80 [°] 47'07" to E 80 [°] 49'11".
	G. Topo Sheet	:	Sol Topo Sheet No 65C/16
	H. Nearest railway station	:	Bhadrachalam Road (65 Km)
	I. Nearest Airport	:	Shamshabad
	J. Nearest town	:	Sathupalli
8.	Address for Correspondence		
	A. Name	:	S.Venkata Chary.
	B. Designation	:	Project Officer
	C. Address		S.C.Co. Ltd, Post: Sathupalli,
		•	Dist: Khammam, Telangana-State.
	D. PIN Code	:	507 303
	E. E-mail ID	:	oc_spl@scclmines.com
	F. Telephone No.	:	08761 - 282734
	G. Fax No.	:	08761 - 282736
9.	Life of the Project		
	A. Date of Opening	:	01-09-2017
	B. Total Life of the project as per EMP	:	29 Years(As per 2016 RCE-1)
	C. Balance Life of the project	:	25 Years
10.	Seams		
	A. No. of Seams Present	:	16 (9 nos. are major, 7 nos. are minor coal seams with limited thickness)
11.	Depth		
	A. Maximum Depth	:	363.45 m

	B. Present working depth	:	100 m	
12.	Reserves			
	A. Total Geological Reserves	:	251.72 MT(As per 20	16 RCE-1)
	B. Total Extractable Reserves	:	239.17 MT(As per 20	16 RCE-1)
	C. Reserves already extracted	:	16.420 MT	
	D. Balance Reserves	:	222.750 MT	
	E. Coal production during last 6 months		3.133 MT	
13.	Over Burden			
	A. Total OB	:	1033.25 M.Cum(As p	er 2016 RCE-1)
	B. OB extracted since inception	:	84.938 M.B.Cum (inc	I.Top soil)
	C. OB removed in last 6 months	:	15.165 M.B.Cum (inc	I.Top soil)
	D. Stripping Ratio	:	4.32	
14.	Top Soil			
	A. Total Topsoil	:	4.50 MB.Cum.	
	B. Total soil extracted since inception	:	1.609 MB.Cum.	
	C. Topsoil preserved for future use	:	1.457 MB.Cum	
	D. Top soil removed in last 6 months	:	0.104 MB.Cum	
	D. Top soil spread in last 6 months	:	0.104 MB.Cum	
15.	Land Requirement			
	A. Total Requirement	:	1409.81 Ha.	
	B. Forestland Involved	:	788.22 Ha.	
	C. Non-forestland	:	621.59Ha.	
16.	Activity wise Land Requirement		As per EMP	Present Status
	A. Quarry Area	:	749.38Ha.	273.380 Ha.
	B. External OB Dumps	:	411.49 Ha.	212.000 Ha.
	C. Infrastructures & CHP	:	22.52 Ha.	22.340 Ha
	D. Others	:	226.42 Ha.	22.520 Ha
	E. Road Diversion	:		3.310 Ha
	F. Total	:	1409.81Ha.	533.550 Ha.
17.	Statutory Clearances			
	A. Mining Plan Approval	:	No. 13016/14/2009-C	A II, Dt.10.02.2016
	B. Ground Water Clearance	:	Memo No. 4693/Hg.II	(2)/2008 dt. 01.11.08
	C. Consent for Establishment	:	Order No.5/PCB Dt.26.06.2015.	/CFE/RO-KGM/HO/2015-570,
	D. Consent for Operation	:	Order No.170421033 31.10.2022	095 Dt.03.01.2018 Valid up to
	E. Forest Clearance from MoEF	:	No.8-56/2014-FC, dt.	31.05.2017 (776.02 Ha.)
	F. Mining Lease (GO MS Nos.)	:	No.13016/2/2015-CA of 30 years.	-II, dt.26/06/2015 for a period
	G. Others: NTR Canal Diversion	:	Obtained permission 1932, I&CADD (MI.II2 No objection certifica Engineer, Minor Irriga	for diversion vide GO RT No. 2) dept dated 30.12.2005. ate has issued by the Chief ation (GB) on 23.04.2016.
18.	R & R Involved	:	Yes (Kommepalli Villa	age)

STATUS OF IMPLEMENTATION OF MoEF&CC ENVIRONMENTAL CLEARANCE CONDITIONS FOR THE PERIOD ENDING 30th Sep' 2021. Environment Clearance vide Lr.No. J-11015/268/2007-IA-II (M) dated 28.03.2010 & J-11015/268/2007-IA.II (M) dated 19th April 2021.

2. A.Specific Conditions:-

S.No	Condition	Compliance Status
(i)	No mining operation shall be undertaken in the 776.20 ha. of forest land until prior clearance has been obtained under the provisions of FC Act, 1980.	Final stage clearance has been accorded by MoEF&CC for diversion of 776.20 ha of forest land vide letter no. F.No.8-56/2014-FC,dt. 31.05.2017 and Government of Telangana State has passed GO Ms. No. 24, dt. 06.07.2017. 776.20 ha of Forest Land. Mining operations commenced after obtaining clearance only.
(ii)	Topsoil should be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used for reclamation and development of green belt.	Out of total top soil of 4.5 Mm ³ available, 1.609 Mm ³ was excavated up to 30.09.2021. Out of which 0.152 Mm ³ has been spread over the external dump and balance 1.457 Mm3 of top soil has been preserved/stacked.
(iii)	Adequate safety distance/barrier shall be maintained from the drainage along the ML boundary. Diversion Bathupalli Flood Flow Canal flowing across the lease and its realignment at the boundary of the lease shall be carried out in consultation with the State Flood and Irrigation Department.	Diversion of NTR canal (Bethupally Flood Flow canal) for a length of 18.32 km had already been under taken with the approval of the State Irrigation & CAD Department vide G.O. Rt. No.1932, dt. 30.12.2005 and the diversion work is completed. The diverted canal is realigned with the original course and retained the existing feeder channels of downstream irrigation tanks.
(iv)	OB shall be stacked at earmarked external OB dumpsite of 411.49 Ha. Within ML area and shall not exceed a maximum height of 90m consisting of 3 benches of 30m each. An estimated 55.28 Mm ³ of OB shall be rehandled from west ext. OB dump to backfill the decoaled void. The ultimate slop of the dump shall not exceed 28°. Slope stability studies shall be carried out and monitoring of the stability of the dumps continuously undertaken	Overburden is being dumped at earmarked external dump site within ML area as envisaged in the approved EMP. As on 30.09.2021 about 83.808Mm ³ of OB is dumped in external dump yard up to a maximum height of +90 m height with each deck of 30 m height with an ultimate slope of below 28°. Total area brought under plantation so far is 20.43 ha. Scientific study for OB dump stability and pit slope stability at JVR OC-II Project is awarded
	and particularly during monsoon and post- monsoon seasons to ascertain its stability. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the MoEF and its Regional office located at	to National Institute of Karnataka, Surathkal and the recommendations will be implemented after completion of study. Monitoring and management of existing reclaimed dumpsites is being continued and will be carried out until the vegetation becomes self-
(v)	Bangalore on a yearly basis. Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads,	Sustaining. Catch drains for a length of 3.5 km and 7 No's. Settling ponds have been made to arrest silt and sediment flows from soil, OB and coal dumps.
	green belt development etc. The drains shall be regularly desilted and maintained properly. Garland drains of suitable size gradient and	suppression in the mine area, on haul roads and for green belt development etc.

S.No	Condition	Compliance Status
	length and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide for adequate retention period to allow proper settling of silt material.	The drains are being regularly desilted and maintained properly. Garland drains of 9.6 km's of 2mx1m size, gradient and length and sump capacity is designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site.
(vi)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	910 m of retaining wall is constructed at the toe of OB dump decks and proper slope is provided to OB Benches for avoid run off OB siltation.
(vii)	Crushers at the proposed CHP shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operation, conveyor system, haulage roads and transfer points.	Instead of providing bag filters, fixed as well as 3 No's of mobile mist spray arrangements have been provided for controlling dust emissions and the air quality parameters monitored at the CHP are well within the stipulated norms. Water sprinkling system is provided to check fugitive emissions from crushing operation, conveyor system, haulage roads and transfer points. 4 no's. of 28 kl departmental water sprinklers and 10 No's. of water sprinklers by OB off- loading contractors (2 No. of 20 kl, 3 No.of 18kl, 2 No. of 15 kl capacity and 3 No. of 12 kl capacity) are being deployed regularly for dust suppression on haul roads, approach roads, loading and unloading points etc. A separate contractual water sprinkler of 12 kl capacity is being deployed throughout the year for dust suppression at CHP and surroundings.
(viii)	No coal transportation shall be undertaken by road.	Vide EC Lr No. J-11015/268/2007-IA.II (M) dated 19th April 2021, MoEF&CC permitted SCCL to transport coal by road mode with covered tarpaulin up to 31st December, 2021.
(ix)	Drills shall be wet operated only.	Drills are provided with wet drilling arrangement.
(x)	Controlled blasting shall be practiced only during day time with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Controlled blasting is being practiced during day time only with use of delay detonators. Usage of NONEL's has helped in control of ground vibrations and to arrest the fly rocks and boulders during blasting operations. The sound vibrations are being monitored as per DGMS guide lines.
(xi)	Afforestation shall cover a total area of not less than 790.75 ha. which includes reclaimed external OB dump (411.49 ha), reclaimed topsoil dump, back filled quarry area (296.17 ha), along ML boundary, along roads and along service buildings and CHP, and other areas within the lease (83.09 ha) by planting native spices in consultation with the local DFO / Agriculture Deptt. The density of the trees should be around 2500 plants per ha.	A progressive afforestation plan is being implemented in the project area as per approved EMP. The SCCL has a separate Forest Dept., with qualified forest officers and qualified supervisors headed by advisor Forestry, a retired IFS officer. SCCL has a separate nursery at Sathupalli to serve the needs of Sathuaplli mines. Plantation is being taken up along ML boundary, roads, service buildings and CHP,

S.No	Condition	Compliance Status
		and other areas within the lease by planting native species at a density of not less than 2500 nos. of plants/ha As per EMP. So far 54,460nos. of plants are planted in an area of 20.43 ha (External dump area- 10.48 ha.,safety zone along Kommepalli road-8.45 Ha., Avenue Plantation-1.50Ha) against the total area of 790.75 ha.
		The plantation plan with details enclosed as Annexure No. XIII
(xii)	A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 296.17 ha which shall be backfilled from the 10 th year of mining and backfill the void and by rehandling 55.28 Mm ³ OB from the external OB dump and leaving a final mine void of 35 m depth at the final mine closure stage. The back filled quarry area shall be afforested by planting native plant spices in consultation with the local DFO / Agriculture Department. The density of	Progressive Mine Closure Plan will be implemented by reclamation of quarry area which shall be backfilled from the 10 th year of mining. Aforestation of backfilled area will be done by planting the native plant species at a density of not less than 2500 No.s of plants/ha in consultation with the local DFO/SCCL Forest Department.
	the trees shall be around 2500 plants per ha.	
(xiii)	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 subjected 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.	Periodical Health check up for occupational diseases and hearing impairment has been done at SCCL PME cell for SCCL and contractual labors. Suspected cases for special occupational diseases and hearing impairment have been referred for consultation of specialists at Main Hospital – SCCL Kothagudem and also corporate hospitals at Hyderabad. The results are being submitted to the Ministry and to the DGMS at regular intervals.
(xiv)	ETP shall also be provided for workshop and CHP waste water. Mine discharge water shall be treated to prescribed standards before discharge into any natural water course.	ETP has been provided for workshop and 2 No's. of settling ponds were made at CHP for removal of coal fines and suspended solids. Water quality of mine discharge is being monitored at regular intervals before discharging into natural water course and results are in prescribed standards. Further ETP is planned in new CHP (EPC mode).
(xv)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. 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 MoEF and to the Central Pollution Control Board quarterly within one month of monitoring.	Regular monitoring of ground water level and quality is being carried out by establishing a network of nineteen (19) existing wells and seven (07) piezometers. The monitoring of quantity and quality is being done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons. Data thus collected is being submitted to the MoEF& CC and to the State Pollution Control Board half-yearly within one month of monitoring.
(^)	monsoon shall be treated in a three stage	being treated in a three stage sedimentation

S.No	Condition	Compliance Status
	sedimentation tank along with coagulants, if required and shall meet standards prescribed especially with respect to pH, As, F and Total Suspended Solids (TSS) before discharge into natural water courses/agriculture.	tank and the discharge is within the standards prescribed especially with respect to pH, As, F and Total Suspended Solids (TSS) before discharge into natural water courses/agriculture.
(xvii)	No ground water shall be used for the mining/project activities. Additional water required, if any, shall be met by recycling/reuse of the water from the existing activities and from rainwater harvesting measures.	Groundwater is not being used for mining operations. A minimum quantity of mine discharge water is being utilized for washing, drinking, fire fighting and dust suppression purpose.
(xviii)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring of groundwater level indicates decline in the water table. The project authorities shall meet water requirement of	The Piezometric & Phreatic wells monitoring data reveals that there is no adverse impact on ground water due to mining activity. However the Company has put up artificial groundwater recharge measures for augmentation of groundwater resource.
	nearby village(s) in case the village wells go dry due to dewatering of mine.	Five (7) No's. of settling ponds and Two(2) No. of check dams were constructed in the project area which are also serving the purpose of augmentation of ground water recharging.
		There is no incidence of drying of wells in nearby villages. However, if village wells go dry due to dewatering of the mine, the project authorities will meet water requirement of nearby villages. The season wise Piezometric monitoring results are enclosed as Annexure-VII.
(xix)	For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1:5000) of 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 anyone particular season which is consistent in the time series), and the report submitted to MOEF and its Regional Office at Bangalore.	Digital processing of the entire lease area based on satellite imagery is being done regularly once in 3 years for monitoring land use pattern and post mining land use. Land use for core and buffer zone studies are carried out during 2019-20 and the report is submitted to MoEF&CC and its Regional Office at Chennai vide Ltr No.ENV/KGM/403,404&406/290, Dt.12.09.2020.
(xx)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the MoEF 5 years in advance of final mine closure for approval.	The final mine closure plan will be submitted 5 years in advance of actual mine closure.
(xxi)	An amount not less than a capital expenditure of Rs. 3625.39 lakhs and a revenue expenditure of Rs. 902 lakhs shall be earmarked and utilized for environmental protection measures, the status of which shall be uploaded regularly on the company website ad also furnished as part of the Monitoring report.	Funds are already earmarked and being utilized for Environmental protection measures, the status is furnished in the six monthly compliance report. The same is uploaded in the SCCL website.
(xxii)	The costs for implementation of a Project specific R&R Plan for R&R of one village Kommepalli involving 120 PAFs and land losers from 4 villagers – Kommepalli, Kistaram,	Kommepalli village is falling in the Project area. A total of 229 families are affected by the project and all the project displaced families (PDFS) were paid compensation as per R&R

S.No	Condition	Compliance Status
	Errakunta & Rejerla shall not be less than Rs. 12.40 Crores. The yearly activities undertaken and progress made on R&R along with details of expenditure made on the various activities undertaken under R&R shall be uploaded on the Company's website and updated at least once in six months.	policy envisaged by the Government. R&R amount Rs. 17.7969 Crores has been deposited with District Collector; Khammam on 07.08.2018. RDO, Kallur has disbursed the R&R entitlements to 229 PDFs of Kommepalli on 28.08.2018 to 30.08.2018. PDFs are evacuated. The project displaced persons are relocated in R&R center at Ayyagaripeta of Sathupalli town.
(xxiii)	An amount not less than a capital expenditure of Rs. 27.52 crores and a revenue expenditure of Rs. 584.21 lakhs shall be earmarked and utilized for environmental protection measures, the status of which shall be uploaded regularly on the company website and also furnished as part of the Monitoring report.	Capital and revenue expenditure incurred towards for environmental protection measures up to Sep'-2021 is furnished in Annexure-XII.
(xxiv)	The Project Authorities shall carry out a pre- mining socio-economic survey based on the UNDP Human Development Report and monitor the socio-economic status of the adjoining villages to be taken up under CSR once every three years and maintain records thereof and report in their Annual Report, the socio-economic impact of CSR activities. The yearly activities under taken and progress made on CSR along with details of expenditure made on the various activities undertaken under CSR shall be uploaded on the Company's website and updated at least once in six months.	Pre-mining socio-economic survey based on the UNDP Human Development Report and to monitor the socio-economic status of the adjoining villages was conducted in 2019-20 by M/s Centre for Good Governance, Hyderabad under CSR and submitted the report to MoEF&CC vide Itr No.ENV/KGM/404/552//297, Dt.26.09.2020. The yearly activities under taken and progress made on CSR along with details of expenditure made on the various activities undertaken under CSR will be uploaded on the Company's website and updated in every six months.

2. B.General conditions:

SI. No	Condition			Com	pliance Sta	atus	
(i)	No change in mining technology and scope of working shall be made without prior approval of the MoEF.	N S N	No changes scope of wo MoEF&CC	will be c orking w	lone in mir vithout pric	ning technor or approv	ology and al of the
(ii)	No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.		Calendar pl mineral coal and details p	an inclu has bee provide b Coal	ding excav en complie y PA is furr (in MT)	vation, qu d with as nished und Overb (M C	antum of stipulated ler. urden u M)
			Year	As per EC	Actual	As per EMP	Actual
			2017-2018		0.749	14.67	7.573
			2018-2019		2.955	18.08	18.071
			2019-2020	5.0	4.828	27.10	24.179
			2020-2021	0.0	4.756	27.16	19.950
			2021-2022 upto Sep' 30 th)		3.133	27.16	15.165
(iii)	Four ambient air quality monitoring stations	F	Four ambien	t air qu	ality monit	oring stati	ons were
	should be established in the core zone as well	e	established in	n the cor	e zone as	well as in	the buffer

SI. No	Condition	Compliance Status
	as in the buffer zone for PM_{10} , $PM_{2.5}$, SO_2 and NO_x monitoring. 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.	zone for PM_{10} , $PM_{2.5}$, SO_2 and NO_x monitoring.Location of the stations has been decided in consultation with the State Pollution Control Board. Monitoring is being carried out once in fortnight by EPTRI, MoEF&CC and NABL & CPCB approved third party Laboratory and monitoring data are within the limits. One CAAQMS is also installed in this project area.
(iv)	Fugitive dust emissions (PM ₁₀ , PM _{2.5}) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, and dump trucks (loading and unloading) points should be provided and properly maintained.	Fugitive dust emissions have been monitored as per DGMS (Tech) (S&T) circular No.1 of 2004 with personal dust sampler. The following categories of persons are monitored by personal dust sampler. Drillers & helpers, Shovel Operators, Cable boy, Trip counter, Dozer/Grader Operators & Helpers, CHP conveyor operator, Crusher operators. The monitoring results are within the limits stipulated DGMS(Tech)(S&T).
(v)	Data on ambient air quality (PM_{10} , $PM_{2.5}$ and NO_x) 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.	Data on ambient air quality (PM_{10} , $PM_{2.5}$ and NO_x) is being submitted regularly to the Ministry including its Regional Office at Chennai and to the State Pollution Control Board and the Central Pollution Control Board once in six months.
(vi)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc. should be provided with ear plugs / muffs.	Adequate measures are being taken for control of noise levels below 85 dBA in the work environment. Procuring HEMM designed with acoustically designed operator's cabin. Thick green belt is developed around the project to act as an attenuator in reducing noise to ambient atmosphere. The periodic planned preventive maintenance & engine tuning of HEMM and other transport vehicles is being done at regular intervals as per schedules submitted by OEM. Workers being engaged in blasting and drilling operations, operation of HEMM and other activities having noisy environment are being provided with ear plugs. Noise Levels are being monitored in 4 locations through MoEF&CC approved third party laboratory both day and night and monitored data show that the values are within the limit.
(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 19 th May, 1993 and 31 st December, 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop	Generation of waste water is minimal, since it is a mining project. Workshop effluent is being treated before discharge. Oil&Grease trap has been provided. Periodical monitoring is being carried out through M/s. Environment Protection Training and Research Institute (EPTRI), Hyderabad, which is a
(viii)	effluents. Vehicular emissions should be kept under	laboratory Vehicular emissions are being kept under control

SI. No	Condition	Compliance Status
	control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	through regular maintenance of vehicles. Vehicles used for transporting the mineral are being covered with tarpaulins and are optimally loaded. Vehicular emissions are being monitored regularly. Periodical monitoring is being carried out through M/s. Environment Protection Training and Research Institute (EPTRI), Hyderabad, which is a CPCB, recognized and NABL accredited laboratory.
(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.	Post Project Environmental Monitoring is being carried out through external agency M/s. Environment Protection Training and Research Institute (EPTRI), Hyderabad, which is a CPCB, recognized and NABL accredited laboratory. A Regional Laboratory has been established by EPTRI at Kothagudem for analysis of critical parameters in the field.
(x)	Personnel working in dusty areas should wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Personnel being deployed in dust prone environment are being provided with dust masks and adequate training and information on safety and health aspects is being provided.
	Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.	Occupational health surveillance programme of the workers is being under taken periodically to observe any contractions due to exposure to dust and take corrective measures.
(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 company level environment cell with qualified personnel headed by General Manager (Environment) 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, a unit level Environmental Management Committee with multi disciplinary team has been constituted under the chairmanship of SO to GM, Project Officer, Safety Officer, Project Engineer, Area forest Officer, Area Environmental Officer, Area Civil Engineer and Area Estate Officer.
(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.	Funds are already earmarked and being utilized for Environmental protection measures, the status is furnished in the six monthly compliance report. The same is uploaded in the SCCL website.
(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	Project authorities are extending full co-operation during the visits of the office(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.

SI. No	Condition	Compliance Status
(xiv)	A copy of the same shall be marked to concerned Panchayat / local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	This condition was complied immediately after obtaining EC from MoEF&CC, New Delhi. A copy was EC letter was sent to all the concerned vide Ltr.No.KGM/ENV/405/2010/66 dated:06.04.2010 The Environmental Clearance letter is also displayed on company's website i.e. www. scclmines.com
(xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/ Tahsildar's Office for 30 days.	SCCL requested TSPCB to display the EC letter vide Ltr.No.KGM/ENV/405/2010/67, dated: 06.04.2010 and the same was 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.	Advertisement was already given on 04.04.2010 in daily News paper of vernacular language in "Andhra Jyothi" Khammam Edition and English daily News paper "Deccan Chronicle" Vijayawada edition.
3.	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Any further condition stipulated by the Ministry or any other competent authority for environmental protection will be complied.
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.	It was submitted that the condition is "Noted" and assured to abide by the condition.
5.	The above conditions will be enforced, inter- alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, The Air (Prevention & Control of Pollution) Act, 1981, The Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	PA has obtained Consent for Operation from State PCB VIDE Order No.170421033095 Dt.03.01.2018 Valid up to 31.10.2022. PLI Policy is taken from the National Insurance Company Ltd under Public Liability Insurance Act, 1991 vide policy No. 550200492110000009, valid from 30.04.2021 to 29.04.2022.

Project Officer JVROC-I&II Mines

SCCL - KOTHAGUDEM AREA

1	. <u>Produ</u>	uction Details		- 11			
	S No	o. Year	Coal (in MT)	Overburden (M.Cu.M)		
	3.NU.		As per EC	Actual	As per EMP	Actual	
	1	2017 – 2018		0.749	14.67	7.573	
	2	2018 – 2019		2.955	18.08	18.071	
	3	2019 – 2020	5.0	4.828	27.10	24.179	
	4	2020 – 2021		4.756	27.16	19.950	
	5	2021 - 2022(up to Sep'2021)		3.133	27.16	15.165	

<u> PART - II</u>

2. Topsoil Management:

1	Total Topsoil	4.50 MB.Cum
2	Topsoil extracted since inception	1.609 MB.Cum
3	Topsoil preserved for future use	1.457MB.Cum
4	Top soil removed in last 6 months	0.104 MB.Cum.
5	Top soil spread in last 6 months	0.104 MB.Cum.
O v a r	ourdon Mononontu	

3. Overburden Management:

Over	erburuen management.								
1.	Total Overburden as per revised estimates.	1033.25 MB.Cum (As per 2016 RCE-1)							
2.	Total OB removed since inception	84.938 MB.C	Cum.(Inc.Top	Soil)					
3.	Total OB removed during last 6months	15.165 M.B.Cum (incl.Top soil)							
4.	Details of External OB dumps	Area (in Ha)	Quantity in (M.Cu.M)	Height (m)	Overall slope				
	Dump	212.000	83.808	+90	25 ⁰				

4. Plantation:

			Total Area = 20.43 Ha.		
1.	1.	Total area brought under plantation so far in Ha.	ii.External Dumps- 10.48Ha.		
			iii.Safety Zone- 8.45Ha.		
	2.	Total no of plants planted so far since inception	54460 No's.		
	0	Species of plants planted	Dendrocalamus strictus		
	3.		Delberzia sissoo, Ficus Sps.		

4. Water Balance Statement:

S.No.	Description	Quantity in KLD
Α.	Average quantity of water pumped out of the mine	2603
В.	Water utilization:	
1.	Water used for dust suppression	1221
2.	Water sprinkling along coal transport road	140
3.	Water used for washing of HEMM	0
4.	Water used for domestic and plantation	0
C.	Final discharge point of excess water let out	1242

6.	Soil	Erosion	Control	Measures:

S.No.	Description	Quantity					
1.	Length of toe Walls	1.213 KM					
2.	Length of garland drains around the quarry	3500 n	3500 mts				
	Length of garland drains around external dump	4500 mts					
3.	No. of settling ponds	7					
		SI.	Length	Width	Depth	Volume	
		No.	in (m)	(m)	(m)	(cu. m)	
		1.	28.8	10	2	576	
		2.	30	12	2	720	
		3.	28.8	10	2	576	
		4.	125.5	55	2	13800	
		5.	110	10	2	2200	
		6.	18	14	2	504	
		7.	14.5	10	2	290	
4.	No. of gabions	Nil					
5.	No. of cribs	4 No's					
6.	No. of rock fill dams	1					

7. Micro-meteorological Monitoring:

Micro-meteorological station was installed at the project office. The summary of the monitoring from Apr' 2021 to Sep' 2021 is as follows:

S.No	Parameter (s)	Min	Max	Mean	
1.	Temperature (ºC)	22.3	42.3	29.5	
2.	Wind Speed (m/s)	Calm 18.69%	6.5	1.5	
3.	Relative Humidity (%)	11.2	99.9	66.3	
4.	Predominant Wind direction for the study period	East-North East (E-NE), followed by North East (NE)			
5.	Total Rainfall (mm)	750.8mm			

8. Ambient Air Quality Monitoring:

Parameters & Procedure

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_{10} and $PM_{2.5}$), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x) 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_{10} , SO_2 and NO_x and Ambient Fine Dust Sampler is being used for monitoring of $PM_{2.5}$. 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.

S.No	Location	Zone	Direction w.r.t. Project & Distance	Station Code
1.	Project Office	Core Zone		CA7
2.	Base Workshop	Core Zone		CA8
3.	JVR OC – II Pit Head CHP	Core Zone		CA10
4.	Kistaram Village	Buffer Zone	W & 1.0 KM	BA5
5.	Sathupalli	Buffer Zone	NE & 1.5 KM	BA7
6.	Rejarla	Buffer Zone	S & 6KM	BA9
7.	Chaudavaram Village	Buffer Zone0	SW&6.6KM	BA10

Post project Ambient Air quality monitoring stations:

Monitoring data: The summary of the air quality monitoring data from Apr' 2021 to Sep' 2021 is as follows.

					(A	ll values i	n μg/m³)
S No.	Location	Direction &	PM ₁₀				
5.NO.		Distance	Min.	Max.	Avg.	98%tile	Standard
1.	Project Office	Core Zone	92	111	99.3	109.90	250
2.	Base Workshop	Core Zone	116	135	126.9	135.00	250
3.	JVR OC – II Pit Head CHP	Core Zone	185	210	193.5	207.58	250
4.	Kistaram Village	W & 1.0 KM	60	75	65.3	73.46	100
5.	Sathupalli	NE & 1.5 KM	51	58	54.8	57.78	100
6.	Rejarla	S & 6KM	54	66	62.0	66.00	100
7.	Chaudavaram Village	SW&6.6KM	50	55	52.5	55.00	100
S No	Location	Direction &	PM _{2.5}				
S.No.		Distance	Min.	Max.	Avg.	98%tile	Standard
1.	Project Office	Core Zone	30.5	43.1	33.8	42.24	-
2.	Base Workshop	Core Zone	40.5	63.9	46.0	60.73	-
3.	JVR OC – II Pit Head CHP	Core Zone	62.6	71.2	66.6	71.13	-
4.	Kistaram Village	W & 1.0 KM	25.1	33.7	27.3	32.58	60
5.	Sathupalli	NE & 1.5 KM	21.4	24.3	23.0	24.21	60
6.	Rejarla	S & 6KM	23.4	29	26.9	28.91	60
7.	Chaudavaram Village	SW&6.6KM	21.8	24.7	23.1	24.59	60
0.11-	Leastion	Direction &	SO ₂				
S.No.	Location	Distance	Min.	Max.	Avg.	98%tile	Standard

SCCL – KOTHAGUDEM AREA

1.	Project Office	Core Zone	11.7	14.5	13.1	14.41	120
2.	Base Workshop	Core Zone	12	14.8	13.6	14.71	120
3.	JVR OC – II Pit Head CHP	Core Zone	12.4	15.7	14.2	15.61	120
4.	Kistaram Village	W & 1.0 KM	11.1	13.6	12.6	13.58	80
5.	Sathupalli	NE & 1.5 KM	9.7	13.9	11.7	13.79	80
6.	Rejarla	S & 6KM	9.9	12.8	11.3	12.73	80
7.	Chaudavaram Village	SW&6.6KM	9.7	12.2	11.1	12.13	80
	Leastion	Direction &	NO ₂				
S.No.	L opption						
S.No.	Location	Distance	Min.	Max.	Avg.	98%tile	Standard
S.No. 1.	Location Project Office	Distance Core Zone	Min. 17.5	Max. 22.4	Avg. 19.9	98%tile 22.27	Standard 120
S.No. 1. 2.	Location Project Office Base Workshop	DistanceCore ZoneCore Zone	Min. 17.5 17.2	Max. 22.4 21.8	Avg. 19.9 19.8	98%tile 22.27 21.73	Standard 120 120
S.No. 1. 2. 3.	Location Project Office Base Workshop JVR OC – II Pit Head CHP	DistanceCore ZoneCore ZoneCore Zone	Min. 17.5 17.2 17.9	Max. 22.4 21.8 23.4	Avg. 19.9 19.8 21.0	98%tile 22.27 21.73 23.27	Standard 120 120 120
S.No. 1. 2. 3. 4.	Location Project Office Base Workshop JVR OC – II Pit Head CHP Kistaram Village	Distance Core Zone Core Zone Core Zone W & 1.0 KM	Min. 17.5 17.2 17.9 15.8	Max. 22.4 21.8 23.4 20.1	Avg. 19.9 19.8 21.0 18.4	98%tile 22.27 21.73 23.27 20.06	Standard 120 120 120 80
 S.No. 1. 2. 3. 4. 5. 	Location Project Office Base Workshop JVR OC – II Pit Head CHP Kistaram Village Sathupalli	Distance Core Zone Core Zone Core Zone W & 1.0 KM NE & 1.5 KM	Min. 17.5 17.2 17.9 15.8 14.2	Max. 22.4 21.8 23.4 20.1 20.4	Avg. 19.9 19.8 21.0 18.4 16.8	98%tile 22.27 21.73 23.27 20.06 20.22	Standard 120 120 120 80 80
S.No. 1. 2. 3. 4. 5. 6.	Location Project Office Base Workshop JVR OC – II Pit Head CHP Kistaram Village Sathupalli Rejarla	Distance Core Zone Core Zone Core Zone W & 1.0 KM NE & 1.5 KM S & 6KM	Min. 17.5 17.2 17.9 15.8 14.2 14.3	Max. 22.4 21.8 23.4 20.1 20.4	Avg. 19.9 19.8 21.0 18.4 16.8 16.4	98%tile 22.27 21.73 23.27 20.06 20.22 18.79	Standard 120 120 120 80 80 80
S.No. 1. 2. 3. 4. 5. 6. 7.	Location Project Office Base Workshop JVR OC – II Pit Head CHP Kistaram Village Sathupalli Rejarla Chaudavaram Village	Distance Core Zone Core Zone W & 1.0 KM NE & 1.5 KM S & 6KM SW&6.6KM	Min. 17.5 17.2 17.9 15.8 14.2 14.3 13.7	Max. 22.4 21.8 23.4 20.1 20.4 18.9 18.1	Avg. 19.9 19.8 21.0 18.4 16.8 16.4 16.1	98%tile 22.27 21.73 23.27 20.06 20.22 18.79 17.97	Standard 120 120 120 80 80 80 80 80

The air quality data monitored at the work zone locations and sathupalli residential area indicate that PM_{10} concentration is within the stipulated limits at all locations. The $PM_{2.5}$ concentrations at all locations are within the stipulated limits. The SO_2 and NO_x levels are well within the limits at all the locations. The fortnightly air quality data monitored during six months period from Apr' 2021 to Sep' 2021 is enclosed as **Annexure - I**.

Air Pollution Control Measures

SCCL is taking following control measures in the JVR OC II Project for air pollution control including reduction of particulate emissions:

- Wet drilling arrangements are provided for controlling dust while drilling.
- Water spraying is being done on haul roads; dump yards and at coal loading and unloading points to reduce the dust arising due to movement of vehicles and wind.
- Mobile water sprinkler of 28 KL and 18KL (Off loading) are deployed for water spraying purpose.
- Periodical maintenance of all diesel / petrol operated vehicles is being done to control SO₂, NO₂ & 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.
- Employees are being provided with free LPG gas cylinders instead of coal to discourage coal burning for domestic use. All employees are using LPG gas in place of coal.
- Ambient air quality is being monitored every fortnight in and around the project area.
- Cabins of heavy earth moving machines are provided with A.C.
- Emissions from heavy earth moving machinery are being monitored.

9. 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 3 water samples i.e., 1 sample from surface and 2 samples from groundwater were collected and analyzed for various physico-chemical and bacteriological parameters.

S.No	Location	Zone	Distance & Direction w.r.t. Project	Station Code
Ι.	Surface Water			
1.	Yedutla Cheruvu	Buffer Zone	NW&4.00KM	SW4
П.	Ground Water			
1.	Rejarla	Buffer Zone	S&6.00KM	GW4
2.	Kistaram village	Buffer Zone	W&1.00KM	GW6

Post project water quality monitoring stations:

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), 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), TDS, Chemical Oxygen demand (COD),BOD 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, ground water and effluents quality data monitored during Apr' 2021 to Sep' 2021 is enclosed as **Annexure - II, III and Annexure - IV** respectively. The summarized data on effluent water quality in respect of four critical parameters stipulated for coal mines is furnished hereunder.

S.N o	Location	Concentr ation	Parameter					
			pH (at 25⁰ C)	TSS At 105⁰ C	TDS at 180⁰C	COD	BOD	Oil & Grease
1		Min	5.9	11	911	15	2	5.1
	BWS-EIP	Max	7.9	23	1059	26	5	6.4
2	JVR OC-II Mine	Min	6.9	6	899	15	2	<1
	Discharge	Max	8	24	1121	33	8	<1

3	JVR OC-II OB	Min	6.7	7	924	19	2.2	<1
	Dump surface run off	Max	7.9	29	1068	29	6	<1
MoEF GSR 742 (E) and GSR 801(E) Effluent Standards for coal mines		5.5 to 9.0	100		250	30	10	

Water Pollution Control Measures:

- Mine water is being collected in to the sumps inside quarry for settling suspended solids.
- Mine water is passed through garland drain to arrest the silt from surface runoff from OB dumps and mine discharge before letting into nearby Puligutta Sump and Chillavagu Tank.
- The attitude of piezometric surface and phreatic surface level in and around the project area are being recorded seasonally in nearby villages and the data of the same is enclosed as **Annexure VII & VIII respectively**
- Surface water, Ground water (bore well) and effluents (mine discharge water and ETP out let water) samples are being collected and analyzed regularly. The analysis results are furnished in the **Annexures II, III & IV** respectively.

10. Water Levels monitoring:

The peizometric surface levels are being monitored in four peizometric wells around the mine four times in a year i.e., in summer, pre monsoon, post monsoon and winter, around the mine.. The observed data is enclosed as **Annexure – VII.**

The phreatic surface levels are being monitored in 27 observation wells around the mine four times in a year i.e., in summer, pre monsoon, post monsoon and winter, around the mine up to 10km radius distance. The observed data is given in from the year 2016 to 2021 (up to monsoon season) is enclosed as **Annexure - VIII.**

11. Noise Level Monitoring:

The summary of noise quality data is as furnished below. The detailed noise quality data monitored from Apr' 2021 to Sep' 2021 is enclosed as **Annexure – V.**

S No	Location	Direction &	Day Time				
3.NU.	Location	Distance	Min	Max	Avg	Standard	
1.	JVR OC - I Site Office	Core Zone	60.5	64.1	62.00	75	
2.	JVR OC - I Base Workshop	Core Zone	62.3	68.8	65.75	75	
3.	Rejarla	S & 6 KM	49.5	52.2	51.14	55	
4.	Sathupalli Town	NE & 1.5 KM	49.7	51.3	50.73	55	
0.11-		Direction &	Night Time				
	Location	Birootion a		<u> </u>			
5.NO.	Location	Distance	Min	Max	Avg	Standard	
5.NO. 1.	Location JVR OC - I Site Office	Distance Core Zone	Min 46.1	Max 48.8	Avg 47.34	Standard 70	
1. 2.	Location JVR OC - I Site Office JVR OC - I Base Workshop	Distance Core Zone Core Zone	Min 46.1 47.4	Max 48.8 52.4	Avg 47.34 50.12	Standard 70 70	
S.No. 1. 2. 3.	Location JVR OC - I Site Office JVR OC - I Base Workshop Rejarla	Distance Core Zone Core Zone S & 6 KM	Min 46.1 47.4 37.4	Max 48.8 52.4 41.2	Avg 47.34 50.12 39.34	Standard 70 70 45	

Note: 1. Daytime is reckoned in between 6 am and 10 pm Night time is reckoned in between 10 pm and 6 am

Noise Pollution Control Measures:

- Proper blasting pattern with optimum charge of explosives and use of delay action detonators is being adopted to reduce noxious gases and dust emissions.
- Controlled blasting techniques using Non-electric detonators (NONELS) are being used scrupulously for blasting to reduce blasting induced ground vibrations. Blasting induced ground vibrations are being recorded on day-to-day basis and the recorded data is being maintained in a proforma specifically designed to monitor the above said parameters and the recorded value i.e. Peak Particle Velocity (PPV) was always well within Director General of Mines Safety (DGMS) limit (10 mm/sec).
- Plantations are raised in the mine premises.
- Scientific study was carried out by CMRI for optimum blast geometry and their recommendations regarding the blasting methodology are being adopted.
- Proper maintenance of machinery is being done. Ear plugs are being provided to the employees exposed to high noise levels.
- Protective devices like acoustic wool, earplugs and earmuffs are being provided to the needy workers.
- Sound proof cabins are provided in HEMM.

12. Capital and Revenue Expenditure incurred on Environment Management and

Pollution Control Measures in Apr' 2021 to Sep' 2021 (Financial Year):-

S.No.	Pollution Control measure	Expenditure in Rs.
1.	Air pollution (prevention & control)	8,50,54,250.38
2.	Water Pollution (prevention & control)	4,98,63,227.86
3.	Land Development	2,86,57,650.56
4.	Plantation	40,65,478.94
5.	Plant & Machinery for Env. Protection	59,39,599.32
6.	Consultancy payments/ Scientific studies	-
7.	OB Dump/Subsidence Stabilization	-
8.	Others (Env.management cell etc.)	1,90,88,910.92
	TOTAL	19,26,69,117.98

13. Socio-economic Measures:

- LPG gas is supplied free of cost to the employees.
- Free medical treatment to workmen and their families is given
- 10% of the employees have undergone periodical medical examinations during last six months 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.

An environment management committee (EMC) has been constituted with officers of mine and as well as area level. The list of committee members and the minutes of meeting is enclosed as **Annexure - X**.

14. Corporate Social Responsibility: - Medical camps are being conducted regularly in the surrounding villages of Sathupalli i.e. Kommepalli, Rejarla, Kistaram and

Jagannathapuram and the details of medical camps and cataract surgeries are being

conducted. The list of CSR works is enclosed as Annexure - XI.

- The CSR works taken up under Surrounding Habitat Assistance Programme (SHAPE), laying of CC roads and drains bore well constructions and repairs etc.
- Desiltation of village tank viz, Chilla vagu near kistaram has been taken up for desiltation to improve irrigation facilities and ground water recharge to the surrounding area.
- Singareni Seva Samithi has conducted trainings programs at Sathupalli and surrounding villages.
- Fabric Painting course under Singareni sewa Samithi had arranged from 16.03.2015 to 15/5/2015 to a batch of 25 women in Kistaram Village.
- Free tailoring and Embroidery training under Singareni sewa Samithi had arranggd from 29.03.2015 to 28/9/2015 to a batch of 25 women at Jagannadhapuram.
- 50 No's of LED Bulbs with fittings were given to Kistaram grama panchayath for street lighting on 16.03.2015.
- Conducted employment awareness programme to children of 180 persons.
- Training was given to 25 security Guards.
- Old NTR Canal is filled up.
- Dispensary is provided at SCCL guest house and treatment to PAF's is extended.
- Desilting of Chillavagu Cheruvu and Jinugupalli Cheruvu in 2014. Peddacheruvu of Kistaram in 2015.
- Employment is being provided at the Contractors for unemployed persons of surrounding villages as and when required.

• 1000 Nos. of flower bearing plants were supplied during Oct-2015 to the Sathupalli Ganesh Utsav Committee and 500 to the surrounding schools on free of cost.

• 10000 Nos.of fruit & flower bearing plants were distributed at Sathupalli and surrounding villages of Kistaram, Kommepalli, Rejerla & Jagannadhapuram in 2016 monsoon period.

• Tailoring & Embroidery course at Lingapalem Village, STPL for PAPs from 14.12.2016 to 11.06.2017 (1 Batch 25 Numbers) -6 Months Course.

- 40000 nos. of Eucalyptus clones distribution at free of cost in and around the surrounding villages of sathu palli. .
- Motor Driving course is being given to 25 persons in the month of September-2017.
- Motor Driving course is being given to 20 persons from 09.04.2018 for one month.
- Tailoring course started at NTR Nagar, STPL for PAPs from 19.06.2018 to 18.12.2018 (1 Batch 30 Numbers) -6 Months Course.
- Motor Driving course is being given to 20 persons from 19.06.2018 for one month.
- Motor Driving course is being given to 20 persons from 09.04.2018 for one month.
- Computer coaching is given to PAP's of NTR Nagar from 06.10.2018 for 3 months.

Medical Camps, etc.:-

- 1. Health Awareness Programme on Breast Lump Cancer and Cervical Cancer for Female Employees of SCCL and for Female Dependents of our employees at RCOA Club, Rudrampur on 27.02.2016.
- Primary Health Checkup (Screening) for Breast Lump Cancer Cervical Cancer for female employees & SEWA members of Kgm Area from 11.03.2016 to 12.03.2016 at Rudrampur Dispensary.

- Medical camp Held at Muluggudem Primary School, interior of Penagadapa village on 31.05.2016.
- Mobile Medical camps were were Held at STPL surrounding villages in the months of March (21.03.2018) to May (31.05.2018), about 491 beneficiaries got utilised.

SPECIAL PROGRAMMES

- a) Singareni Animuthyalu Mega Job Mela Programme conducted at Gouthampur Community Hall from 28.01.2016 to 29.01.2016
- b) Yoga Training Programme under Mee Kosam Mee Arogayam programme from 24.05.2016 to 30.05.2016 at Kothagudem Area i.e. Ramavaram & Pragathi Vanam Rudrampur. (250 numbers).
- c) International Yoga day programme conducted in Kgm Area at all Mines & Departments, Ramavram, Rudrampur & Schools & Colleges from 17.06.2018 to 21.06.2018.
- d) Telanganaku Harithaharam programme conducted in the month of july 2019 in KGM Area at all mines ,colonies,etc...
- e) Environment Awareness Week 2019, 2020 & 2021 was observed from 5th June 30th June in all mines and departments.
- f) Organized massive plantation under Vriksharopan Abhiyan in the month of August-2021.

