

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

Ref.No: KGM/ENV/404/ [S] To The Director, Sub – office, MoEF &CC, Gol 3<sup>rd</sup> Floor, Aranya Bhavan, Saifabad, HYDERABAD - 500004. Telangana(State).

> Sub: Half Yearly Environmental Monitoring report (Apr'2023 to Sep'2023) of Jalagam Vengala Rao Opencast Mine (I&II Expansion) of SCCL – Reg.

- Ref: 1. MoEF&CC, Gol Lr. No.J-11015/268/2007-IA.II(M), Dt.11th Oct, 2021.
  - 2. MoEF&CC, Gol Lr. No.23-77/2018-IA(III), Dt.1st February, 2021,
  - 3. MoEF&CC, Gol Lr. No.J-11015/268/2007-IA-II (M) Dt. 28.03.2010,
  - 4. MoEF&CC, Gol Lr. No. J-11015/301/2007-IA-II (M) Dt. 27.07.2007,
  - 5. MoEF&CC, Gol Lr. No. J-11015/268/2007-IA.II (M) Dt. 19.04.2021.

With reference to the subject and environmental clearance letters cited above, please find enclosed soft copies of the status of implementation of environmental conditions vis-à-vis project progress of Jalagam Vengala Rao Opencast Mine (I&II Expansion) for the half yearly period ending on 30<sup>th</sup> Sep' 2023.

Yours faithfully

Date: 27.11.2023

General Manager Kothagudem Area The S.C.Co.Ltd Venkateshkhani - (P.O) Bhadradri Kothagudem - (Dist) Telangana(state) Pin - 507 103. Pin - 507 103. General Manager gala Rao Opere C Mod (1611

Encl: Half yearly compliance report of Jalagam Vengala Rao Oper COMORI (1811 Expansion).

# HALF-YEARLY MONITORING REPORT

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

FOR

### JALAGAM VENGAL RAO OPEN CAST MINE-(I & II Expansion)

(KOTHAGUDEM AREA)

(For the period 1<sup>st</sup> Apr 2023 to 30<sup>th</sup> Sep'2023)



## THE SINGARENI COLLIERIES COMPANY LIMITED (A GOVERNMENT COMPANY)

KOTHAGUDEM AREA

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### THE SINGARENI COLLIERIES COMPANY LIMITED

(A Govt. Company)

Kothagudem Area

<u> PART - I</u>

### A. SALIENT FEATURES OF THE PROJECT:

1.	Name of the Project	:	Jalagam Vengala Rao Opencast Mine (I&II Expansion)
2.	Organization		The Singareni Collieries Company Limited
3.	Coalfield	:	Godavari Valley Coal Field
4.	Type of Mine		Opencast
5.	Technology	:	Shovel and Dumper Combination
6.	Environmental Clearance	-	
	A. Letter No & date	:	J-11015/268/2007-IA.II(M), Dt.11 <sup>th</sup> Oct, 2021
	B. Sanction Capacity	:	10.00MTPA
	C. Mining Lease Area.	:	1910.09 Ha.
	D. Date of Public Hearing	:	14.02.2020.
7.	Location of the Project		
	A. Village	:	Kommepalli
	B. Tehasil / Mandal	:	Sathupalli
	C. District	:	Khammam
	D. State	:	Telangana.
	E. Latitude	:	17 <sup>°</sup> 09'54.59" N to 17 <sup>°</sup> 13'01.70" N
	F. Longitude	:	80 <sup>°</sup> 45'43.38" E to 80 <sup>°</sup> 49'20.86" E
	G. Topo Sheet	:	Topo Sheet No. 65 C/16
	H. Nearest railway station	:	Bhadrachalam Road (65 Km)
	I. Nearest Airport	:	Gannavaram-Vijayawada
	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, T.S.
	D. PIN Code	:	507 303
	E. E-mail ID	:	oc_spl@scclmines.com
	F. Telephone No.	:	08761 – 282734, +9194911 44156
	G. Fax No.	:	08761 - 282736
9.	Life of the Project		44.49.9994
	A. Date of Opening	:	11.10.2021
	B. Life as per EMP	:	26 years from 2020-21
10.	Seams		
	A. No. of Seams Present	:	6 (as per MP)
	B. Seams being worked	:	6

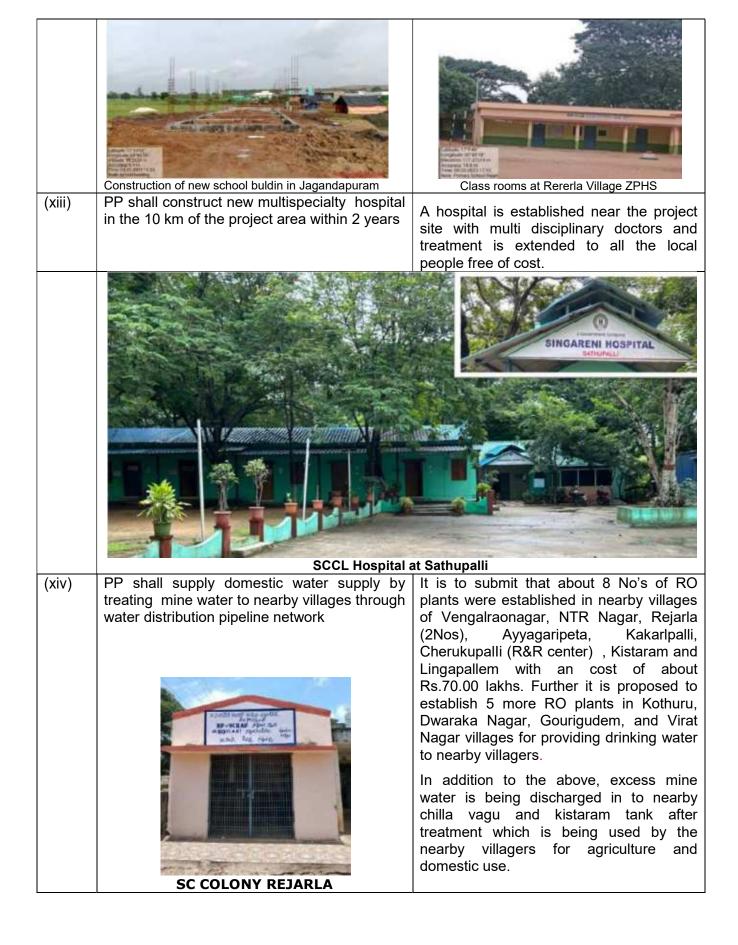
11.	Depth			
	A. Minimum Depth	:	25.50 m (as per MP)	
	B. Maximum Depth	:	363.45 m (as per MP	")
	C. Present working depth	:	130 m	
12.	Reserves			
	A. Total Geological Reserves	:	309.55 MT (as per E	MP)
	B. Total Extractable Reserves as per EMP.	:	291.97 MT (as per E	MP)
	C. Balance Extractable Reserves	:	201.59 MT	
	D. Reserves already Extracted	:	90.38 MT	
	E. Balance Reserves	:	201.59 MT	
	F. Coal production during last 6 months	:	5.20 MT	
13.	Over Burden			
	A. Total OB	:	1046.89 (as per EMF	?)
	B. OB extracted since inception	:	306.20 MB Cum.	
	C. OB removed in last 6 months	:	27.80 MB Cum.	
	D. Overall Stripping Ratio	:	1:4.26 (as per EMP	)
14.	Top Soil			/
	A. Total Topsoil	:	14.19 M.Cum (as per	r EMP)
	B. Topsoil extracted since inception	:	7.124 MB Cum.	,
	C. Topsoil removed in last 6 months	:	0.724 MB Cum.	
15.	Land Requirement			
	A. Total Requirement	:	1910.09 Ha.	
	B. Forestland Involved	:	1156.72 Ha.	
	C. Non-forestland	:	753.37 Ha.	
16.	Activity wise Land Requirement (ha)	:	As per MP	Present Status
	A. Quarry Area	:	1030.87	656.30
	B. External OB Dumps	:	507.05	470.00
	C. Safety Zone	:	177.69	151.02
	D. Roads & Infrastructure	:	152.74	152.74
	E. Other	:	41.74	41.74
	F. Total	:	1910.09	1471.8
17.	Statutory Clearances	_		
	A. Approval of Mining Plan (including	:	MP & FMCP a	approved vide file
	Mine Closure Plan)			CA dated 29.03.2019.
	,		Consent Order No	
	B. Consent for Operation	:	13.04.2022 and valid	
	C. Forest Clearance for 1156.72 Ha.	:	F.No.8-129/2003-FC	•
			Details of Mining Leas	
			S.No Mininig E	Extent(ha) Valid upto
				200.00 42.02.2047
				300.6913.02.2047136.5009.11.2028
			Exp.	00.11.2020
				383.05 22.03.2025
			4. LOI	89.85
			obtained for Roads &	
			Infrastructures	
			TOTAL 1	910.09

4.	4. Compliance report of, EC Lr. No. J-11015/268/2007-IA.II(M), Dt.11 <sup>th</sup> Oct, 2021.			
Cond. No.	Condition	Compliance		
(i)	All the conditions mentioned in EC dated 27 <sup>th</sup> July, 2007 for JVROC-I and 28 <sup>th</sup> March, 2010, 1st February, 2021 and EC Amendment dated 19 <sup>th</sup> April, 2019 should be strictly complied within 8 months and shall be read with instant EC. Grant of this integrated EC is subject to mine lease period of mine.	The conditions stipulated in the earlier environmental clearances issued for JVR OC-I and JVR OC-II mines were complied. The EC amendment with respect to coal tranportation is also complied and coal dispatches by rail mode commenced from 28 <sup>th</sup> May 2022. The compliance status of EC dated 1 <sup>st</sup> february, 2021, 28 <sup>th</sup> March, 2010, 27 <sup>th</sup> July,2007 and EC amendment dated 19 <sup>th</sup> April, 2019 are enclosed as Annexure-II, Annexure-III, Annexure-IV abd Annexure-V.		
(ii)	Transportation of coal from Coal Handling Plant shall be through mechanized covered trucks for 2 years. No transportation by trucks after 2 years and proposed railway siding should be constructed within 2 years of mine operations.	Transportation of coal from CHP is being carried out through rail mode only from 28 <sup>th</sup> May 2022.		
(iii)	Third party monitoring (by reputed institute) for air quality shall be carried out at identified locations, both ambient and the process area, to oversee the impact and mitigations measures vis-a-vis details mentioned EIA report.	Third party monitoring of air quality is carried out by NEERI, Hyderabad and the monitored results are well within the standards. The air quality monitoring result is enclosed as <u>Appendix-1</u> .		
(iv)	PP shall install continuous online monitoring station (24x7) at appropriate location and data so generated should be displayed at entry gate of mine for public domain within period of 6 months and also shared with respective SPCB and upload on the company's website.	One continuous Ambient Air Quality Monitoring Station (CAAQMS) was established at the project site and the air quality data is being displayed digitally in front of manager's office for public information and the data is also being uploaded to TSPCB web-site on real time basis.		
	Monitoring Station in Project Premies Minude 17.21127971* Leiteltude 19.21127971* Leiteltude 19.21127971* Leiteltude 19.21127971* Leiteltude 19.21127971* Leiteltude 19.21127971* Leiteltude	Display Board at Project Office he project		
(v)	Mining shall be carried out only by surface miners for the project and silo loading through in- pit conveyor should be installed to stop road transportation in 2 years of mine operations.	Coal extraction is being carried out as envisaged in the mining plan approved by MoC. Coal handling plant with latest dust suppression technology has been established at the project site along with closed in-pit belt conveying system and silo loading arrangement.		



	Mango Plantation in the mine	Sapota Plantation in the mine
(vii)	PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis.	The environmental monitoring of air, water and noise pollution is being monitored through an external agency viz., Environment Protection Training and Research Institute (EPTRI), Hyderabad, a CPCB recognized and NABL accredited state laboratory. EPTRI also established field Laboratory at Kothagudem for monitoring of critical parameters as stipulated by MoEF&CC vide Standards for Coal mines vide GSR-801 (E), dt. 25.09.2000.
	Environment Protection Training & Beserchlinstitute Augured Lithonology Kettogetion	
(viii)	10 Fog canon shall be installed to reduce the impact of air pollution for nearby villages, along the haul road, transportation route and at railway siding.	10 Fog canons were established in project to reduce the impact of air pollution to nearby villages, along the haul road, transportation route, CHP and at railway siding.

(ix)	With confirmation of further utilisation/ recovery of Sand by PP, it shall establish a pilot plant of 100 TPH capacity M-Sand (Manufactured sand) Plant at MOCP, Godavarikhani (BOO modal if feasible) for a period of minimum 6 years within one year of issue of EC letter.	A pilot plant at Medapalli OCP, Godavarikhani has been established with a production capacity of 100TPH of M- Sand.
(x)	PP shall implement three tier 50 m peripheral tree plantation along the boundary of coal washery.	Coal washery is yet to establish. After establishing coal washery this condition will be complied.
(xi)	2 nos. of water tank similar to the area of Jeenugupallii tank will be created by PP in one year in nearby villages and shall be continuously maintained. Regular de-siltation of nearby water tanks will be carried out PP and quality shall be monitored every six months (of at least 10 tanks).	One water tank has been created near Rejarla village and another water tank will be developed near Chilla vagu before removing Jeenugupalli tank which is in the project area. SCCL has already taken up de-siltation of Chillavagu, Jeenugupalli Tank and Kistaram tank and de-siltation of nearby water tanks will be continued in future. The quality of surface water bodies including nearby tanks is being monitored once in three months and the data is being submitted to MoEF&CC and TSPCB along with EC compliance reports. Water quality data of the surrounding tank is enclosed as <u>Appendix-20.</u>
	Photograph of tank developed at Rejarla Village	Land near chilla vagu identified for creation of new tank
(xii)	PP shall establish one new higher secondary school in the 5 km of the project area within 2 years	A new school in Jagandapuram village is under construction with an amount of Rs.61.00 lakhs. In addition, SCCL has constructed additional class rooms, repair of school building in Rejerla Village Z.P.High School with an amount of Rs.14.00 lakhs. Further, it is proposed to spend an amount of Rs.35.00 Lakhs for providing infrastructure facilities like computers, benches, lab items, other furniture etc. to the nearby village schools.



	VENGALA RAO NAG	AR SATHUBALLT
	NTR NAGAR SATHUPALLI	BC COLONY REJARLA
(xv)	PP shall maintain V-M Banjara - Sathupalli road and any other road used for coal transportation and regular cleaning and maintenance shall be conducted by PP in collaboration with state PWD. All approach roads to mine and all other roads which are in regular use should be black topped. The maintenance of road shall be done by PP in collaboration with state government. The details of expenditure incurred shall be submitted to Ministry's Regional Office	
(xvi)	PP shall employ appropriate measure to control the environmental impacts of blasting such as noise, vibration, air blast etc. Use of state of the technology solution for design and simulation of each blast is strongly recommended to minimize the environmental impacts of blasting. PP should as far as possible maintain a distance of 500 m from the blasting point to the nearby habitation.	Blasting operations are being carried out using non-electric delay detonators (NONELs) so as to minimize the blast induced ground vibrations, noise etc. Scientific study was taken up for carrying out blasting near habitations as suggested by DGMS and based on the study report DGMS granted prior approval for blasting near habitation. The conditions stipulated in scientific studies and DGMS permissions are being strictly implemented. scientific study report is enclosed as <u>Appendix-4</u> and DGMS permissions as <u>Appendix-5</u>

(xvii)	Muffled blasting technic In-active OB dump shall not be kept	· · · · · · · · · · · · · · · · · · ·
(XVII)	barren/open and immediately reclaimed and re-graded to improve the land form and covered by temporary grass etc. for better land use post mining on closure	reclaimed with plantation to improve the land form.
(xviii)	PP shall regularly check the water quality of mine pit water for drinking water standards at regular interval of time.	Mine discharged water is being treated in the slow sand filter beds to arrest the suspended solids and after that it is treated in the RO plant for drinking purpose. Potable test is being done at frequent intervals. Water quality of mine pit water 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. Mine discharge water quality report Apr' 2023 to Sep'2023 is enclosed as Appendix-17.
(xix)	Peripheral tree plantation around the affected villages and nearby villages (particularly Kistaram village, siddaram village, vengalarao nagar, rejerla village).	Extensive peripheral plantation was taken up around the project for controlling dust pollution. In addition a Mound Barrier of around 1.5 km length (Height -10m ,top width-15m,bottom width – 40m) was also made at north and east side boundaries of the quarry towards NTR Nagar and thick green belt is developed over it for controlling dust pollution.
(xx)	Persons of nearby villages shall be given training on livelihood and skill development to make them employable.	Skill development programmers are being conducted to improve the job opportunities for unemployed local youth in project contractual operations and also in other segments. About 1139 un-employed youth from surrounding villages were imparted vocational training in various fields like driving, motor winding, beautician, tailoring, embroidery, police, army etc., SCCL will organize the skill development trainings in future also as per the requirement of the local youth.
(xxi)	Project Proponent shall explore deployment of	Controlled blasting techniques are being

(xxii) (xxiii)	rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitation/structures due to blasting activity. Raw coal, washed coal and rejects shall be stored in covered silos or in dome shaped storage to reduce air pollution. The PP should provide proper roads, toilets facilities, plantation, solar lights, drinking water facilities, stationeries to nearby villages, school and colleges.	carried out using non-electric delay detonators (NONELs) to control blast induced ground vibrations. Scientific studies were carried out for conducting safe blasting operation near habitations and prior approval also obtained from DGMS to carry out blasting up to 100 m from habitation. Coal washery is yet to establish after establishing coal washery this condition will be complied. Facilities like proper roads, toilet facilities, plantation, solar lights, drinking water facilities, stationeries to nearby villages, school and colleges are being provided under CSR activities. So far an amount of Rs. 2057.97 Lakhs was spent for carrying
(xxiv)	PP shall pay to farmers of agricultural land if there is any loss and for cracks in the house due to blasting found by concerned District Commissioner as per extent rules or norms.	out CSR works. As of now there is no incidence of loss to agriculture products and damages to houses due to blasting operation. PP mentioned controlled blasting operations are being carried out in order to control blast induced ground vibrations thereby ensuring no damage to nearby houses. In case of any damage to agriculture and houses the same will
(xxv)	PP shall strictly comply the judgement of Hon'ble NGT in the matter of OA. 174 of 2020 and OA 20 of 2021 as and when judgment is pronounced.	be compensated by PP as per status. Hon'ble NGT (SZ), Chennai, while awarding a common judgement order in both the cases viz. OA. 174 of 2020 and OA 20 of 2021 on 06.05.2022, directed SCCL to comply with certain guidelines including payment of compensation of Rs.41.21Crores [i.e. Rs.58.86Crores (10% of the profit) - Rs.17.65 Crores (3% of the profit) which was directed to be adjusted towards the remediation plan] within a period of 3 (Three) months with the Telangana State Pollution Control Board. However, SCCL approached Hon'ble Supreme Court regarding the common judgment and the apex court while granting stay order directed SCCL to deposit 50% of amount as imposed by Hon'ble NGT. SCCL deposited 50% of the amount with the Tribunal, the case is presently pending with the Hon'ble Supreme Court for final judgment in the matter. SCCL will comply with the Hon'ble Supreme Court verdict.
(xxvi)	PP shall establish new Effluent Treatment plant for expansion project within 1 one year of issue of EC letter.	One new ETP established at Base Workshop and Two ETPs established at the CHP.

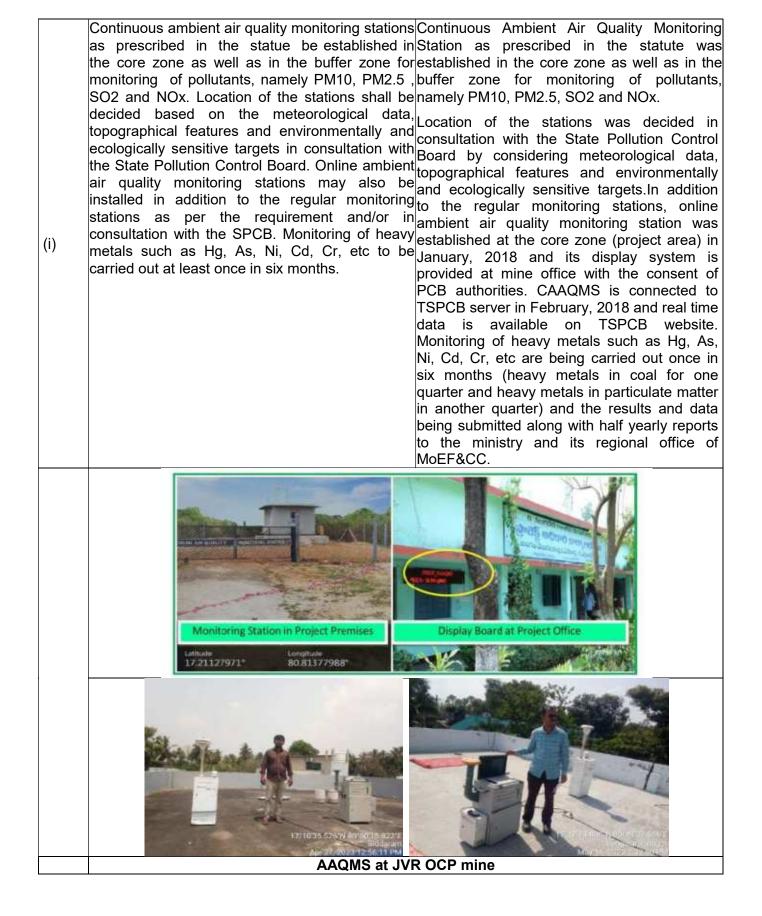
		ETP at BWS
(xxvii)	PP shall use only mine water for washery operations (620 KLD) and effluent from washery shall be treated in ETP and shall implement principles of Zero Liquid Discharge. No surface and ground water to be drawn	Coal washery is yet to establish after establishing coal washery this condition will be complied.
(xxviii)	PP shall complete all the activity listed in Remediation plan and Natural and Community Resource Augmentation plan with three years and before the expiry of mining lease (valid up to 22nd March, 2025) as stipulated in EC dated 1st February, 2021.	Remediation plan and Natural and Community Resource Augmentation plan (RP&NCRAP) works are being executed as per the EC schedule and will be completed within the given time frame as stipulated in EC dated 1st February, 2021.
(xxix)	Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, 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. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.	After completion of mining operations, re- grassing/reclamation of the disturbed area due to mining activities will be taken up and restored as per the approved Mining Plan & Final Mine Closure Plan. The implementation report will be submitted to the Regional Office of the MoEF&CC during the post closure stage.
(xxx)	Rejects and Middling generated from Washery shall be utilized as per Ministry's Notification dated G.S.R.443 (E) dated 25th June, 2021.	Coal washery is yet to establish after establishing coal washery this condition will be complied.
(xxxi)	PP shall construct concrete road inside and	Coal washery is yet to establish after

	peripheral road of washery boundary and haul road from mine to washery shall be black	••••
	topped with all dust control mechanism.	
(xxxii)	Transportation of rejects shall only be in 40 to	Coal washery is yet to establish after
	50 tonne trucks only if railway siding is not present at utilization points. If railway siding is available at any Thermal Power PI ant, then no transportation shall be allowed by trucks	0

**4.1** The grant of Environment Clearance (EC) is further subject to compliance of the Standard EC conditions as under:

(a)	Statutory compliance	
Cond	Condition	Compliance
. No.	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	Total forest land involved in the project is 1156.72 ha and was diverted in three phases.
		776.20 ha - F. No. 8-56/2014-FC, Dt. 30 <sup>th</sup> May, 2017, for a period co-terminus with the period of mining lease (ML valid up to 13th February, 2047 - 30 Yrs.) Copies of Forest clearances were enclosed as Appendix-7
(ii)	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not applicable. There are Wildlife sanctuaries with in 10 km from the project.
(iii)	The project proponent shall prepare a Site- Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).	A site-specific Wildlife Conservation & Mitigation Plan for Schedule-I species was prepared in consultation with state forest department for an amount of Rs.2.57 Crores, which was approved by the Principal Chief Conservator of Forest (HoFF) and Chief Wild life Warden (FAC), TS. vide Ltr No. Prl CCF (HoFF), TS, Hyderabad, Rc.No.7281/2020/WI-1, Dt.18.09.2020. For implementation, SCCL deposited the funds in favor of State Forest Department Vide Lr.No. KGM/ENV/404/534/2021/294, dated 09.11.2021. Copy of payment receipt is enclosed as <u>Appendix-8</u> .
		SCCL asked FDO Sathupalli to provide the implementation status of Site-Specific Conservation Plan/Wildlife Management Plan and funds utilized which is enclosed as <u>Annexure-8A</u> .

<ul> <li>(iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention &amp; Control of Pollution) Act, 1981 and the Water (Prevention &amp; Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.</li> <li>(iv) Act, 1974 from the concerned State Pollution Control Board/ Committee.</li> </ul>	GM/HO/ / is enclosed Vide ref. No. valid up to
<ul> <li>(v)</li> <li>The project proponent shall obtain the necessary permission from the Central Ground Water Authority.</li> <li>(v)</li> <li>Ground Water Clearance was o district ground water authority, Telangana State vide Lr. No OC/2019, date.10.05.2021 va 09.05.2026. Copy of GWC enclosed as Appendix-11.</li> </ul>	Khammam, b.545/T/JVR- alid up to
<ul> <li>(vi)</li> <li>(vi)</li> <li>Solid/ hazardous waste generated in the mines solid/ hazardous waste generated in accordance to the Solid mines are being disposed in accordance to the Solid Waste Management Rules, 2016/Hazardous &amp; Other Waste Management Rules, 2016.</li> <li>(vi)</li> <li>(vi)</li> </ul>	coordance to nent Rules, er Waste with barrels, ansformer oil , iron scrap, cap lamp ase drums is red off in laid down in and copper the recyclers PCB/TSPCB mpty oil and ified prior to s. other wastes Kothagudem pertaining to
Coal beneficiation practices shall be carried out Coal washery is yet to es	
(vii) under strict adherence to provisions of the establishing coal washery this	condition will
	condition will

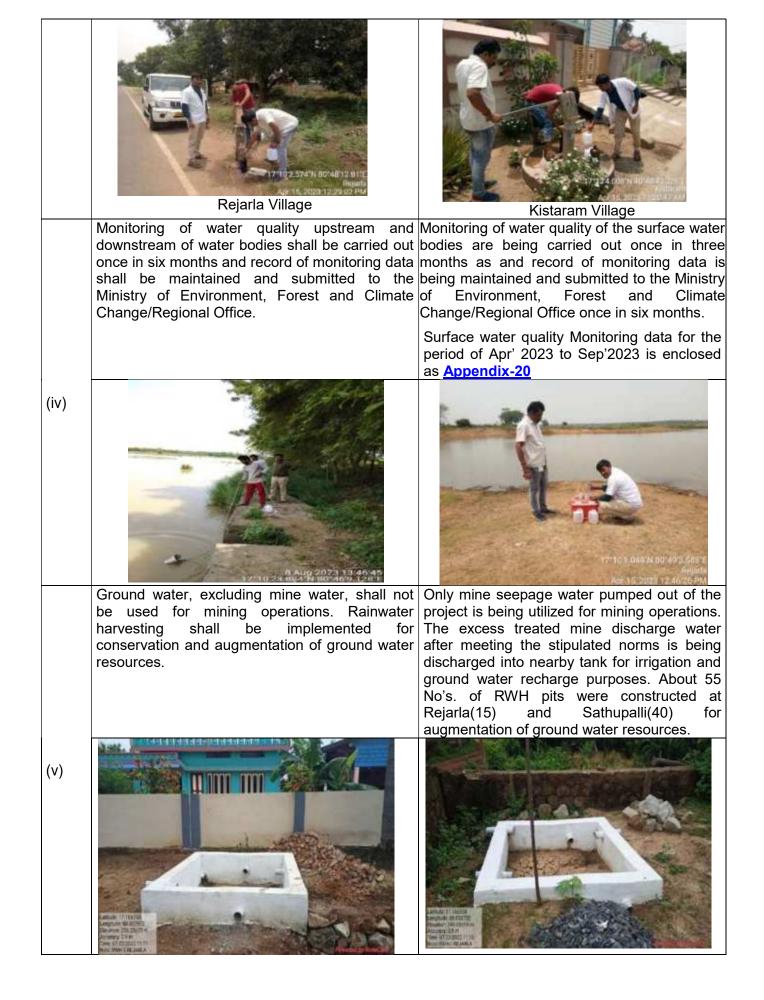


(	(ii)	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.	as well as in the buffer zone 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. The data on ambient air quality and heavy metals are being submitted along with half yearly reports to the ministry and its regional office of MoEF&CC. Monitoring data of ambient air quality and heavy metals for the period of Apr' 2023 to Sep'2023 pertaining to JVR OC Mine(I&II Expansion) is enclosed as <u>Appendix-13</u> and
(	(iii)	trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun	mode. Effective dust control measures like Water/mist spraying, fog canons area provided at the CHP. Regular water spraying is being carried out along the haul roads, approach roads, loading points etc by providing sufficient water sprinklers of 28 KL (4 No's), 20 KL (5 No's), 15 KL (2 No's) capacity and 12 KL Water Tanker (3 No's) for dust suppression etc.
		Dust supression	
(	(iv)	The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	The transportation of coal is being carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan through rail mode from 28 <sup>th</sup> May 2022.

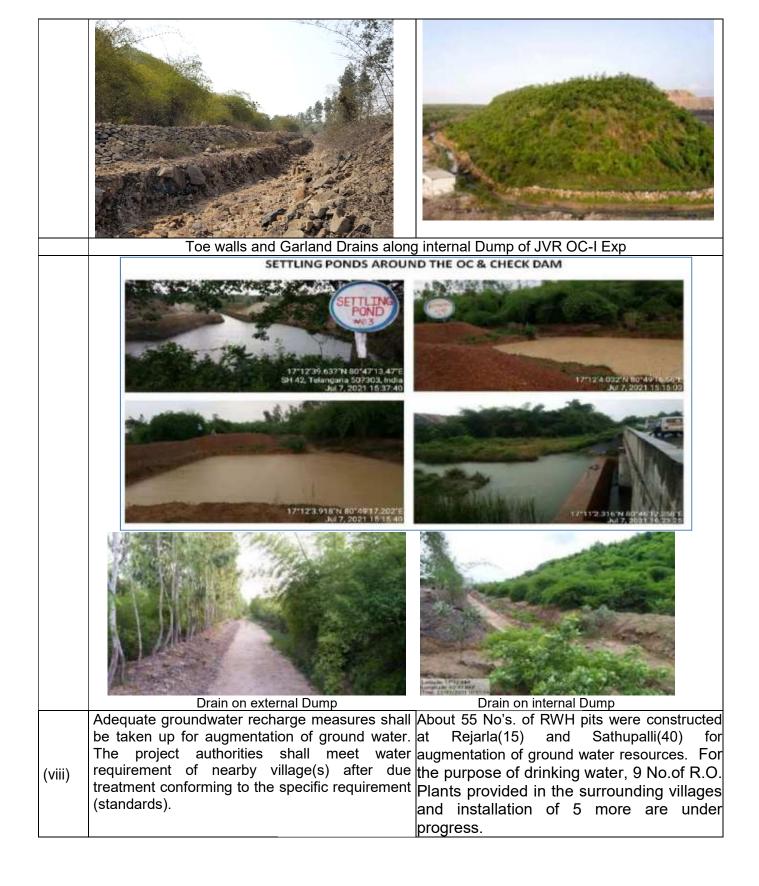
		T
	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining ' PUC' certificate from the authorized pollution testing centres.	engine tuning of HEMM and other transport vehicles is being done at regular intervals as
		Vehicular emissions of departmental HEMM, being operated by Diesel are being monitored at every six months interval through EPTRI, Hyderabad, which is a CPCB, recognized and NABL accredited laboratory.
		Vehicular emissions for the period of Apr' 2023 to Sep'2023 pertaining to JVR OC Mine(I&II Expansion) (10.00 Mtpa, granted on 11 <sup>th</sup> October, 2021) is enclosed as <u>Appendix-15.</u>
(v)		'PUC' certificates for OB contractual vehicles and Coal transport vehicles are being obtained by respective contractual agencies from the authorized pollution testing centers. Specimen copies of PUC certificates obtained are enclosed as <u>Appendix-16</u> .
(vi)	Coal stock pile/crusher/feeder and breaker material transfer points shall in variably be provided with dust suppression system. Belt- conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	are provided with water/mist spray arrangements. Belt-conveyors were fully covered to avoid air borne dust. Side cladding all along the conveyor gantry was made to avoid air borne
	Fixed Water Spraying at coal yard	Closed conveying system at CHP

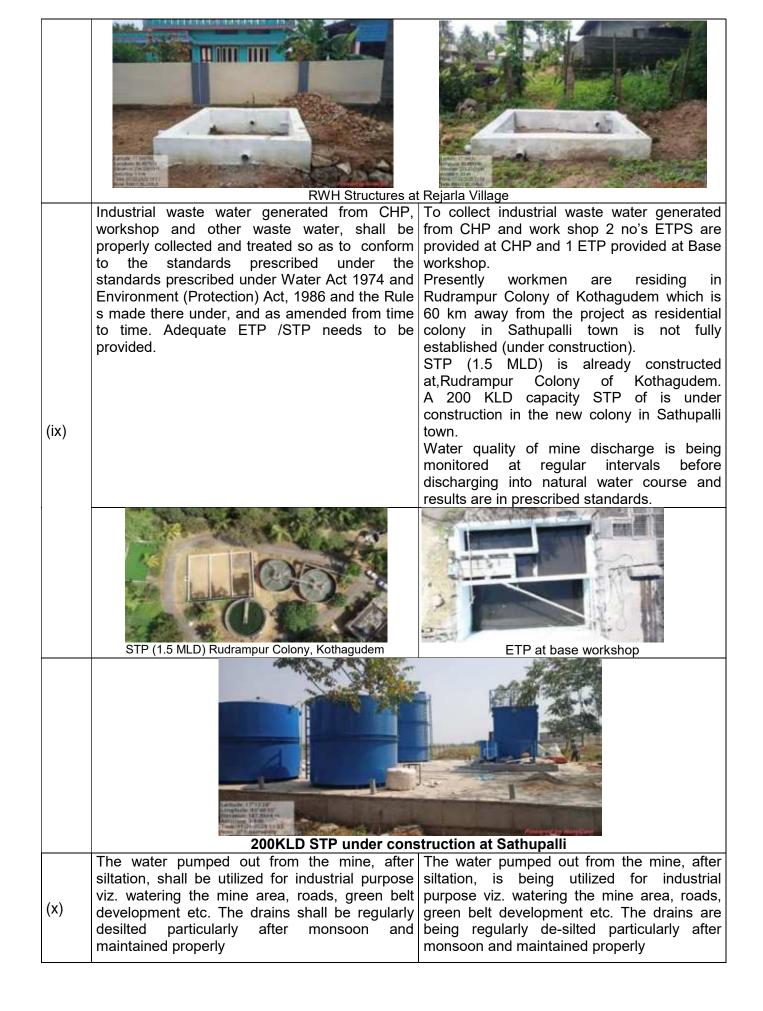
(vii)	effective control measures w.r.t. Various environmental parameters. Environmental	Coal handling plant is being operated with water spray/sprinklers with effective control measures. Fog canons are provided at CHP, Belt conveyors are fully covered to avoid air borne dust. Side cladding is made all along the conveyor gantry to avoid air borne dust.
	A veiw of the set of t	the CHP
(viii)	All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.	All approach roads are black topped and internal roads were concreted. The roads are
(ix)	Covered trucks shall be engaged for mineral transportation outside the washery upto the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.	establishing coal washery this condition will be complied
(x)	Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.	Parking facility has been provided in the project for trucks carrying raw material.
(xi)	Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor system s and from transportation roads.	material transfer points were provided with dust suppression system. Belt-conveyors were fully covered to avoid air borne dust. Side cladding all along the conveyor gantry was made to avoid air borne dust. Drills are

(xii)	The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.	Coal washery is yet to establish after establishing coal washery this condition will be complied.
(xiii)	The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.	Coal washery is yet to establish after establishing coal washery this condition will be complied.
(C)	Water quality monitoring and preservation	
(i)	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.	The effluent discharge (mine waste water, workshop effluent) are being monitored through EPTRI in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. The effluents monitoring results for the period of Apr' 2023 to Sep'2023 is enclosed as <u>Appendix-17</u> .
(ii)	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J-20012/ I/2006-IA. II(M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be refer red in this regard for its compliance.	The monitoring data is being uploaded on the company's website and displayed at company's website URL: <u>https://scclmines.com/env</u> . The circular No.J-20012/1/2006-IA.11 (M) dated 27 <sup>th</sup> May, 2009 issued by Ministry of Environment, Forest and Climate Change is being complied.
(iii)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post- monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MoEFCC/RO.	Regular monitoring of ground water levels being done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons by establishing a network of nineteen (19) existing wells and seven (07) piezometers. The ground water level monitoring data for the period of 2019-2023 is enclosed as <u>Appendix-18</u>



	Rain water harves	with the second secon
(vi)	No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should	Coal washery is yet to establish after establishing coal washery this condition will be complied.
(vii)	not exceed 1.5 m3/tonne of raw coal. Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains / ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilized for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run off and siltation should be based on the rainfall data. The of native species to be made between toe of the dump and adjacent field/habitation /water bodies.	species only. Species planted are: Hardwikia





(xi)	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA /EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.	water conservation plan for the area of influence affected by the said mining operations, considering the presence of water bodies in the area has been prepared and being implemented. There are no diversions of natural water courses involved for the project. Therefore, there is no proposal of
(xii)		Not applicable. There are no rivers in and around the mine.
(xiii)	An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented	
(xiv)	Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant	establishing coal washery this condition will
(xv)	Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.	Coal washery is yet to establish after establishing coal washery this condition will be complied.
(xvi)	The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.	establishing coal washery this condition will be complied.
(xvii)	Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.	Coal washery is yet to establish after establishing coal washery this condition will be complied.

(xviii)	The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run of from reject dumping sites.	s establishing coal washery this condition will be complied. e e o n g
(d)	Noise and Vibration monitoring and preven	tion
	Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.	control of noise levels as per Noise Pollution Rules, 2016 in the work environment. All the HEMM are provided with Sound Proof
(i)	· ····································	Thick Green Belt has been developed around the project for noise attenuation. Adequate awareness programme for users are being conducted. Progress in usage of such accessories is being monitored during the inspections of officers and supervisors.
	Green belt around the project	In addition, a Mound Barrier of around 1.5 km length is made at north and east side boundaries of the quarry and thick green belt are developed over it. Noise Monitoring data for the period of Apr' 2023 to Sep'2023 is enclosed as Appendix-21

(ii)	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.	out in order to mitigate ground vibrations, fly
	Muffuled Blasting	
	Monitoring of Blast Vi	brations with Minimate
		Noise level survey is being carried out once in
(iii)	per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six- monthly basis.	a month to assess noise exposure level of workmen in the mine premises as per DGMS guidelines.
(e)	Mining Plan	
(i)	adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	Mining operations are being carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there- under as applicable.
(ii)		Mining operations are being carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS). Copy of Mining Plan approval letter is enclosed as <u>Appendix-24</u>

(iii)	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.	<ul> <li>Mining operations are commenced after obtaining forest land clearance only.</li> <li>Forest land involved in the project is 1156.72 ha and was diverted in three phases.</li> <li>244.02 ha - No. 8-129/2003-FC, Dt. 02<sup>nd</sup></li> <li>February, 2005, for a period co-terminus with the mining lease (ML valid up to 22nd March, 2025 - 20 Yrs).</li> <li>136.50 ha - F. No. 8- 56/2008-FC, Dt. 03<sup>rd</sup></li> <li>July, 2012, valid for 20 years subject to possession of valid lease (ML valid up to 9th November, 2028 - 20 Yrs).</li> <li>776.20 ha - F. No. 8-56/2014-FC, Dt. 30<sup>th</sup></li> </ul>
		May, 2017, for a period co-terminus with the period of mining lease (ML valid up to 13th February, 2047 - 30 Yrs.) Copies of FC is an enclosed as <u>Appendix-7</u> .
	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Efforts are being made to reduce energy and fuel
(iv)		view of Solar Power Plant in KGM Area
		The current generated by Solar panels are in DC form which are sent to assembly station from every single panels, from there they are sent to the inverter which converts the current to AC form and then it is sent to power up Transformer from where the power is stepped up and then the power is fed to the Transmission grid. <u>2.Fixing of Energy Meters:</u> • 20000 No.s fixed in quarters of SCCL. • Target fix in all 46,000 No. of SCCL quarters
		<ul> <li>3. Lighting:</li> <li>Incandescent lamps are banned in quarters.</li> <li>Advised to replace LED lamps in place of Incandescent lamps.</li> <li>Conventional street / yard lighting is replaced with LED lights.</li> <li>4 <u>Energy efficient appliances:</u></li> </ul>

	5.	<ul> <li>Made mandatory to purchase 5 star rated. house hold appliances.</li> <li>Purchased 5 star rated Air conditioners, Refrigerators, Fans, Coolers etc., in SCCL and also made propaganda among the employees.</li> <li>Others:</li> <li>In OC mines, proposed to procure mobile Solar Lighting Masts with energy saving LED lights with Battery backup in place of diesel operated DG Set with conventional high capacity lights.</li> <li>Arranged to fix transparent acrylic sheets on roof top to utilize day light.</li> <li>Using timers in street lighting in all areas.</li> </ul>
(f)	Land reclamation	
(i)	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in I :50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).	zone using Satellite Remote Sensing survey is being carried out once in three years for monitoring land use pattern and post mining land use and the report is being submitted to MoEF &CC/RO with the half yearly monitoring
(ii)	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.	363.45 m as per the approved Mine Closure Plan by MOC, Gol and EC granted by MoEF&CC. After closure of the mine adequate engineering interventions will be provided for sustenance of aquatic life in the void. Out of 1030.87 ha of the quarry area about 531.75 ha will be back filled and covered with thick and alive top soil and plantation will done and 499.12 ha will be left as void which will act as water
(iii)	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/" post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vi s the post mining land use pattern shall be submitted to the MOEFCC/RO.	external OB dumping (including top soil) and Afforestation plan is in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to the Ministry. Progressive compliance status

(iv)	Fly ash shall be used for external dump of overburden , backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum gene rated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	Manuguru Opencast Project which is adjacent to PK OC to ascertain the stability of overburden dumps by mixing of fly ash by CSIR- Central Institute of Mining and Fuel Research, Dhanbad. Basing on the outcome of the scientific study, PP will approach DGMS for permission. Based on the above study report and DGMS permission a decision on mixing of fly ash with OB in this project will be taken up. However, it is to submit that the fly ash is being utilized in the underground mines of SCCL for stowing of goaved out areas. Till now around 104.92 lakh cu.m of ash has been utilized for this purpose.
(v)	The topsoil shall temporarily be stored at earmarked site (s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self- sustaining. Compliance status shall be submitted to the Ministry of Environment , Forest and Climate Change/ Regional Office	approved mine closure plan and topsoil will be maintained live till the point of utilization. The topsoil is being temporarily stored at earmarked site and is being utilized for reclamation on the dumps . Active OB dumps are being stabilized with native grass species to prevent erosion and surface run off. Presently OB dumping is being carried out on external and internal dumps. Monitoring and management of rehabilitated areas will continue until the vegetation becomes self-sustaining. Compliance status is being submitted to the Ministry of Environment
(vi)	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	The directions of Hon'ble Supreme Court will be implemented regarding the grazing land.
(g)	<u>Green Belt</u>	
(i)		As per the EIA/EMP report, no endangered flora and fauna reported within the core area.

Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The the end of Sep, 2023 as per the approved green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

Green belt around the project boundary



Total 390.52 ha of land is reclaimed with plantation in and around the project up to EMP.

S.No.	S.No. Description		
Α.	A. Within the project area		
1 External Dump Yard		152.06	
2.	2 Internal Dump Yard		
3.	•		
4.	4 Avenue Plantation		
	258.52		
В	Outside project area		
1.	Gap Plantation in Forest Land between Mine Boundary and R&B Road (Beyond mandate)	80.00	
2.	Safety Zone Area in 136.50 ha of Forest Land diverted for JVR OC-I Expn.	52.00	
	132.00		
Total a	Total area brought under plantation 390.52		
<b>-</b> .	<b>T</b> I I I I I I O O O I		

The plantation area also includes 80.00 ha of Gap Plantation carried out in Forest Land between Mine Boundary & R&B Road beyond mandate and 52 ha of Safety Zone along the outer boundary of the mining lease area.

The greenbelt comprising a mix of native species and endemic species has been developed. A plantation plan is enclosed as Appendix-26.

#### Species planted:

Hardwikia binata, Dendrocalamus strictus, Ficus religiosa, Pterocarpus santalinus, Azadirachta indica, Limonia acidissima, Ficus bengalensis, Aegle marmelos, Mitragyna parvifolia, Dalbergia Pterocarpus marsupium, Syzygium latifolia, cumini, Albizzia procera, Terminalia bellarica, Pongamia pinnata, Madhuka indica, Tamarindus indica, Pithecelobium dulci, Sterculia urens, Dalbergia sissoo, Bombax ceiba, Albizzia lebbek Green belt around the project

Three tier greenbelt comprising of a mix of Coal washery is yet to establish after ill

I								
		native species, of minimum 30 m width shall be	establishing	coal	washery	this	condition	will
		developed all along the washery area to check	be complied		-			
	fugitive dust emissions and to render aesthetic							
	(;;;;)	to neighboring stakeholders. A 3-tier green belt						
	(iii)	comprising of a mix of native species or tree						
		species with thick leaves shall be developed						
		along vacant areas, storage yards,						
		loading/transfer points and also along internal						
		roads/main approach roads						

(ii)

(iv) (h)	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land. <b>Public hearing and Human health issues</b> Adequate illumination shall be ensured in all	be implemented regarding the grazing land.
(i)	mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six- monthly basis.	mine locations as per the DGMS standards and being monitored weekly.
(ii)	occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules,1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check -up for occupational diseases and hearing impairment, if any, as amended time to time.	7-area hospital (with a total of 821 beds) and 21 dispensaries established in all the workings areas of the company. The annual expenditure incurred by SCCL in maintenance of health care facilities during 2022-23 is Rs.307.00 Crores. SCCL is also conducting regular health camps in villages located in the vicinity of project to

		Radiologist constituted the Occupational Diseases Board, Physician and Occupational Health Physician together.
		In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year. The PME details are being submitted to the Ministry and to the DGMS at regular intervals. In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period. Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
		The PME details are being submitted to the Ministry and to the DGMS at regular intervals.
(iii)	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.	operations are being provided with dust masks to wear and adequate training and
		Adequate training is being imparted on safety and health aspects at the Mine Vocational Training Centre, Kothagudem during initial/ refresher training programmes and being educated regularly during safety education, talks etc. by concerned in-charges
(iv)	Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/ measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company /State Government/Central Government, as applicable.	Action plan on the issues raised during the public hearing is formulated and implementation is being ensured. All the tasks/measures as per the action plan with budgetary provision submitted during the

(v)	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-110 13/5712014-IA.I I (M) dated 29th October, 2014, titled' Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, are being
(i)	Corporate Environment Responsibility	
(i)	Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/20 17-IA.III dated 30th September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC	hearing will be taken up under CER as per Ministry's O.M. No. 22-65/20 17-IA.III dated
(ii)	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements /deviation/violation of the environmental/ forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation /violation of the environmental/forest/wildlife norms /conditions and/or shareholders/stake holders.	environmental policy duly approved by the Board of Directors. Copy enclosed as <u>Appendix-27</u> . The environmental policy is containing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/ violation of the environmental/ forest/ wildlife norms/conditions. The company is having a
(iii)		A company level environment cell with qualified personnel headed by General Manager (Environment) who is reportable to

2.       Project Officer       Member         3.       Area Engineer (E&M)       Member         4.       Area Civil Engineer       Member         5.       Area Forest Officer       Member         6.       Area Estates Officer       Member         7.       Project Anaager       Member         8.       Project Surveyor       Member         9.       Project Surveyor       Member         10.       Project Manager       Member         11.       Area Env. Officer       Member         12.       Sr. Hydro Geologist       Member         13.       Area Surveyor       Member         14.       Area Env. Officer       Member         15.       Area Surveyofficer       Member         16.       Area Surveyofficer       Member         17.       Project Surveyor       Member         1			1. SO to General Manager Chairman
3.       Area Engineer (E&M)       Member         4.       Area Civil Engineer       Member         5.       Area Estates Officer       Member         6.       Area Estates Officer       Member         7.       Project Engineer       Member         8.       Project Enveryor       Member         9.       Project Env. Officer       Member         11.       Area Survey Officer       Member         12.       Sr. Hydro Geologist       Member         13.       Area Survey Officer       Member         14.       Area Could the survey Officer       Member         15.       Area Survey Officer       Member         16.       Area Survey Officer       Member         17.       Project Survey Officer       Member         18.       Decomposition massures shall be kept in separate account and not the survey and separate account and survey consumental protection measures is being reported to the funistry /Regional Offi			Ţ.
4.       Area Civil Engineer       Member         5.       Area Forest Officer       Member         6.       Area Estates Officer       Member         7.       Project Manager       Member         8.       Project Surveyor       Member         9.       Project Surveyor       Member         10.       Project Surveyor       Member         11.       Area Env. Officer       Member         12.       Sr. Hydro Geologist       Member         13.       Area Survey Officer       Member         14.       Area Civil Engineer       Member         15.       Area Civil Cavey Officer       Member         16.       Area Survey Officer       Member         17.       Area Civil Cavey Officer       Member         18.       Area Civil Cavey Officer       Member         19.       Area Survey Officer       Member         19.       Core was spent as environmental protection measures are not being diverted for any other purpose. Till now about Rs.4.70 measures is being reported to the Ministry/Regional Office along with the S			,
5.       Area Forest Officer       Member         6.       Area Estates Officer       Member         7.       Project Lingineer       Member         8.       Project Env. Officer       Member         10.       Project Surveyor       Member         11.       Area Evrey Officer       Member         12.       Sr. Hydro Geologist       Member         13.       Area Survey Officer       Member         14.       Area Environmental       Management       Committee         15.       Area Evrey Officer       Member       Invironmental         16.       Area Evrey Officer       Member       Invironmental         17.       Project Surveyor       Member       Invironmental         18.       Project Surveyor       Member       Invironmental         19.       Project Surveyor       Member       Invironmental         19.       Project Management       Committee       Invironmental         10.       Project Management       Conmittee       Invironmental       Invironmental			
6.     Area Estates Officer     Member       7.     Project Engineer     Member       8.     Project Env. Officer     Member       9.     Project Env. Officer     Member       10.     Project Env. Officer     Member       11.     Area Env. Officer     Member       12.     Sr. Hydro Geologist     Member       13.     Area Survey Officer     Member       13.     Area Survey Officer     Member       13.     Area Survey Officer     Member       14.     Freydro Geologist     Member       15.     Area Survey Officer     Member       16.     Area Survey Officer     Member       17.     Area Survey Officer     Member       18.     Area Survey Officer     Member       19.     Project Env. Officer     Member       10.     propared and shall be duly approved by     Crore was spent as environmental comparts of unpromental protection measures shall be kept in separate account and revenue expenditure.     Resonart.       (iv)     Nto be diverted for any other purpose.     Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six.       (iv)     annually.     Every three years third party environmental audit shall be conducted annually.     Self environmental audit shall be conducted sa Appendix-2.			
7.       Project Manager       Member         8.       Project Engineer       Member         9.       Project Env. Officer       Member         10.       Project Env. Officer       Member         11.       Area Env. Officer       Member         12.       Sr. Hydro Geologist       Member         13.       Area Survey Officer       Member         13.       Area Survey Officer       Member         13.       Area Survey Officer       Member         14.       Area Survey Officer       Member         15.       Area Survey Officer       Member         16.       Project Env. Officer       Member         17.       Project Manager       Member         18.       Area Survey Officer       Member         19.       Area Survey Officer       Member         10.       Project Manager       Member         11.       Area Survey Officer       Member         12.       Sr. Hydro Geologist       Member         13.       Area Survey Officer       Member         14.       Project Env.       Member         15.       Core was spent as environment capital protection       Reavenditure vas projeces of implementation of action pl			
8.         Project Engineer         Member           9.         Project Env. Officer         Member           10.         Project Env. Officer         Member           11.         Area Env. Officer         Member           12.         Sr. Hydro Geologist         Member           13.         Area Survey Officer         Member           14.         Area Survey Officer         Member           15.         Area Survey Officer         Member           16.         prepared         and shall be duly approved by         Crore was spent as environmental protection           measures shall be kept in separate account and measures is being reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.         Monthly Compliance Report.           (iv)         environmental audit shall be conducted annually. Every three years third party environmental audit was conducted in shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.           (v)         Coal beneficiati			
9.         Project Surveyor         Member           10.         Project Env. Officer         Member           11.         Area Env. Officer         Member           12.         Sr. Hydro Geologist         Member           13.         Area Survey Officer         Member           14.         Area Survey Officer         Member           15.         St. Hydro Geologist         Member           16.         Project Survey Officer         Member           17.         Area Survey Officer         Member           18.         Project Survey Officer         Member           19.         Member         Project Survey Officer         Member			, ,
10. Project Env. Officer     Member       11. Area Env. Officer     Secretary       12. Sr. Hydro Geologist     Member       13. Area Survey Officer     Member       13. Area Survey Officer     Member       13. Area Survey Officer     Member       14. Area Survey Officer     Member       15. Area Survey Officer     Member       16. Project Env. Officer     Member       17. Area Survey Officer     Member       18. Area Survey Officer     Member       19. Area Survey Officer     Member       11. Area Survey Officer     Self environmental protection       10. To be diverted for any other purpose. Year <td< th=""><th></th><th></th><th></th></td<>			
11.       Area Env. Officer       Secretary         12.       Sr. Hydro Geologist       Member         13.       Area Survey Officer       Member         14.       Area Survey Officer       Member         13.       Area Survey Officer       Member         13.       Area Survey Officer       Member         14.       Preasures       is enclosed as Appendix-28.         Action plan for implementing EMP and protection measures are not being diverted for any other purpose. Tail now about Rs.4.70 (70 revas spent as environment capital competent authority. The year wise funds expenditure and about Rs.18.12 Crores (2021 to 20223) spent as environmental protection measures shall be kept in separate account and revenue expenditure. Year wise progress of implementation of environmental protection measures is being reported to the Six-Monthly Compliance Report.         (iv)       wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.         (v)       environmental audit shall be conducted annually. Every three years third party (2023 which is enclosed as Appendix-2. Third party environmental audit will be carried out in next year.         <			
12.     Sr. Hydro Geologist     Member       13.     Area Survey Officer     Member       14.     Sr. Hydro Geologist     Member       15.     Action plan for implementing EMP and environmental conditions along with prepared and shall be duly approved by competent authority. The year wise funds competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.     Ministry/Regional Office along with the Six Monthly Compliance Report.       (iv)     Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.     Self environmental audit was conducted in annually. Every three years third party environmental audit shall be carried out.     Self environmental audit was conducted in annually. Every three years third party environmental audit shall be carried out.     Self environmental audit was conducted in annually. Every three years third party environmental audit shall be prepared separately for raw coal, clean coal, middling and rejects     Coal washery is yet to establish afte establishing coal washery this condition will be complied.       (ii)     Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects     Solar power unit of 37 megawatts was consumptio			
Image: 13         Area Survey Officer         Member           Environmental         Management         Committee           Action         plan         for         implementing         EMP         and           environmental         conditions         along         with         prepared         and         shall be         dup approved         by           prepared         and         shall be         dup approved         by         Core as spent as environmenta         protection         measures are not being diverted           or any other purpose.         for any other purpose.			
Environmental       Management       Committee         Action       plan       for       implementing       EMP       and         Action       plan       for       implementing       EMP       and         Action       plan       for       implementing       EMP       and         environmental       conditions       along       with       protection       measures are not being diverted         or prepared       and shall       be       duly approved       by       Crore was spent as environment capital         earmarked       for       environmental       protection       measures shall be kept in separate account and       revenue expenditure. Year wise progress of         (iv)       wise progress of implementation of action plan       measures is being       reported       to the         shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.       Monthly Compliance Report.       Nonthly Compliance Report.         (v)       annually.       Every three years third party       Self environmental audit shall be conducted annually.       Self environmental audit shall be carried out.       Self environmental audit was conducted in annually.       Self environmental audit shall be carried out.       Self environmental audit shall be carried out.       Noffice along with the Six Monthly Compliance Report. <th></th> <th></th> <th>, , ,</th>			, , ,
Meeting         Minutes         is         enclosed         as           Action         plan         for         implementing         EMP         and         The         funds         earmarked         for         environmental         protection         measures are not being diverted         for any other purpose. Till now about Rs.4.70           prepared         and shall be         duly approved         by         Crore was spent as         environment capital           competent         authority.         The year wise funds         expenditure         and about Rs.18.12         Crores           measures shall be kept in separate account and         revenue expenditure. Year wise progress of         implementation of action plan         revenue expenditure. Year wise progress of         implementation of action plan           wise progress of implementation of action plan         measures         is being         reported to the         Ministry/Regional Office           along with the Six Monthly Compliance Report.         Self         environmental audit shall be carried out.         Self environmental audit shall be carried out.         Self environmental audit shall be carried out.         Self environmental audit was conducted in annually. Every three years third party environmental audit will be carried out in next year.           (i)         Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects </th <th></th> <th></th> <th>13. Area Survey Officer Member</th>			13. Area Survey Officer Member
environmentalconditionsalongwith responsibility matrix of the company shall be for any other purpose. Till now about Rs.4.70 Grore was spent as environment capital searmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.Former procession (2021 to 20223) spent as environmental revenue expenditure. Year wise progress of implementation of environmental protection measures is being reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.(iv)Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be prepared separately for raw coal, clean coal, middling and rejectsSelf environment audit was conducted in 2023 which is enclosed as Appendix-2. Third party environmental audit will be carried out in next year.(ii)Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.Coal washery is yet to establish after establishing coal washery this condition will be consurvation, efficiency improvements and use of renewable energy.			Meeting Minutes is enclosed as <u>Appendix-28.</u>
<ul> <li>(v) annually. Every three years third party environmental audit shall be carried out.</li> <li>(v) environmental audit shall be carried out.</li> <li>(j) Coal beneficiation</li> <li>(j) Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects for raw coal, clean coal, middling and rejects</li> <li>(i) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy</li> <li>(ii) (ii) Efforts and use of renewable energy improvements and use of renewable energy.</li> </ul>	(iv)	environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.	protection measures are not being diverted for any other purpose. Till now about Rs.4.70 Crore was spent as environment capital expenditure and about Rs.18.12 Crores (2021 to 20223) spent as environmental revenue expenditure. Year wise progress of implementation of environmental protection measures is being reported to the Ministry/Regional Office along with the Six- Monthly Compliance Report. Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.
(j)Coal beneficiation(i)Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejectsCoal washery is yet to establish after establishing coal washery this condition will be complied.(i)Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy (ii)Solar power unit of 37 megawatts was constructed in Kothagudem area and connected to grid so as to reduce energy consumption by conservation, efficiency improvements and use of renewable energy	(v)	annually. Every three years third party	2023 vide Ltr No.KGM/ENV/404/2023/106, Dt.19.07.2023 which is enclosed as <u>Appendix-2</u> . Third party environmental audit
<ul> <li>(i) Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects for raw coal, clean coal, middling and rejects</li> <li>(ii) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy consumption by conservation, efficiency improvements and use of renewable energy consumption by conservation, efficiency limprovements and use of renewable energy consumption by conservation, efficiency limprovements and use of renewable energy.</li> </ul>	(j)	Coal beneficiation	
<ul> <li>(i) for raw coal, clean coal, middling and rejects</li> <li>establishing coal washery this condition will be complied.</li> <li>Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy consumption by conservation, efficiency improvements and use of renewable energy consumption by conservation, efficiency limprovements and use of renewable energy.</li> </ul>			Coal washery is yet to establish afte
(ii) consumption by conservation, efficiency improvements and use of renewable energy consumption by conservation, efficiency Improvements and use of renewable energy.	(i)	for raw coal, clean coal, middling and rejects	establishing coal washery this condition will be complied.
(k) <u>Miscellaneous</u>		consumption by conservation, efficiency improvements and use of renewable energy	constructed in Kothagudem area and connected to grid so as to reduce energy consumption by conservation, efficiency
	(k)	<u>Miscellaneous</u>	

	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this s hall also be displayed in the project proponent's website permanently.	Advertisement was given on 15.10.2021 in daily News paper of vernacular language (Telugu) in "Namsthe Telangana" and English daily News paper "The Indian Express. And the same was displayed in the project proponent's website permanently. The Environmental Clearance letter is also displayed on company's website i.e. https://scclmines.com/env/frmEnvClearance.aspx.
(i)		Province Contraction Configuration Company Limited     A Sourcement Company)     Read Office: ROTHACODEM- 507101, Tolongana.     Contraction Románico Contractive Contractive     Source Contraction     Source     So
(ii)	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	after obtaining EC from MoEF&CC, New Delhi vide Lr. No. KGM/ENV/404/2021/259 to 278 dated 12 <sup>th</sup> Oct, 2021 sent to heads of local bodies, Panchayats and Municipal
(iii)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same.	Six-monthly reports on the status of the compliance of the stipulated environmental
(iv)		out in core zone as well as in buffer zone. The monitoring results are being provided in half yearly monitoring reports and are also being

(v)	The project proponent shall submit six -monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	compliance of the stipulated environmental conditions was uploaded on the website of the ministry of Environment, Forest and
(vi)	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z- 11013 /5712014- IA.J I (M) dated 29th October, 2014, titled' Impact of mining activities on habitation s issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, are being implemented.
(vii)		was submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as
(viii)	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Commencement of operations was informed
(ix)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Stipulations made by the State Pollution
(x)	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	All commitments and recommendations made in the EIA/EMP report and also during presentation to the EAC are being complied.
(xi)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	carried out with the prior approval of the Ministry of Environment, Forests and Climate Change.
(xii)	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	
(xiii)	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	clearance letter are being implemented.
(xiv)	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	

	The Regional Office of this Ministry shall monitor	PP agreed to comply
	compliance of the stipulated conditions. The	•
	project authorities should extend full cooperation	
(xv)	to the officer (s) of the Regional Office by	
	furnishing the requisite	
	data/information/monitoring reports.	
	The above conditions shall be enforced, inter-	All the measures are being taken to avoid Air
	alia under the provisions of the Water	
	(Drevention & Control of Dollution) Act 1071 the	
	Air (Prevention & Control of Pollution) Act. 198	
	1. the Environment (Protection) Act. 1986.	CFE and CFO were obtained for the project
	Air (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 198 1, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management	under air and water Acts.
(xvi)	and Trans-boundary Movement) Rules, 2016	PLI policy is also being taken every year. The
	and the Public Liability Insurance Act, 1991	latest PLI policy was taken from The New India
	along with their amendments and Rules and	
	any other orders passed by the Hon'ble	61360136233300000001, valid from
	Supreme Court of India / High Courts and any	
	other Court of Law relating to the subject	Appendix-32
	matter.	
	No change in coal beneficiation process and	
	scope of work shall be made without obtaining	
	prior approval of the Ministry of Environment,	•
(xvii)	Forests and Climate Change (MoEFCC) with	
	such conditions mentioned therein. No change in	
	the maxim um quantum of raw material feed per	
	annum against the approved washery capacity	
	shall be made.	
		All commitments and recommendations made
	commitments and recommendations made in the EIA/EMP report and also that during	presentation to the EAC are being complied.
5.	presentation to the EAC. All the commitments	
	made on the issues raised during public hearing	
	shall also be implemented in letter and spirit.	
		The project is started after obtaining all
	clearances/approvals that may be required	
	before the start of the project. The Ministry or	
G	any other competent authority may stipulate any	any other competent authority for
6.	further condition for environmental protection.	environmental protection, will be complied.
	The Ministry or any other competent authority	
	may stipulate any further condition for	
ļ	environmental protection.	
	Any appeal against this environmental clearance	•
-	shall lie with the National Green Tribunal, if	
7.	preferred, within a period of 30 days as	
	prescribed under Section 16 of the National Green Tribunal Act, 2010.	
	The coal company /project proponent shall be	Not applicable
	liable to nav the compensation against the illegal	
	liable to pay the compensation against the illegal mining, if any, and as raised by the respective	No illegal mining is carried out.
	State Governments at any point of time, in terms	
8.	of the orders dated $2^{nd}$ August, 2017 of Hon'ble	
	Supreme Court in WP (Civil) No.114/2014 in	
	the matter of ' Common Cause Vs Union of India	
1	& others.	

9.	The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.	
10.	This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.	

A periodic progress report regarding environmental protection measures for the period ending Apr' 2023 to Sep'2023 is enclosed as Part - II.

JVR OC Mine - (I&II Expn.,)

Annexure-II

## STATUS OF IMPLEMENTATION OF ENVIRONMENTAL CLEARANCE CONDITIONS (F.No. 23-77/2018-IA(III), Dt.1<sup>st</sup> February, 2021) up to Sep'2023.

## Specific conditions:

Cond. No.	Condition	Compliance
(i)	EAC recommended for an amount of Rs 2667.00 Lakhs towards Remediation plan and Natural and Community Resource Augmentation plan to be spent within a span of three years.	Remediation plan and Natural & Community Resource Augmentation plan (RP&NCRAP) activities with an amount of Rs.2667.00 lakhs is in progress as per the schedule. The latest status of RP&NCRAP is enclosed as Appendix-33.
(ii)	Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 2667.00 lakhs. Therefore, project proponent shall be required to submit a bank guarantee of an amount of Rs. 2667.00 lakhs towards Remediation plan and Natural and Community Resource Augmentation plan with the SPCB prior to the grant of EC.	Bank guarantee No.0416820BG0000510, dated 13.11.2020, for the total budgetary provision, for an amount of Rs.26,67,00,000/- (Rupees Twenty Six Crores Sixty Seven Lakhs only) was submitted in favor of Member Secretary, TSPCB, towards Remediation plan and Natural and Community Resource Augmentation plan with a validity period of 5 years vide Lr. No. CRP/ENV/A/403/764, dt. 17.11.2020. A copy of BG Submitted is enclosed as Appendix-34.
(iii)	Remediation plan shall be completed in 3 years whereas bank guarantee shall be for 5 years. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.	SCCL has already submitted BG to TSPCB for 5 years vide Lr. No. CRP/ENV/A/403/764, dt. 17.11.2020 and is committed to complete the implementation of remediation plan and Natural and Community Resource Augmentation Plan within the stipulated period of 3 years.
(iv)	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.	MoEF&CC granted EC to expansion of JVR OC-I Project for a capacity of 2.00 Mtpa (2.5 Mtpa peak), on 27 <sup>th</sup> July, 2007. Ground water clearance was obtained from State Ground Water Department Vide Memo No.13019/Hg.II(1)/06, Dt. 06 <sup>th</sup> July, 2007. EC for expansion of JVR OC-I Expn. Project from 2.5 Mtpa to 5.00 Mtpa was granted on 1 <sup>st</sup> February, 2021 and by that time (by the end of 2020-21) reserves in the project were exhausted. However, the project was amalgamated with adjacent JVR OCP-II Project under the name of

Cond. No.	Condition	Compliance
110.		carried out in the amalgamated project since 11 <sup>th</sup> , October, 2021. Ground water clearance existing JVR OC Mine (I&II Expansion) of 10 Mtpa was obtained from State Ground Water Department Vide Memo Lr. No.545/T/JVR-OC/2019, date.10.05.2021, valid up 09.05.2026. A copy of of GWC is enclosed as <u>Appendix-11</u> .
(v)	Wild life conservation plan as approved by the Competent Authority shall be implemented.	A Wildlife Conservation & Mitigation Plan for Schedule-I species was approved by the Principal Chief Conservator of Forest (HoFF) and Chief Wild life Warden (FAC), TS. for an amount of Rs.2.57 Crores, vide Ltr No. Prl CCF (HoFF), TS, Hyderabad, Rc.No.7281/2020/WI-1, Dt.18.09.2020. For implementation, SCCL deposited the funds in favor of State Forest Department Vide Lr.No. KGM/ENV/404/534/2021/294,dt.09.11.2021.Copy of payment receipt is enclosed as <u>Appendix-8</u> . However, the implementation details are not available with the SCCL. Therefore, the State Forest Department (TS) may be requested to provide the supporting documents on implementation of Wild life conservation plan and its status.
(vi)	The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 1 14 of 2014 in the matter of Common Cause versus Union of India and Ors.	Not Applicable. Hon'ble Supreme Court issued a judgment in Common Cause Vs Union of India on 02.08.2017 related to major minerals and particularly applicable to Iron Ore and Manganese Ore mines of Odisha State stating that 100% compensation towards the price of the mineral should be recovered for the illegal mining. SCCL submitted affidavits to MoEF&CC while obtaining ToRs of projects under violation category stating that it will abide by the judgment given by Hon'ble Apex Court in Common Cause Vs Union of India. However, The DMG clarified that the penalty clause under section 21(5) and other sub- sections of MMDR Act 1957 are related to the mineral extracted either without granting of mining lease or mineral extracted outside the mine lease area. Hence, DMG has concluded that M/s SCCL has not committed any violation under section 21 (5) of MMDR Act, 1957. DMG also opined that violations committed under E(P) Act/ EIA Notification shall be penalized under the same Act but not under MMDR Act, 1957.
(vii)	Fund allocation for Corporate Environment Responsibility (CER) as per OM of 1 <sup>st</sup> May, 2018 i.e.	Item-wise details and time bound action plan for Rs. 1.05 Crores of funds allocated towards CER, which are considered as fund allocated on

Cond. No.	Condition	Compliance
	Rs.1.05 crore in this case may now be considered as fund allocated on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	commitment made during public consultation are under process as per schedule.
(viii)	Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission.	After exhaustion of reserves in JVR OC-I Expansion project, the project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) project of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021 and presently operations are being carried out in amalmated JVR OC Mine (I&II Expansion) Project since 11 <sup>th</sup> , October, 2021. In JVR OC Mine (I&II Expansion) Project Effective dust suppression system is adopted at the at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission. Regular water spraying is being carried out along the haul roads, approach roads, loading points etc by providing sufficient water sprinklers of 28 KL (4 No's), 20 KL (5 No's), 15 KL (2 No's) capacity and 12 KL Water Tanker (3 No's) for dust suppression etc. Water/mist spraying arrangements and 2 No. of fog canons area provided at CHP for controlling the fugitive dust emissions.
(ix)	Project proponent shall take necessary other clearances / permissions under various Acts and Rules if any, from the respective authorities / department.	<ul> <li>SCCL has obtained all the statutory permissions required for operation of the mine.</li> <li>The details are as follows.</li> <li>1. Mining Plan &amp; Mine Closure Plan: Approved by MoC vide Lr. No. 13016/2/2006-CA-II dated 17<sup>th</sup> November, 2014 for 5.0 Mtpa</li> <li>2. <u>CFE:</u> No. 02/TSPCB/CFE/KMM/RO-KGM/HO/2021, Dt.09th July,2020, for 5.00 Mtpa</li> <li>3. CFO: No.210523015427, dated 27th October, 2021, Valid up to 30th June,2026.)</li> <li>4. Ground water clearance :</li> <li>5. No.13019/Hg.II(1)/06, Dt. 06th July, 2007, for 2.50 Mtpa.</li> <li>6. Lr. No.545/T/JVR-OC/2019, date.10.05.2021 for 10 Mtpa (JVR OC Mine(I&amp;II Expansion)</li> <li>7. Forest Land: Total 380.52 ha <ul> <li>a. 244.02 ha- F. No. 8-129/2003-FC, Dt.02nd February, 2005.</li> <li>b. 136.50 ha-F. No. 8- 56/2008-FC, Dt.03rd</li> </ul> </li> </ul>

Cond. No.	Condition	Compliance
110.		July, 2012.
		<ul> <li>8. <u>DGMS permissions:</u></li> <li>a. OC Operations: Obtained vide Lr. No.H1/ SATTUPALLIOCP- I/Perm/2005/1830,dt.27.09.2005 &amp;No.H1/ JVR OC/Perm/2014/1785, dt. 30.06.2014.</li> <li>b. Controlled blasting within 500 m and up to 100 m of surface structures like Jinugupall Village, Temple, Tomb, PWD Road, etc vide Ltr No.H1/ 1191131339 /JVROC/Perm107(1B)/ 2015, from Gol, Ministry of Labour &amp; Employment, DGMS, Hyderabad Region No.1, Dt.15.09.2015.</li> </ul>
		Presently operations are being carried out in amalmated JVR OC Mine (I&II Expansion) Project since 11 <sup>th</sup> , October, 2021 after obtaining all the permissions. Details provided in <b>Annexure-1.</b>
(x)	The mining lease holder shall, after ceasing mining operations, under take re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to condition which is fit for growth of	SCCL has taken up progressive reclamation activities in the project area as per the details given hereunder. Also, no compensation was levied by Department of Mines & Geology and NoC was issued for seeking EC for the enhanced coal production. The details of plantation are as follows.
	fodder, flora and fauna etc. State	S.No. Description Area(ha)
	Government concerned shall ensure	A. Within the project area
	that mining operation shall not	1. External Dump Yard 152.06
	commence till the entire	2. Internal Dump Yard 34.80
	compensation levied, if any, for	3. Vacant Land 60.76
	illegal mining paid by the Project	4.Avenue Plantation10.90
	Proponent through their respective	Sub-Total 258.52
	Department of Mining & Geology in	B Outside project area
	strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter	BGap Plantation in Forest Land between Mine Boundary and R&B Road (Beyond mandate)80.00
	of Common Cause versus Union of India and Ors.	2. ha of Forest Land diverted 52.00 for JVR OC-I Expn.
		Sub-Total 132.00
		Total area brought under plantati390.52Reserves of the project were exhausted and the project is amalgamated with adjacent JVR OCP-II project, under the name of Jalagam Vengala Rad Opencast Mine (I&II Expansion) project, which is commenced on 11 <sup>th</sup> October, 2021The existing infrastructure, OB dump and void are being utilized in the Jalagam Vengala Rad Opencast Mine (I&II Expansion).

Cond. No.	Condition	Compliance
		Re-grassing works will be progressed in land disturbed in the Jalagam Vengala Rao Opencast Mine (I&II Expansion) project.
(xi)	As mine lease is valid till 22 <sup>nd</sup> March 2025 and balance extractable reserve is only 1.30 Mt therefore validity of Environment Clearance shall be up to 22 <sup>nd</sup> March 2025 and all activities proposed under RP, CRA and NRA shall be completed within three years of the grant of EC.	All activities proposed under RP, CRA and NRA are being implemented as per the schedule and will be completed within the

# Standard Conditions: (a) Statutory compliance

Cond. No.	Condition	Compliance
(i)	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	MoEF&CC granted EC for expansion of JVR OC-I Expansion Project from 2.50 Mtpa to 5.00 Mtpa on 1 <sup>st</sup> February, 2021. 380.52 ha of forest land is involved in total project area of 544.81ha, for which forest clearances were already obtained in the year 2005 & 2012.
		Forest clearances were accorded by MoEF&CC for diversion of 244.02 ha vide letter No. F.No.8-129-/2003/-FC, dt. 2 <sup>nd</sup> February, 2005 and F. No. F.No.8-56-/2008/-FC, dt. 3 <sup>rd</sup> July, 2012 for 136.50 ha. Copies of Forest Clearance enclosed as <u>Appendix-7.</u>
		However, coal reserves of the project were exhausted by the end of year 2020-21.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently mining operations are being continued in JVR OC Mine (I&II Expansion) project.
(ii)	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not applicable. There are Wildlife sanctuaries with in 10 km from the project.
(iii)	The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan /	A site-specific Wildlife Conservation & Mitigation Plan for Schedule-I species was prepared in consultation with state forest department for an amount of Rs.2.57 Crores, whcih was approved by the Principal Chief Conservator of Forest (HoFF) and Chief Wild

Cond. No.	Condition	Compliance
	implemented in consultation with the ( State Forest Department. The implementation report shall be	life Warden (FAC), TS. vide Ltr No. Prl CCF (HoFF), TS, Hyderabad, Rc.No.7281/2020/WI- 1, Dt.18.09.2020. For implementation, SCCL deposited the funds
	compliance report (in case of the presence of schedule-I species in the study area).	in favor of State Forest Department Vide Lr.No. KGM/ENV/404/534/2021/294, dated 09.11.2021.
		However, implementation status was not provided by SCCL, therefore, the State Forest Department may be requested to provide the implemetation status of site-specific Wildlife Conservation & Mitigation Plan for Schedule-I species.
(iv)	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control	Under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974,
	of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	Obtained Consent to Establish vide Order No.02/TSPCB/CFE/KMM/RO-KGM/HO/2021, dated 09th July, 2020.
		Consent to Operate is obtained Vide ref. No. 210523015427, dated 27.10.2021.
		A copy of CFE and CFO is enclosed as Appendix-35 & 36.
(v)	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	Ground Water Clearance is obtained vide Memo No.1309/Hg.II (I)/06, dt. 06.07.2007 from district ground water authority, Khammam, Telangana State. After amalgamation of the project with adjacent JVR OCP-II, GWC obtained for the existing JVR OC Mine (I&II Expansion) project vide Lr. No.545/T/JVR-OC/2019, date.10.05.2021 valid up to 09.05.2026. A copy of of GWC is enclosed as <u>Appendix-11</u> .
(vi)	Solid/ hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.	Solid/ hazardous waste generated in the mines were disposed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.
		Hazardous wastes like used oil with barrels, waste oil with barrels, used transformer oil with barrels, scrapped batteries, iron scrap, copper cables, scrapped cap lamp accumulators, empty oil and grease drums were handled and disposed off in accordance with the procedure laid down in HWM Rules, 2016.
		Used oil, spent oil, batteries and copper cables are disposed off to the recyclers having valid

Cond. No.	Condition	Compliance
		registration from CPCB/TSPCB for recycling or recovery, whereas the empty oil and grease barrels were detoxified prior to their disposal to outside agencies.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently mining operations are being continued in JVR OC Mine (I&II Expansion) project.
		The details of hazardous and other wastes of area stores & Workshops of Kothagudem for the period of 2022-23 pertaining to JVROC Base Work Shop is enclosed as Appendix-12.
(b)	Air quality monitoring and preservat	ion
(i)	Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5, SO2 and NOx. Location of the stations shall be	PP informed that Continuous Ambient Air Quality Monitoring Station as prescribed in the statute was established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5, SO2 and NOx.
	decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Locations of the stations were decided in consultation with the State Pollution Control Board by considering meteorological data, topographical features and environmentally and ecologically sensitive targets.
	Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.	In addition to the regular monitoring stations, online ambient air quality monitoring station was established at the core zone (project area) in January, 2018 and its display system is provided at mine office with the consent of PCB authorities. CAAQMS is connected to TSPCB server in February, 2018 and real time data is available on TSPCB website.
		Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc was carried out once in six months (heavy metals in coal for one quarter and heavy metals in particulate matter in another quarter) and the results and data being submitted along with half yearly reports to the ministry and its regional office of MoEF&CC.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently mining operations are being continued in JVR OC Mine (I&II Expansion) project and air

Cond. No.	Condition	Compliance
		quality monitoring is being carried out for JVR OC Mine(I&II Expansion).
<ul> <li>(ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Centra Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and othe monitoring data shall be regularly</li> </ul>	Ambient air quality monitoring in the core zone as well as in the buffer zone was 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. The data on ambient air quality and heavy	
	reported to the Ministry/Regional Office and to the CPCB/SPCB.	metals were submitted along with half yearly reports to the ministry and its regional office of MoEF&CC.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently Monitoring of ambient air quality and heavy metals being continued in JVR OC Mine (I&II Expansion) project.
		Monitoring data of ambient air quality and heavy metals for the period of Apr' 2023 to Sep'2023 pertaining to JVR OC Mine(I&II Expansion) is enclosed as <u>Appendix-13</u> and <u>Appendix-14</u> .
(iii)	Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as	EC for expansion of JVR OC-I Expn. Project from 2.5 Mtpa to 5.00 Mtpa was granted on 1 <sup>st</sup> February, 2021 and by the end of year 2020-21 reserves in the project were exhausted.
	regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM <sub>10</sub> /PM <sub>2.5</sub> ) such as haul road, loading/unloading and transfer points. Fugitive dust	However, the project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) project of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021.
	emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality	Presently transportation of coal is being done in JVR OC Mine (I&II Expansion) project through rail mode only.
	Prescribed by the Central/State Pollution Control Board.	Water/mist spraying arrangements and 2 No. of fog canons area provided at CHP. Regular water spraying is being carried out along the haul roads, approach roads, loading points etc by providing sufficient water sprinklers of 28 KL (4 No's), 20 KL (5 No's), 15 KL (2 No's) capacity and 12 KL Water Tanker (3 No's) for dust suppression etc.
		It is being ensured that the Ambient Air Quality parameters conform to the norms prescribed

Cond. No.	Condition	Compliance
		by the Central/State Pollution Control Board.
(iv)	The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the	EC for expansion of JVR OC-I Expn. Project from 2.5 Mtpa to 5.00 Mtpa was granted on 1 <sup>st</sup> February, 2021 and by the end of year 2020-21 reserves in the project were exhausted.
		However, the project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) project of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021.
	impact of sound, dust and accidents could be appropriately mitigated.	Presently transportation of coal is being done in JVR OC Mine (I&II Expansion) project through rail mode only.
		The transportation of coal is being carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan.
(v)	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining ' PUC' certificate from the authorized pollution testing centres.	PP informed that periodic planned preventive maintenance & engine tuning of HEMM and other transport vehicles was done at regular intervals as per schedules submitted by OEM to keep the vehicular emissions under control.
		Vehicular emissions of departmental HEMM, being operated by Diesel were monitored at every six months interval through EPTRI, Hyderabad, which is a CPCB, recognized and NABL accredited laboratory.
		'PUC' certificates for OB contractual vehicles and Coal transport vehicles were obtained by respective contractual agencies from the authorized pollution testing centers. This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Vehicular emissions for the period of April, 2023 to Sec, 2023 pertaining to JVR OC Mine(I&II Expansion) (10.00 Mtpa, granted on 11 <sup>th</sup> October, 2021) is enclosed as <u>Appendix-15.</u>
		'PUC' certificates for OB contractual vehicles and Coal transport vehicles are being obtained by respective contractual agencies from the authorized pollution testing centers. Specimen copies of PUC certificates obtained are enclosed as <u>Appendix-16</u>
(vi)	Coal stock pile/crusher/feeder and	This project is amalgamated with adjacent JVR

Cond. No.	Condition	Compliance
	breaker material transfer points shall in variably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet	Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project. Coal stock yard, crusher and feeder breakers are provided with water/mist spray
	operated or fitted with dust extractors.	arrangements. Belt-conveyors were fully covered to avoid air borne dust. Side cladding all along the conveyor gantry was made to avoid air borne dust. Drills were wet operated only.
(vii)	Coal handling plant shall be operated with effective control measures w.r.t. Various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.	This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Coal handling plant is being operated with closed conveyors, side cladding, automatic water sprinkling system.
(C)	Water quality monitoring and prese	ervation
(i)	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as	This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and effluents monitoring is continued in JVR OC Mine (I&II Expansion) project.
	amended from time to time by the Central Pollution Control Board.	This effluent discharge (mine waste water, workshop effluent) were monitored through EPTRI in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.
		The effluents monitoring results for the period of Apr' 2023 to Sep'2023 is enclosed as Appendix-17.
(ii)	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J- 20012/ I/2006-IA. II(M) dated 27th May, 2009 issued by Ministry of	This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
	Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	This monitoring data was uploaded on the company's website and displayed at company's website URL: <u>https://scclmines.com/env</u> . The circular No.J-20012/1/2006-IA.11 (M) dated 27 <sup>th</sup> May, 2009

Cond. No.	Condition	Compliance
		issued by Ministry of Environment, Forest and Climate Change was complied.
(iii)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells	Regular monitoring of ground water levels and quality of the existing mines were carried out by establishing a network of nineteen (19) existing wells and seven (07) piezometers.
	during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre- monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MoEFCC/RO.	The monitoring of ground water 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.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project. The same is being carried out in the JVR OC Mine (I&II Expansion) project.
		The ground water level monitoring data for the period of 2019-2023 is enclosed as <u>Appendix-18</u> .
		Ground Water quality Monitoring data for the period of Apr' 2023 to Sep'2023 is enclosed as <b>Appendix-19</b> .
(iv)	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.	PP informed that monitoring of water quality of water bodies (near by tanks) are being carried out once in three months and record of monitoring data is being maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office once in six months.
		The same is being carried out in the JVR OC Mine (I&II Expansion) project and Surface water quality Monitoring data for the period of Apr' 2023 to Sep'2023 is enclosed as <u>Appendix-20</u> .
(v)	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.	This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project. The same is being carried out in the JVR OC Mine (I&II Expansion) project.
		PP informed that only mine seepage water pumped out of the project is being utilized for mining operations. The excess treated mine discharge water after meeting the stipulated

Cond. No.	Condition	Compliance
		norms is being discharged into nearby tank for irrigation and ground water recharge purposes. About 55 No's. of RWH pits were constructed at Rejarla(15) and Sathupalli(40) for augmentation of ground water resources.
(vi)	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains / ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilized for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation /water bodies.	Catch drains for a length of 17240m and 4 Nos. settling ponds have been made for proper collection of water into the settling ponds and to arrest silt from the runoff from OB dump. The water so collected is being utilized for dust suppression in the mine area, on haul roads and for green belt development etc. The garland drains are being maintained around the external dump and quarry for a total length of 13.00 km. and 4240 mtrs. of drain was provided on internal dump yard. The drains and settling ponds are being regularly de-silted and properly maintained. 1760 m length of Toe Wall is constructed around the External and Internal dump yards. Species planted: Hardwikia binata, Dendrocalamus strictus, Ficus religiosa, Pterocarpus santalinus, Azadirachta indica, Limonia acidissima, Ficus bengalensis, Aegle marmelos, Mitragyna parvifolia, Dalbergia latifolia, Pterocarpus marsupium, Syzygium cumini, Albizzia procera, Terminalia bellarica, Pongamia pinnata, Madhuka indica, Tamarindus indica, Pithecelobium dulci, Sterculia urens, Dalbergia sissoo, Bombax ceiba, Albizzia lebbek. Presently garland drains, catch drains, toe wall and settling ponds of JVR OC-I Exp. are being used for the JVR OC(I&II Exp.) project and will
(vii)	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).	be extended as the project expands. About 55 No's. of RWH pits were constructed at Rejarla(15) and Sathupalli(40) for augmentation of ground water resources. For the purpose of drinking water, 9 No.of R.O. Plants provided in the surrounding villages and installation of 5 more are under progress.
(viii)	Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and	To collect industrial waste water generated from CHP and work shop 2 no's ETPS are provided at CHP and 1 ETP provided at Base workshop. Presently workmen are residing in Rudrampur Colony of Kothagudem which is 60 km away from the project as residential colony in

Cond. No.	Condition	Compliance
	the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.	Sathupalli town is not fully established (under construction). STP (1.5 MLD) is already constructed at,Rudrampur Colony of Kothagudem. A 200 KLD capacity STP of is under construction in the new colony in Sathupalli town. Water quality of mine discharge is being monitored at regular intervals before discharging into natural water course and results are in prescribed standards.
(ix)	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly	The water pumped out from the mine, after siltation, was utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains were regularly de- silted particularly after monsoon and maintained properly
(x)	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA /EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of water bodies in the area has been prepared and implemented. There are no diversions of natural water courses involved for the project. Therefore, there is no proposal of construction of embankment and there is no of any inrush of water.
(xi)	The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A rivarine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	Not applicable. There are no rivers in and around the mine.
(d)	Noise and Vibration monitoring an	
(i)	Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in	Adequate measures were taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. All the HEMM are provided with Sound Proof AC Cabins.

Cond. No.	Condition	Compliance
	blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be	Periodic planned preventive maintenance & engine tuning of HEMM and other transport vehicles is being done. Workers engaged in noisy environment like blasting and drilling operations, operation of HEMM, etc were provided with personal protective equipments (PPE) like ear plugs/muffs.
	conducted. Progress in usage of such accessories to be monitored.	Thick Green Belt has been developed around the project for noise attenuation.
		Adequate awareness programme for users is being conducted.
		Progress in usage of such accessories is being monitored during the inspections of officers and supervisors.
		In addition, a Mound Barrier of around 1.5 km length is made at north and east side boundaries of the quarry and thick green belt are developed over it.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Presently all the noise control measures are being adopted in the JVR OC (I&II Exp.) project. Noise Monitoring data for the period of Apr' 2023 to Sep'2023 is enclosed as <u>Appendix-21</u>
(ii)	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS. The noise level survey shall	Controlled blasting with nonels was adopted carried out in order to mitigate ground vibrations, fly rock, noise and air blast. Shot holes are being muffled when ever workings are reached closer proximity to any dwellings.
	be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.	Regular monitoring was carried out by recording the blast induced ground vibrations in terms of Peak Particle Velocity (PPV), which are well below the permissible limits. Steps are being taken to limit the ppv with in the permissible limits.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Presently, Controlled blasting technique and monitoring of blast induced ground vibrations

Cond. No.	Condition	Compliance
110.		are being continued in the JVR OC (I&II Exp.) project.
(e) (i)	Mining Plan Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	EC for expansion of JVR OC-I Expn. Project from 2.5 Mtpa to 5.00 Mtpa was granted on 1 <sup>st</sup> February, 2021 and by the end of year 2020-21 reserves in the project were exhausted.
		However, This project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021.
		The infrastructure and void of JVR OC-I Expansion Project are being utilized in the existing JVR OC Mine (I&II Expansion).
		Presently, mining operations are being carried out in the existing JVR OC Mine (I&II Expansion), under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
		PP informed that Mining Plan of JVR OC-I Expansion project (5.00 Mtpa) was pproved by MoC vide Lr. No. 13016/2/2006-CA-II dated 17.11.2014 for 5.0 Mtpa. A copy of mining plan enclosed as <u>Appendix-37</u> .
		Mining Plan & Mine Closure Plan of JVR OC Mine (I&II Expansion) Project (10.00 Mtpa) was aproved by MoC vide F.No.PCA- 38011/12/2017-PCA, dated 29 <sup>th</sup> March,2019 for 10.00 Mtpa. Copy of Mining Plan approval letter is enclosed as <u>Appendix-24</u> .
(ii)	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant	EC for expansion of JVR OC-I Expn. Project from 2.5 Mtpa to 5.00 Mtpa was granted on 1 <sup>st</sup> February, 2021 and by the end of year 2020-21 reserves in the project were exhausted.
	circulars issued by Directorate General Mines Safety (DGMS).	However, This project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021.
		The infrastructure and void of JVR OC-I Expansion Project are being utilized in the existing JVR OC Mine(I&II Expansion).
		Presently, mining operations are being carried out in the existing JVR OC Mine (I&II Expansion), as per the approved mining plan (including Mine Closure Plan) abiding by

Cond. No.	Condition	Compliance
		mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
(iii)	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.	In JVR OC-I Expansion of 5.00 Mtpa, 380.52 ha of forest land is involved out of total project area of 544.81ha, for which forest clearances were already obtained in the year 2005 & 2012. Forest clearances were accorded by MoEF&CC for diversion of 244.02 ha of forest land vide letter No. F.No.8-129-/2003/-FC, dt. 2nd February, 2005 and No. F.No.8-56-/2008/- FC, dt. 3rd July, 2012 for 136.50 ha) Copies of Forest Clearance enclosed as <u>Appendix-7.</u>
		However, coal reserves of the project were exhausted by the end of year 2020-21.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021.
		Presently mining operations are being continued in JVR OC Mine (I&II Expansion).
(iv)	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Efforts are made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy. <u>Solar Power</u> : Total Solar Power Installed in the SCCL is approximately 219 Mega Watt (MW), out of which installed capacity in Kothagudem Region is approximately 40.76 MW. The current generated by Solar panels are in DC form which are sent to assembly station from every single panel, from there they are sent to the inverter which converts the current to AC form and then it is sent to power up Transformer from where the power is stepped up and then the power is fed to the Transmission grid.
		<ul> <li>Fixing of Energy Meters:</li> <li>20000 No.s fixed in quarters of SCCL.</li> <li>Target fix in all 46,000 No. of SCCL quarters</li> </ul>
		<ul> <li>3. Lighting:</li> <li>Incandescent lamps are banned in quarters.</li> <li>Advised to replace LED lamps in place of Incandescent lamps.</li> <li>Conventional street / yard lighting is replaced with LED lights.</li> </ul>
		4. Energy efficient appliances:

Cond. No.	Condition	Compliance
		<ul> <li>Made mandatory to purchase 5 star rated. house hold appliances.</li> <li>Purchased 5 star rated Air conditioners, Refrigerators, Fans, Coolers etc., in SCCL and also made propaganda among the employees.</li> </ul>
		<ul> <li>5. Others:</li> <li>In OC mines, proposed to procure mobile Solar Lighting Masts with</li> <li>LED lights with Battery backup in place of diesel operated DG Set with conventional high-capacity lights.</li> <li>Arranged to fix transparent acrylic sheets on roof top to utilize day light.</li> <li>Using timers in street lighting in all areas.</li> </ul>
(f)	Land reclamation	
(i)	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1 :50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey is being carried out once in three years. EC to JVR OC-I Expansion Project of 5.00 Mtpa capacity was issued on 1st October, 2021. However, the reserves of the project were exhausted by the end of year 2020-21. This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC Mine (I&II Expansion) project for which EC was granted on 11 <sup>th</sup> October,2021. Land use Land cover study of core & buffer zone of JVR OC Mine (I&II Expansion) project was carried out by M/S.Greenc India Private Ltd, during 2022 and the report was submitted to RO, MoEF&CC vide Ir No. ENV/KGM/VK7/552/54 dated:24.05.2023. Copy of last Land use Land cover study along with letter submitted to MoEF&CC enclosed as <u>Appendix-25</u> .
(ii)	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan	Reserves of the JVR OC-I Expansion project have been exhausted by the end of year 2020- 21. This project is amalgamated with adjacent JVR OCP-II project, under the name of Jalagam Vengala Rao Opencast Mine (I&II Expansion), which is commenced on 11 <sup>th</sup> October, 2021 EC for the Jalagam Vengala Rao Opencast Mine (I&II Expansion) was granted vide 11 <sup>th</sup> October, 2021. The voids of this project are being backfilled with the OB removed in the existing Jalagam Vengala Rao Opencast Mine (I&II Expansion)

Condition	Compliance
issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.	and reclamation activities are being continued. The final mine void depth will be as per the approved Mining Plan including Mine Closure Plan of Jalagam Vengala Rao Opencast Mine (I&II Expansion).
	PP informed that adequate engineering interventions will be provided for sustenance of aquatic life in case it exceeds 40 m.
The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/" post mining" land-use pattern, which is an integral part of the approved Mining	Reserves of the JVR OC-I Expansion project have been exhausted by the end of year 2020- 21. This project is amalgamated with adjacent JVR OCP-II project, under the name of Jalagam Vengala Rao Opencast Mine (I&II Expansion).
Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vi s the post mining land use pattern shall be submitted to the MOEFCC/RO.	EC for the Jalagam Vengala Rao Opencast Mine (I&II Expansion) was granted on 11 <sup>th</sup> October, 2021, basing on the Mining plan (I revision) including Mine Closure Plan of JVROC (I&II expansion), approved by MOC on 29 <sup>th</sup> March, 2019.
	The existing infrastructure, OB dump and void JVR OC-I Expansion project are being utilized in the Jalagam Vengala Rao Opencast Mine (I&II Expansion).
	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan will be in conformity with the "during mining"/" post mining" land-use pattern, of the approved Mining plan (I revision) including Mine Closure Plan of JVROC (I&II expansion) and the EIA/EMP JVROC (I&II expansion) submitted to this Ministry.
	PP informed that progressive compliance status vis-a-vi s the post mining land use pattern will be submitted to the MOEF&CC/RO, as per the approved Mining plan (I revision) including Mine Closure Plan and EIA/EMP of JVROC (I&II expansion).
Fly ash shall be used for external dump of overburden , backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external	Reserves of the JVR OC-I Expansion project have been exhausted by the end of year 2020- 21. This project is amalgamated with adjacent JVR OCP-II project, under the name of Jalagam Vengala Rao Opencast Mine (I&II Expansion) for better optimization of land, by utilizing the existing void JVR OC-I Expansion project to accommodate the OB generated in the project. However, PP informed that SCCL is
	<ul> <li>27th August, 2009 and subsequent amendments.</li> <li>The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/" post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vi s the post mining land use pattern shall be submitted to the MOEFCC/RO.</li> <li>Fly ash shall be used for external dump of overburden , backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated</li> </ul>

Cond. No.	Condition	Compliance
	mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	conducting a scientific study at Manuguru Opencast Project to ascertain the stability of overburden dumps by mixing of fly ash by CSIR- Central Institute of Mining and Fuel Research, Dhanbad. Basing on the outcome of the scientific study, PP will approach DGMS for permission.
		Based on the above study report and DGMS permission a decision on mixing of fly ash with OB in Jalagam Vengala Rao Opencast Mine (I&II Expansion) project will be taken up. Further, it is to submit that the fly ash is being utilized in the underground mines of SCCL for stowing of goaved out areas. Till now around 104.92 lakh cu.m of ash has been utilized for this purpose.
(v)	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site (s) only and shall not be kept unutilized. The top soil shall be used for land	Reserves of the JVR OC-I Expansion project have been exhausted by the end of year 2020- 21 and PP informed that 4.080 M.Cu.m of top soil has been removed out of which 3.667 M.Cu.m of top soil wa utilized and balance top soil of 0.413 M.Cu.m is temporarily stored in ear marked Topsoil dump yard.
	reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated	This project is amalgamated with adjacent JVR OCP-II project, under the name of Jalagam Vengala Rao Opencast Mine (I&II Expansion) project.
	with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation	Presently mining operations are being continued in JVR OC Mine(I&II Expansion) and top soil management is being carried out as per the as per the EIA/EMP of JVR OC Mine(I&II Expansion) project.
	becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment , Forest and Climate Change/ Regional Office	
(vi)	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in	Not applicable. No grazing land is involved in the core zone of
	consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	the project.
(g)	Green Belt	
(i)	The project proponent shall take all	Not Applicable
	precautionary measures during mining operation for conservation and	As per the EIA/EMP report, no endangered flora and fauna reported within the core

Cond. No.	Condition	Compliance
	protection of endangered /endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.	area.
(ii)	Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the	About 322.90 ha of land is reclaimed with plantation in and around the project up to 2021. The plantation area includes 115.00 ha in external dump, 25.50 ha in internal dump (back filling), 35.00 ha in vacant land and 9.40 ha of avenue plantation within the project area.
	major approach/ coal transportation roads.	The plantation area also includes 80.00 ha of Gap Plantation carried out in Forest Land between Mine Boundary & R&B Road beyond mandate and 52 ha of Safety Zone along the outer boundary of the mining lease area.
		The greenbelt comprising a mix of native species and endemic species has been developed
		Species planted:
		Hardwikia binata, Dendrocalamus strictus, Ficus religiosa, Pterocarpus santalinus, Azadirachta indica, Limonia acidissima, Ficus bengalensis, Aegle marmelos, Mitragyna parvifolia, Dalbergia latifolia, Pterocarpus marsupium, Syzygium cumini, Albizzia procera, Terminalia bellarica, Pongamia pinnata, Madhuka indica, Tamarindus indica, Pithecelobium dulci, Sterculia urens, Dalbergia sissoo, Bombax ceiba, Albizzia lebbek.
		Presently plantation is being continued in the JVR OC (I&II Expansion) project.
(h)	Public hearing and Human health i	
(i)	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly	Adequate illumination was ensured in all mine locations as per the DGMS standards and being monitored weekly. The report on the same is submitted to this ministry & it's RO on six-monthly basis.
	basis.	Presently plantation the same continued in the JVR OC(I&II Expansion) project.
(ii)	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project	SCCL is providing free medical treatment to all the workmen and their family members in the 7-area hospital (with a total of 821 beds) and 21 dispensaries established in all the workings

Cond. No.	Condition	Compliance
	and maintain records accordingly as	areas of the company.
	per the provisions of the Mines Rules,1955 and DGMS circulars. Besides regular periodic health check- up, 20% of the personnel identified from	The annual expenditure incurred by SCCL in maintenance of health care facilities during 2022-23 is Rs.307.00 Crores.
	workforce engaged in active mining operations shall be subjected to health check -up for occupational diseases and hearing impairment, if any, as	SCCL is also conducting regular health camps in villages located in the vicinity of project to study the health status of the people and is providing free treatment in SCCL hospitals.
	amended time to time .	In addition, SCCL established eleven Initial Medical Examination (IME) /Periodical Medical Examination (PME) centres in the company, i.e., at Kothagudem, Manuguru, Yellandu, Godavarikhani Sector-III Colony(Godavarikhani), Bellampalli, Ramakrishnapur, Mandamarri, Srirampur, Bhupalpally and Sathupalli for conducting IME/PME of the employees including contract employees.
		All the PME Centres are equipped with necessary infrastructure for carrying out IME/PME and maintenance of data base. All the Chest radiographs of the Initial and Periodical Medical examinations are being classified for detection, diagnosis and documentation of Pneumoconiosis in accordance with the ILO classification for Pneumoconiosis according to DGMS guidelines. All the PME Doctors employed except gynaecologists, paediatricians, surgeons and ortho surgeons are trained to read PME XRays in accordance with ILO classification of Pneumoconiosis.
		Out of a total of 209 Doctors on roll as on date, 123 Doctors are trained in reading the chest radiographs as per the ILO guide lines. SCCL has one Occupational Diseases Board
		(Pneumoconiosis Board) in existence since 1965. Chief of Medical Services, Radiologist constituted the Occupational Diseases Board, Physician and Occupational Health Physician together.
		In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle

Cond. No.	Condition	Compliance
		drivers and HEMM operators at an interval of once in a year.
		The PME details are being submitted to the Ministry and to the DGMS at regular intervals. In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
		The PME details are being submitted to the Ministry and to the DGMS at regular intervals.
(iii)	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.	Persons deployed in open atmosphere in mining operations were provided with dust masks to wear and adequate training and information on safety and health aspects is being imparted. Dust masks are being provided to workmen exposed to dusty environment. Dust masks to the outsourced employees are being provided by respective OB contractual agencies.
		Adequate training is being imparted on safety and health aspects at the Mine Vocational Training Centre, Kothagudem and Sathupalli during initial/ refresher training programmes and being educated regularly during safety education, talks etc. by concerned in charges.
(iv)	Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project	Action plan on the issues raised during the public hearing is formulated and implementation is being ensured.
	proponent shall undertake all the tasks/ measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees	All the tasks/measures as per the action plan with budgetary provision submitted during the public hearing are being undertaken.
	shall be compensated as per the norms laid down in the R&R policy of the company /State Government/Central Government, as applicable.	Land oustees were compensated as per the norms laid down in the R&R policy of the company/State Government/ Central Government, as applicable.
(v)	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-110 13/5712014- IA.I I (M) dated 29th October, 2014, titled' Impact of mining activities on habitations-issues related to the mining projects wherein habitations and	All the mitigation measures provided in Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, were implemented.

Cond. No.	Condition	Compliance
	villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	
(i)	Corporate Environment Responsib	bility
(i)	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to	The company is having a well laid down environmental policy duly approved by the Board of Directors. Copy enclosed as <u>Appendix-27</u> .
	have proper checks and balances and to bring into focus any infringements /deviation/violation of the environmental/ forest/wildlife norms/conditions.	The environmental policy is containing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/ violation of the environmental/ forest/ wildlife norms/conditions.
		The company is having a defined system of reporting infringements/deviation/ violation of the environmental/ forest/ wildlife norms/ conditions and/or shareholders/stake holders.
(ii)	The company shall have defined system of reporting infringements/deviation /violation of the environmental/forest/wildlife norms /conditions and/or shareholders/stake holders.	The company is having a well laid down system of reporting infringements/deviation /violation of the environmental/forest/wildlife norms /conditions and/or shareholders/stake holders.
(iii)	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Company level environment cell with qualified personnel headed by General Manager (Environment) who is directly reportable to the Chairman of the Company 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. The committee has been constituted with following members.
		1. SO to General Manager Chairman
		2. Project Officer Member
		3. Area Engineer (E&M) Member
		4. Area Civil Engineer Member
		5. Area Forest Officer Member
		6. Area Estates Officer Member

Cond. No.	Condition	Compliance	
		7. Project Manager	Member
		8. Project Engineer	Member
		9. Project Surveyor	Member
		10. Project Env. Officer	Member
		11. Area Env. Officer	Secretary
		12. Sr. Hydro Geologist	Member
		13. Area Survey Officer	Member
(iv)	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.	protection measures are not being any other purpose. Till now about Crore was spent as environme expenditure and about Rs.109.00 C 111.10.2021) spent as environment expenditure. Year wise pro- implementation of environmental measures is being reported Ministry/Regional Office along wit Monthly Compliance Report. progress of implementation of action be reported to the Ministry /Reg- along with the Six Monthly Compliant	t Rs. 48.40 lent capital Crores (up to ntal revenue ogress of protection to the th the Six- Year wise on plan shall ional Office nce Report.
(v)	Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self environmental audit conducted environmental audit will be carried year.	
(j)	<u>Miscellaneous</u>		
(i)	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this s hall also be displayed in the project proponent's website permanently.	Environmental clearance granted February, 2021. Advertisement was given on 06th 2021 in daily News paper of language (Telugu) in "Namsthe and English daily News paper "The the same was displayed in t proponent's website permanently. Copy of advertisement is en <u>Appendix-38.</u>	r February, vernacular Telangana" Hindu. And he project
(ii)	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	This condition was complied imme obtaining EC from MoEF&CC, New Lr. No. KGM/ENV/403/2021/4 to 20 Feb, 2021 sent to heads of loo Panchayats and Municipal addition to the relevant offic Government.	w Delhi vide 0 dated 03 <sup>rd</sup> cal bodies, Bodies in
(iii)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on	Hard and soft copies of the compliance of stipulated EC cor being submitted to the respective Offices of the MoEF & CC.	nditions are

Cond. No.	Condition	Compliance
	their website and update the same.	Hard copies are being submitted by register post. Soft copies are being uploaded in MoEF & CC web portal PARIVESH. URL of the SCCL webpage: https://scclmines.com/env/docs/ECS.
(iv)	The project proponent shall monitor the criteria pollutants level namely; PM10, SO 2, NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the	Monitoring of pollutants, namely PM10, PM2.5, SO2 and NOx were carried out in 3 stations in core zone and 5 stations in buffer zone. The monitoring results are being provided in half yearly monitoring reports and are also being uploaded in company website.
	company.	URL: <u>https://scclmines.com/env</u> .
		In addition, an online ambient air quality monitoring station was established at the core zone (project area) in January, 2018 and its display system is provided at mine office with the consent of PCB authorities. CAAQMS is connected to TSPCB server in Feb, 2018 and real time data is available on TSPCB website. The display unit arranged at the project office.
(v)	The project proponent shall submit six - monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Six-monthly reports on the status of compliance of the stipulated environmental conditions are being submitted on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal. A copy is also being uploaded in MoEF&CC web portal PARIVESH.
(vi)	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z- 11013 /5712014-IA.J I (M) dated 29th October, 2014, titled' Impact of mining activities on habitations issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	All the mitigation measures are taken.
(vii)	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	The Environmental Statement in Form-V for every financial year was submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently. The statement is also kept in SCCL Web site. URL: <u>https://scclmines.com/env/docs</u> .

Cond. No.	Condition	Compliance
(viii)	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Not applicable EC is granted to regularize the expansion of the existing JVR OC-I Expansion Project.
(ix)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	PP agreed to comply
(x)	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	PP agreed to comply PP informed that commitments and recommendations made in the EIA/EMP report, during Public Hearing and also that during their presentation to the Expert Appraisal Committee were implemented.
(xi)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	The reserves of the project have been exhausted and the project is amalgamated with adjacent JVR OCP-II project, under the name of Jalagam Vengala Rao Opencast Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October.
(xii)	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	 ·
(xiii)	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	The conditions stipulated in Environmental clearance letter are being implemented.
(xiv)	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	PP agreed to comply
(xv)	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	PP agreed to comply
(xvi)	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 198 1, the Environment (Protection) Act, 1986,	All the measures are being taken to avoid soil contamination, contamination of ground water & surface water and occupational and other diseases due to the mining operations. CFE and CFO were obtained for the project under air and Water Acts.

Cond. No.	Condition	Compliance
	Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	PLI policy is also being taken every year.
5.	The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.	All commitments and recommendations made in the EIA / EMP report and also during presentation to the EAC are being complied.
6.	The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	The project is started after obtaining all necessary clearance /approvals only.
7.	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Not applicable. No appeal against this environmental clearance made with the National Green Tribunal, within a period of 30 days
8.	The coal company /project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of ' Common Cause Vs Union of India & others.	Not applicable
9.	The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.	Not applicable
10.	This environmental clearance shall not be operational till such time the project	Not applicable

Cond. No.	Condition	Compliance
~	proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.	

A periodic progress report regarding environmental protection measures for the period ending Apr' 2023 to Sep'2023 is enclosed as Part - II.



#### Annexure-III <u>STATUS OF IMPLEMENTATION OF ENVIRONMENTAL CLEARANCE CONDITIONS</u> <u>OF JALAGAM VENGALRAO OPENCAST PROJECT-II up to Sep'2023.</u>

### Environment Clearance vide Lr.No. J-11015/268/2007-IA-II (M) dated 28.03.2010.

#### 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.	Environmental Clearance for JVR OC-II Project was obtained vide Lr. No. J- 11015/268/2007- IA-II (M) dated 28.03.2010 for a production capacity of 4.0 MTPA (5.0 MTPA peak) in the project area of 1409.81 ha involving 776.20 ha forest land.
		Forest Land was diverted by MoEF&CC vide letter no. F.No.8-56/2014-FC,dt. 31.05.2017 and GO by Government of Telangana was issued vide Ms. No. 24, dt.06.07.2017. PP stated that coal mining operations commenced in JVR OC-II Project on 01.09.2017 only after diversion of forest land.
		However, JVR OC-II has been amalgamated with adjacent JVR OC-I project for which Environmental Clearance was accorded by MoEF&CC vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021 under the name of Jalagam Vengala Rao Opencast Mine (I&II Expansion) project and accordingly all th mining operations are being carried out.
(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.	Copies of Forest clearance was enclosed as <u>Appendix-7</u> . Out of total top soil of 4.5 Mm <sup>3</sup> , about 1.609 Mm <sup>3</sup> of top soil was excavated up to 11.10.2021. Out of 1.609 Mm <sup>3</sup> of top soil excavated 0.152 Mm <sup>3</sup> has been spread over the external dump for carrying reclamation work and balance 1.457 Mm <sup>3</sup> of top soil has been preserved/stacked properly for future reclamation works.
		Further, JVR OC-II has been amalgamated with adjacent JVR OC-I Expansion project for facilitating sequential/relay dumping and conserving the land requirement for overburden dumping along with an integrated coal washery under the name of the JVR OC Mine (I&II Expansion) project for which EC was accorded by MoEF&CC vide file no. J-11015/268/

S.No	Condition	Compliance Status
		2007- IA.II(M) dated 11.10.2021. After obtaining EC of JVR OC (I&II Expansion) project, all the operations are now being carried out as per this latest EC conditions. Accordingly, top soil and OB management from October 2021 onwards are being carried out under JVR OC Mine (I&II Expansion) project.
(iii)	Adequate safety distance/barrier shall be maintained from the drainage along the ML boundary. Diversion Bethupalli 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.	PP informed that, adequate safety distance/barrier of 2.0 km was maintained from the drainage along the ML boundary. Further, diversion of Bethupalli Flood Flow canal (NTR canal) for a length of 18.32 km was carried out with the approval of the State Irrigation & CAD Department vide G.O. Rt. No.1932, dt. 30.12.2005. The diverted canal was realigned with the original course and retained the existing feeder channels of downstream irrigation tanks. The canal diversion work was completed during the year 2016.
(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 <sup>3</sup> 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 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 Bangalore on a yearly basis.	PP informed that overburden was dumped at earmarked external dump site within ML area as envisaged in the approved EMP. Scientific study for stability of slopes, high walls and OB dumps at JVR OC-II Project was carried through National Institute of Karnataka, Surathkal and the recommendations suggested in the report are being implemented. A copy of the study report is enclosed as <u>Appendix-39.</u> Monitoring and management of existing reclaimed dump sites is being continued and will be carried out until the vegetation becomes self-sustaining. Further, the OB management is being continued as per the Environmental Clearance of JVR OC Mine (I&II Expansion) project accorded vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-I Exp. and JVR OC-II mines. Compliance status is being submitted to MoEF&CC Regional office along with the Half yearly compliance reports.
(v)	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 utilised for watering the mine area, roads, green belt development	Catch drains of 4.5 km length with 2m (width) x 1.5m (depth) were constructed around the external dump. 7 No's. Settling ponds of adequate capacity have been made to arrest silt and sediment flows from dumps. The water

S.No	Condition	Compliance Status
(vi)	<ul> <li>etc. The drains shall be regularly desilted and maintained properly.</li> <li>Garland drains of suitable size gradient and 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.</li> <li>Dimension of the retaining wall at the toe of the dumps and OB benches within the</li> </ul>	so collected is being utilized for dust suppression in the mine area, on haul roads and for green belt development etc. Garland drains of 3.5 km length have been made and regularly de-silted properly. Further, garland drains, catch drains and settling pons are continued in the JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021. About 1213 m of retaining wall was constructed at the toe of OB dump
	mine to check run-off and siltation shall be based on the rainfall data.	benches and OB benches are properly sloped to avoid run off OB siltation.
		Further, retaining walls are continued in the JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021.
(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.	Coal is not pulverized in the crushers and is only crushed to (-) 200 mm size. Hence, instead of bag filters, fixed as well as 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. SCCL has been requesting MoEF&CC to amend the condition of installing bag filters for the CHPs and this condition is not being imposed in the recent ECs issued for coal mines. Fixed water sprinkling system was provided to check fugitive emissions from crushing operations, haul roads, coal transfer points, etc., for effective dust suppression.
		Further, in JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021 this condition was modified.
(viii)	No coal transportation shall be undertaken by road.	Coal transportation is being done through rail mode only in JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and

S.No	Condition	Compliance Status
		JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021
(ix)	Drills shall be wet operated only.	All the drills were operated 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 was practiced and blasting was carried out during day time only using nonels. Usage nonels has helped in control of ground vibrations, to arrest the fly rock during blasting operations. The blast ground vibrations and noise levels are being monitored as per DGMS guide lines.
		This condition is being continued in the JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021.
(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.	Afforestation is being carried out as per the EC conditions of JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021.
(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 <sup>th</sup> year of mining and backfill the void and by rehandling 55.28 Mm <sup>3</sup> 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 the trees shall be around 2500 plants per ha.	Progressive Mine Closure Plan is being carried out as per the EC conditions of JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021.
(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	SCCL is providing free medical treatment to all the workmen and their family members in the 7-area hospital (with a total of 821 beds) and 21 dispensaries established in all the workings areas of the company. The annual expenditure incurred by

S.No	Condition	Compliance Status
	reported to this ministry and to DGMS.	SCCL in maintenance of health care facilities during 2022-23 is Rs.307.00 Crores.
		SCCL is also conducting regular health camps in villages located in the vicinity of project to study the health status of the people and is providing free treatment in SCCL hospitals.
		In addition, SCCL established eleven Initial Medical Examination (IME) /Periodical Medical Examination (PME) centres in the company, i.e., at Kothagudem, Manuguru, Yellandu, Godavarikhani Sector-III Colony(Godavarikhani), Bellampalli, Ramakrishnapur, Mandamarri, Srirampur, Bhupalpally and Sathupalli for conducting IME/PME of the employees including contract employees.
		All the PME Centres are equipped with necessary infrastructure for carrying out IME/PME and maintenance of data base. All the Chest radiographs of the Initial and Periodical Medical examinations are being classified for detection, diagnosis and documentation of Pneumoconiosis in accordance with the ILO classification for Pneumoconiosis according to DGMS guidelines. All the PME Doctors employed except gynaecologists, paediatricians, surgeons and ortho surgeons are trained to read PME XRays in accordance with ILO classification of Pneumoconiosis.
		Out of a total of 209 Doctors on roll as on date, 123 Doctors are trained in reading the chest radiographs as per the ILO guide lines. SCCL has one Occupational Diseases Board
		(Pneumoconiosis Board) in existence since 1965. Chief of Medical Services, Radiologist constituted the Occupational Diseases Board, Physician and Occupational Health Physician together.
		In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after

S.No	Condition	Compliance Status
		completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
		The PME details are being submitted to the Ministry and to the DGMS at regular intervals. In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
		The PME details 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 CHP and 4 settling ponds were constructed at CHP for removal of coal fines and suspended solids.
(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 on half yearly basis and the same is being continued in the JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021.
		The ground water level monitoring data for the period of 2019-2023 is enclosed as <u>Appendix-18</u> .
(xvi)	Mine discharge water during peak monsoon shall be treated in a three stage sedimentation tank along with coagulants, if required and shall meet standards prescribed especially with respect to pH, As, F and Total	Mine discharge water during peak monsoon was treated in a three-stage sedimentation tank and the quality of discharge is within the prescribed standards with respect to pH and Total Suspended Solids (TSS) before letting

S.No	Condition	Compliance Status
	Suspended Solids (TSS) before discharge into natural water courses/agriculture.	out into nearby tanks for agriculture purpose and the same is being continued in the JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021. A copy of the mine discharge water quality report Apr' 2023 to Sep'2023 is enclosed as <u>Appendix-17.</u>
(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.	
(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 nearby village(s) in case the village wells go dry due to dewatering of mine.	The Piezometric & Phreatic wells monitoring data reveals that there is no adverse impact on ground water due to mining activity. However artificial groundwater recharge measures for augmentation of groundwater resource are being taken up around the project area. Seven (7) No's. of settling ponds and Two (2) No. of check dams and 55 RWHS were constructed in and around 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 mining operations the project authorities will provide water required for the nearby villages and the same is being continued in the JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021.
(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	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey is being carried out once in three years for monitoring land use pattern and post mining land use and the report is being submitted to MoEF &CC/RO with the half yearly monitoring report.

S.No	Condition	Compliance Status
	to MOEF and its Regional Office at Bangalore.	Latest land use for core and buffer zone JVR OC Mine (I&II Expansion) project which is amalgamation project of JVR OC-II and JVR OC-I Exp mines for which MoEF&CC accorded EC vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021 was carried out by M/S.Greenc India Private Ltd, during 2022 and the report was submitted to RO, MoEF&CC vide Ir No. ENV/KGM/VK7/552/54 dated:24.05.2023.
		Copy of last Land use Land cover study along with letter submitted to MoEF&CC enclosed as <u>Appendix-25.</u>
(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.	Final mine closure plan will be submitted in the year 2040-41 i.e., 5 years in advance of actual mine closure, as per the Environmental Clearance of JVR OC Mine (I&II Expansion) accorded by MoEF&CC vide File No. J- 11015/268/207-IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-II and JVR OC-I Exp mines.
(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.	Rs.90.57 Crores are already utilized as capital expenditure and Rs.49.63 crores as revenue expenditure for Environmental protection measures such as for air & water pollution monitoring and control measures, greenbelt development, OB dump stabilization and related consultancy works till 11.10.2021. The status of expenditure along with the works were furnished in the submitted six monthly compliance report.
		Presently, capital and revenue environmental cost envisage in the JVR OC Mine (I&II Expansion) project is being utilized as JVR OC Mine (I&II Expansion) project is amalgamation project of JVR OC-II and JVR OC-I Exp mines.
(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, 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.	There were 120 PDFs in the Kommepalli Village as per the preliminary survey in 2009. No of PDFs increased from 120 No's in 2009 to 229 in 2017 because in some families son's and daughter's who were minor in 2009 become major and were treated as individual families in 2017 as per the guide lines of RFCT LAAR Act-2013. Details of R&R for Kommepalli Village:

S.No	Condition	Compliance Status
S.No (xxiii)	Condition         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.	<ul> <li>Compliance Status</li> <li>229 families in kommepalli village were identified as project affected families.</li> <li>An amount of Rs. 17.7969 Crores has been deposited with District Collector; Khammam on 07.08.2018 and all the 229 PDFs have been paid R&amp;R entitlement from 28.08.2018 to 30.08.2018 by RDO Kallur.</li> <li>All the PDFs were evacuated and relocated in R&amp;R center at Ayyagaripeta of Sathupalli town. (CC roads, drains, and other details for development of R&amp;R colony).</li> <li>Compensation for the land looser of Kommepalli, Kistaram, Errakunta &amp; Rejerla villages were paid as per RFCT LAAR Act-2013.</li> <li>The R&amp;R proposal and funds deposition approval letter has been obtained from District collector vide letter dated 22.12.2017. The R&amp;R status was submitted to regional Office of MoEF&amp;CC along with half yearly compliance reports.</li> <li>The letter from collector stating R&amp;R details is enclosed as <u>Appendix-40</u>.</li> <li>Rs.90.57 Crores are already utilized as capital expenditure and Rs.49.63 crores as revenue expenditure for Environmental protection measures, greenbelt development, OB dump stabilization and related consultancy works till 11.10.2021. The status of expenditure along with the works were furnished in the submitted six monthly compliance report.</li> <li>Presently, capital and revenue environmental cost envisage in the JVR OC Mine (I&amp;II Expansion) project is being utilized as JVR OC Mine (I&amp;II Expansion) project is amalgamation project of JVR OC-II and JVR OC-I Exp</li> </ul>
		mines. Environment capital and revenue cost details are enclosed as <u>Appendix-41</u> .
(xxiv)	The Project Authorities shall carry out a pre-mining socio-economic survey based	M/s Centre for Good Governance, Hyderabad was awarded to conduct the

S.No	Condition	Compliance Status
	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.	survey based on the UNDP Human Development Report and the socio- economic status of the adjoining villages in 2019-20. The report has been submitted to Ministry vide letter no. ENV/KGM/404/552/297 dated 26.09.2020.

# General conditions:

SI. No	Condition	Compliance Status
(i)	No change in mining technology and scope of working shall be made without prior approval of the MoEF.	There is no change in mining technology and scope of working.
(ii)	No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.	Calendar plan including excavation, quantum of mineral coal has been complied. Presently, mining operations and coal production is being carried out in the JVR OC Mine (I&II Expansion) project as per the approved calander plan. JVR OC Mine (I&II Expansion) project is amalgamation project of JVR OC-II and JVR OC-I Exp mines.

SI. No	Condition	Compliance Status
(iii)	Four ambient air quality monitoring stations should be established in the core zone as well 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.	Ambient air quality was monitored at 7 locations, three in core zone and four in buffer zone of the project. The parameters, namely, RPM, SPM, SO2, NOx, later from 2009 PM10 and PM2.5 were also monitored every fortnight to assess the ambient air quality and to take adequate dust suppression measures. Location of the stations has been decided in consultation with the State Pollution Control Board. Monitoring data are within the limits. Also, one continuous online ambient air quality station (CAAQMS) was also established at the project in the year 2017-18 and connected to TSPCB for real time uploading of air quality data. This project is amalgamated with adjacent JVR Opencast Project-I Exp under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently Monitoring of ambient air quality being continued in JVR OC Mine (I&II Expansion) project.
(iv)	Fugitive dust emissions (PM <sub>10</sub> , PM <sub>2.5</sub> ) 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.	This project is amalgamated with adjacent JVR Opencast Project-I Exp under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Fugitive dust emissions were controlled by water/mist spraying arrangements and were 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. PP mentioned that the monitoring data 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.	PP informed that data on ambient air quality $(PM_{10}, PM_{2.5}SO_2 \& NO_2)$ was regularly submitted to the Ministry including its Regional Office at Chennai/Hyderabad. Ambient air quality monitoring data is also being submitted to the TS Pollution Control Board, Regional Office, Kothagudem once in six months.
		This project is amalgamated with adjacent JVR Opencast Project-I Exp under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently Monitoring of ambient air quality and heavy metals being continued in JVR OC Mine (I&II Expansion) project. Monitoring data of ambient air quality and heavy metals for the period of Apr' 2023 to Sep'2023 pertaining to

SI. No	Condition	Compliance Status
		JVR OC Mine(I&II Expansion) is enclosed as Appendix-13.
(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 dB (A) in the work environment, like procurement of HEMM with sound proof operators cabins, periodical planned preventive maintenance of HEMM & other transport vehicles at regular intervals as per schedules submitted by OEM, development of thick green belt around the project to act as an attenuator in reducing noise to ambient atmosphere. Workers being engaged in drilling and blasting operations, operation of HEMM and other activities having noisy environment are being provided with ear plugs. Noise Levels were monitored in 5 locations through MoEF&CC approved third party laboratory both day and night and monitored data show that the values are within the limit.
		This project is amalgamated with adjacent JVR Opencast Project-I Exp. under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11th October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Presently all the noise control measures are being adopted in the JVR OC (I&II Exp.) project. Noise Monitoring data for the period of Apr' 2023 to Sep'2023 is enclosed as <u>Appendix-21</u> .
(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 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	ETP has been provided for workshop with oil and grease trap. Periodical monitoring of ETP effluents is being carried out through M/s EPTRI, CPCB recognized and NABL accredited Laboratory and monitored effluents are well within the prescribed limits.
(viii)	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Vehicular emissions are being kept under control through regular maintenance of vehicles and vehicles having valid PUC certificate from authorized pollution testing centers are only engaged. Vehicles used for transporting the mineral are being covered with tarpaulins and are optimally loaded. Vehicular emissions are being monitored regularly through MoEF&CC, CPCB, recognized and NABL accredited laboratory M/s.EPTRI Hyderabad.
		This project is amalgamated with adjacent JVR Opencast Project-I Exp. under the name

SI. No	Condition	Compliance Status
		of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Vehicular emissions for the period of Oct, 2022 to Mar, 2023 pertaining to JVR OC Mine(I&II Expansion) (10.00 Mtpa, granted on 11 <sup>th</sup> October, 2021) is enclosed as <u>Appendix-15</u> .
(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.	Regional Laboratory has been established by EPTRI at Kothagudem with two qualified staff members for analysis of critical parameters in the field. Post Project Environmental Monitoring is being carried out through external agency M/s. Environment Protection Training and Research Institute (EPTRI), Hyderabad.
(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. Occupational health surveillance programme of the workers should be	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 workmen's is being under taken periodically as per Mines Act and records are being maintained.
	undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.	SCCL is providing free medical treatment to all the workmen and their family members in the 7-area hospital (with a total of 821 beds) and 21 dispensaries established in all the workings areas of the company.
		The annual expenditure incurred by SCCL in maintenance of health care facilities during 2022-23 is Rs.307.00 Crores. SCCL is also conducting regular health camps in villages located in the vicinity of project to study the health status of the people and is providing free treatment in SCCL hospitals.
		In addition, SCCL established eleven Initial Medical Examination (IME) /Periodical Medical Examination (PME) centres in the company, i.e., at Kothagudem, Manuguru, Yellandu, Godavarikhani Sector-III Colony(Godavarikhani), Bellampalli, Ramakrishnapur, Mandamarri, Srirampur, Bhupalpally and Sathupalli for conducting IME/PME of the employees including contract employees.
		All the PME Centres are equipped with necessary infrastructure for carrying out IME/PME and maintenance of data base. All the Chest radiographs of the Initial and Periodical Medical examinations are being classified for detection, diagnosis and 78   Page

SI. No	Condition	Compliance Status
		documentation of Pneumoconiosis in accordance with the ILO classification for Pneumoconiosis according to DGMS guidelines. All the PME Doctors employed except gynaecologists, paediatricians, surgeons and ortho surgeons are trained to read PME XRays in accordance with ILO classification of Pneumoconiosis.
		Out of a total of 209 Doctors on roll as on date, 123 Doctors are trained in reading the chest radiographs as per the ILO guide lines. SCCL has one Occupational Diseases Board
		(Pneumoconiosis Board) in existence since 1965. Chief of Medical Services, Radiologist constituted the Occupational Diseases Board, Physician and Occupational Health Physician together.
		In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
		The PME details are being submitted to the Ministry and to the DGMS at regular intervals. In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period. Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year. The PME details are being submitted to the Ministry and to the DGMS at regular intervals.
(xi)	A separate Environmental Management Cell with suitable qualified personnel should be set up under the control of a Senior Executive	Company level environment cell headed by General Manager (Environment) is established to monitor and guide in implementation of the environmental safeguards
	who will report directly to the Head of the Company.	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. To carryout functions relating to

SI. No	Condition	Compliance Status	
		environmental management at environment management co has been constituted with members:	mmittee (EMC)
		2.Project officer3.Area engineer (E&M)4.Area civil engineer	Chairman Member Member Member
		<ol> <li>Area estates officer</li> <li>Project Manager</li> <li>Project engineer</li> <li>Project surveyor</li> </ol>	Member Member Member Member Member
		11.Area env. officer12.Sr.Hydro Geologist13.Area Survey Officer	Member Secretary Member Member Member
(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 (both capital and recur for environmental control me being diverted for any othe being spent for environme measures only. Year wise being reported to the Mi Regional Office of MoEF&CC	ring) earmarked easures are not or purpose and ental protection expenditure is nistry and its
(xiii)	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Complied	
(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.	A copy was EC letter was concerned vide Ltr.No.KGM/El dated: 06.04.2010 and th displayed.	NV/405/2010/66
(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.	<b>Complied</b> PP informed that SCCL request display the EC Ltr.No.KGM/ENV/405/2010/ 06.04.2010 and the same was of	letter vide 67, dated:
(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	Complied Advertisement regarding issua been published on 04.04.2010 paper of vernacular languag Jyothi" Khammam Edition an News paper "Deccan Chronic edition. The EC letter has bee company's website in www.sc URL. https://scclmines.com/env/docs	D in daily News ge in "Andhra d English daily cle" Vijayawada en uploaded on cclmines.com at

SI. No	Condition	Compliance Status
	Ministry of Environment & Forests at http://envfor.nic.in.	as Appendix-42
3.	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	
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.	
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.	All the measures are being taken to avoid Air & water pollution due to the mining

A periodic progress report regarding environmental protection measures for the period ending Apr' 2023 to Sep'2023 is enclosed as Part - II.

Project Officer R OC Mine - (I&II Expn.,)

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#### Annexure-IV

## STATUS OF IMPLEMENTATION ENVIRONMENTAL CLEARANCE CONDITIONS OF JALAGAM VENGAL RAO OPENCAST-I COAL MINE PROJECT up to Sep'2023.

## vide Lr.No. J-11015/301/2007-IA-II (M) dated 27.07.2007

# Specific Conditions:

SI. No.	Condition	Compliance Status
(i)	No mining operations shall be under taken in the 136.50 ha of forestland until forestry clearance has been obtained under the provisions of FC Act, 1980.	Environmental Clearance for JVR OC-I coal mine project was obtained vide letter No. J- 11015/301/2007-IA-II (M) dated 27.07.2007 for a production capacity of 2.0 MTPA (2.5 MTPA peak) in the ML area of 547.08 ha.
		However, PP informed that till 2014 mining operations were carried out only in 410.58 ha which includes 244.02 ha forest land, which was diverted vide letter No. F.No.8-129/2003-FC dt.02.02.2005. The remaining forest land clearance for 136.50 ha of forest land involved in the project was obtained vide letter No. 8-56/2008-FC, dt. 03.07.2012. After diversion of forest land only, SCCL informed that the mining operation were started in the remaining 136.50 ha Forest Land in 2014. Copies of Forest clearance was enclosed as <u>Appendix-7</u> .
(ii)	Diversion of NTR canal (Bethupalli Flood Flow canal) for a length of 18.32 Km shall be under taken with the approval of the State Irrigation Department and ensure that it is realigned with the original course so as to retain the existing feeder channels of downstream irrigation tanks.	The diversion of Bethupalli Flood Flow canal (NTR canal) for a length of 18.32 km was carried out with the approval of the State Irrigation & CAD Department vide G.O. Rt. <u>No.1932</u> , dt. 30.12.2005. The diverted canal was realigned with the original course and retained the existing feeder channels of downstream irrigation tanks. The canal diversion work was completed during the year 2016. Copy of the NOC for I&CADD is enclosed as <u>Appendix-43</u> .
		A Google image showing than existing Bethupalli canal and diverted course along with the photograph of diverted canal is shown here under.
Original course       Diverted course		
(iii)	Diversion of PWD road passing	PWD road passing through the lease area was

SI. No.	Condition	Compliance Status
	through the lease shall be done with the prior approval of the competent authorities.	diverted with the approval of R&B Dept. GoAP, vide permission letter no. 42110/TA13/ AEE4/ 2002, dated 20 <sup>th</sup> July 2003. A copy of permission for R&B department is enclosed as <u>Appendix-6.</u>
(iv)	Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and the same shall be used for reclamation and development of	About, 4.080 M.Cu.m of top soil was removed in the project out of which 3.667 M.Cu.m was spread over OB dumps for taking up plantation. Balance 0.413 M.Cu.m of top soil is preserved in temporary stockyard for future use for reclamation.
	green belt.	After exhaustion of reserves in JVR OC-I Expansion project, the project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) project of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021 and presently the top soil management is being continued as per the Environmental Clearance of JVR OC Mine (I&II Expansion).
(v)	OB should be stacked at earmarked dumpsite(s) within ML area and shall be a maximum height of 90 m only and consist of three benches of 30 m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of rehabilitated dump sites should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bangalore on a yearly basis.	So far, 169.645 M.Cu.m of OB (including top soil) has been excavated out of which 39.075 M. Cu.m was accommodated externally and 130.57 M.Cu.m of OB was backfilled in the de-coaled portion of quarry. Overburden has been dumped at earmarked external dump yard up to a height of 90 m with three benches each of 30 m. The internal dumping was done up to a maximum height of 60 m. with two decks of 30 m each.The ultimate slope of the dump is being maintained below 28°. After exhaustion of reserves in JVR OC-I Expansion project, the project was amalgamated with adjacent JVR OCP-II Project under the name of JVR OC Mine (I&II Expansion) project of 10 Mtpa, for which EC was granted by MoEF&CC on 11 <sup>th</sup> October, 2021 and presently OB management is being continued as per the Environmental Clearance of JVR OC Mine (I&II Expansion).
(vi)	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for	Catch drains for a length of 17240m and 7 Nos. settling ponds have been made for proper collection of water into the settling ponds and to arrest silt from the run off from OB dump. The water so collected is being utilized for dust suppression in the mine area, on haul roads and for green belt development etc.
	watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly. Garland drains suitable size, gradient and length and sump capacity should be designed keeping 50% safety margin over and	The garland drains are being maintained around the external dump and quarry for a total length of 13.00 km. and 4240 mtrs. of drain was provided on internal dump yard. The drains and settling ponds are being regularly de-silted and properly maintained. Further, the construction of catch drains & garland drains and settling ponds is being continued as per
	above the peak sudden rainfall and	the Environmental Clearance of JVR OC Mine (I&II

SI. No.	Condition	Compliance Status
	maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	Expansion) accorded vide File No. J-11015/268/207- IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-I Exp. and JVR OC-II mines.
(vii)	Dimension of the retaining wall at the toe of dumps and OB benches	Toe wall around the external dump over a length of 1760 m has been made to check runoff and siltation.
	within the mine to check run-off and siltation should be based on the rainfall data.	Further, the construction of toe wall is being continued as per the Environmental Clearance of JVR OC Mine (I&II Expansion) accorded vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-I Exp. and JVR OC-II mines.
(viii)	Crushers at the existing CHP and that to be constructed should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, haulage roads, and transfer points.	The coal is not pulverized in the crushers and is only crushed to (-) 200 mm size. Hence, instead of bag filters, fixed as well as 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. A 12 KL capacity water sprinkler is being deployed for dust suppression at CHP and surroundings.
		SCCL has been requesting MoEF&CC to amend the condition of installing bag filters for the CHPs and this condition is not being imposed in the recent ECs issued for coal mines. Fixed water sprinkling system was provided to check fugitive emissions from crushing operations, haul roads, coal transfer points, etc., for effective dust suppression.
		However, this condition is exempted in the Environmental Clearance of JVR OC Mine (I&II Expansion) accorded vide File No. J-11015/268/207- IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-I Exp. and JVR OC-II mines.
(ix)	Drills should be wet operated only.	Drills are provided with wet drilling arrangement.
(x)	Controlled blasting should be practiced only during day time with the use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	PP mentioned that usage of non-electric delay detonators was adopted in the project for control of ground vibrations, arresting of fly rocks and boulders during blasting operations. Permissions obtained from DGMS for carrying controlled blasting operations vide letter dated 8 <sup>th</sup> April 2009 and ground vibrations are being monitored as per DGMS guide lines.

SI. No.	Condition	Compliance Status
(xi)	Afforestation shall cover a total area of not less than 393.13 ha which includes reclaimed external dump (72.75 ha), reclaimed top soil dump, back filled area (169.15 ha), along	Plantation is being taken up along ML boundary, roads, service buildings and CHP, 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. Details of the plantation carried out is as follows:
	ML boundary, along drains and along service buildings (18.13 ha)	
	within the lease and in township by	Sl.No.DescriptionArea in Ha.01External Dump Yard152.06
	planting the native plant species in	02 Internal Dump Yard 34.80
	consultation with the local DFO / Agriculture Department. The density	03 Vacant Land within Mining Lease Area 60.76
	of the trees should be around 2500 plants per Ha.	04Avenue Plantation within Mining Lease Area10.90
		05 Gap Plantation in Forest Land between Mine Boundary and R&B Road beyond mandate
		06 Safety Zone Area of 136.50 Ha. of Forest Land diverted 52.00 for JVR OC-I Expn.
		Total: 390.52
(xii)	A progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 298.32 ha which shall be back filled and afforested by planting the native plant species in consultation with the local DFO /	The progressive mine closure activities will be continued as per the EC of JVR OC mine (I&II expansion), for which EC was accorded vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-I Exp. and JVR OC-II mines and Mining plan including Mine Closure
(xiii)	Agriculture Department. The conditions stipulated by the State Ground Water Department shall be effectively implemented. The company shall obtain prior approval of CGWA / CGWB, Regional office for use of ground water if any, for mining operations.	Plan approved by MoC. Approval has been obtained from A.P. State Ground Water Dept. vide Memo No. 13019/Hg.II (1)/06 dt. 06.07.07 for drawl of ground water and the conditions stipulated by the State Ground Water Department were implemented. After amalgamation of the project with adjacent JVR OCP-II, GWC obtained for the existing JVR OC Mine (I&II Expansion) project vide Lr. No.545/T/JVR-OC/2019, date.10.05.2021 valid up to 09.05.2026. A copy of of GWC is enclosed as <u>Appendix-11</u> .
(xiv)		A network of existing Piezometric wells was

SI. No.	Condition	Compliance Status
	quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and the Central Pollution Control Board quarterly within one month of monitoring.	This project is amalgamated with adjacent JVR Opencast -II Project under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project. The same is being carried out in the JVR OC Mine (I&II Expansion) project.
		The ground water level monitoring data for the period of 2019-2023 is enclosed as Appendix-18.
(xv)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.	55 rain water harvesting pits and check dams were constructed around the project for augmenting groundwater recharge. Further excess water from the project is discharged out into local drainage which reaches the nearby tank which also helps in augmentation of groundwater. The project authorities are committed to meet water requirement of nearby village(s) in case the village wells go dry due to de- watering of the mine.
(xvi)	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	SCCL is providing free medical treatment to all the workmen and their family members in the 7 area hospital (with a total of 821 beds) and 21 dispensaries established in all the workings areas of the company. The annual expenditure incurred by SCCL in maintenance of health care facilities during 2022-23 is Rs.307.00 Crores.
	any, through any agency such as NIOH, Ahmadabad within a period of one year and the results reported to this Ministry and to DGMS.	SCCL is also conducting regular health camps in villages located in the vicinity of project to study the health status of the people and is providing free treatment in SCCL hospitals.
		In addition, SCCL established eleven Initial Medical Examination (IME) /Periodical Medical Examination (PME) centres in the company, i.e., at Kothagudem, Manuguru, Yellandu, Godavarikhani, Sector - III Colony (Godavarikhani), Bellampalli, Ramakrishnapur, Mandamarri, Srirampur Bhupalpally and Sathupalli for conducting IME/PME of the employees including contract employees.
		All the PME Centers are equipped with necessary infrastructure for carrying out IME/PME and maintenance of data base. Every PME centre is provided with the facility for chest radiographs as per ILO guidelines with a set of ILO standard chest radiographs on Pneumoconiosis, lung function tests with computerized Spirometres of RMS make, and facilities for Audiometry with pure tone Audiometry equipment.
		All the Chest radiographs of the Initial and Periodical Medical examinations are being classified for detection, diagnosis and documentation of Pneumoconiosis in accordance with the ILO classification for Pneumoconiosis according to

SI. No.	Condition	Compliance Status
		DGMS guidelines.
		All the PME Doctors employed except gynaecologists, paediatricians, surgeons and ortho surgeons are trained to read PME X-Rays in accordance with ILO classification of Pneumoconiosis. Out of a total of 209 Doctors on roll as on date, 123 Doctors are trained in reading the chest radiographs as per the ILO guide lines.
		SCCL has one Occupational Diseases Board (Pneumoconiosis Board) in existence since 1965. Chief of Medical Services, Radiologist constituted the Occupational Diseases Board, Physician and Occupational Health Physician together.
		In SCCL, Every employee below 45 years age is examined at an interval of once in five years and employees of above 45 years age are examined once in three years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year. The PME details are being submitted to the Ministry and to the DGMS at regular intervals.
(xvii)	ETP should be provided for Work shop and CHP waste water. Mine discharge water shall be treated to prescribed standards before discharge in to any natural water course.	ETP has been provided for workshop and Mine discharge water is allowed to settle in the settling ponds for removal of coal fines and suspended solids before discharging into natural water course. PP informed that the quality of mine discharge water is being monitored at regular intervals and the results are within the prescribed standards.
(xviii)	A Sewage treatment plant shall be installed in the combined township and in the proposed township to be established within the lease.	ETP was provided for workshop and commissioned on 23.06.2006. STP (1.5 MLD) is already constructed at,Rudrampur Colony of Kothagudem, a 200 KLD capacity STP of is under construction in the new colony in Sathupalli town.
(xix)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on scale of 1:5000) of the core zone and buffer zone, from the start of the project	Digital processing of the entire lease area based on satellite imagery is being done once in 3 years for monitoring land use pattern and post mining land use. Land use for core and buffer zone studies carried out during 2016 & 2019 has already been submitted.
	until end of the mine life shall be prepared once in 3 years (for any particular season which is consistent in time series), and the report submitted to MoEF and its regional office at Bangalore.	This project is amalgamated with adjacent JVR Opencast -II Project under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project. The same is being carried out in the JVR OC Mine (I&II Expansion) project.
		Land use Land cover study of core & buffer zone of JVR OC Mine (I&II Expansion) project was carried

SI. No.	Condition	Compliance Status
(xx)	A Final Mine closure plan along with	
	details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	year 2040-41 i.e., 5 years in advance of actual mine closure, as per the Environmental Clearance of JVR OC Mine (I&II Expansion) accorded by MoEF&CC vide File No. J-11015/268/207-IA.II (M) dt. 11.10.2021, which is amalgamation project of JVR OC-I Exp. and JVR OC-II mines.

# **General Conditions:**

S. No	Condition	Compliance Status
i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests (MoEF).	There is no change in mining technology and scope of working
ii)	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Excess production over the sanctioned annual capacity of 2.5 MTPA was taken from the project in some years. However, EC for a capacity of 5.0 MTPA was regularized in 2021, as per the S.O. 804 (E) dated 14.03.2017 under violation category, vide F.No. 23-77/2018-IA(III), dated 1 <sup>st</sup> February, 2021 under the name of JVR OC-I Expansion project.
		Further, JVR OC-I Expansion project was amalgamated with adjacent JVR OC-II project and obtained EC under the name of JVR OC (I&II Expansion) project for a capacity of 10.00 MTPA and presently JVR OC (I&II Expansion) project is in operation.
iii)	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO <sub>2</sub> and NO. Monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Ambient air quality was monitored at 7 locations, three in core zone and four in buffer zone of the project. The parameters, namely, RPM, SPM, SO <sub>2</sub> , NOx, later from 2009 PM <sub>10</sub> and PM <sub>2.5</sub> were also monitored every fortnight to assess the ambient air quality and to take adequate dust suppression measures. Location of the stations has been decided in consultation with the State Pollution Control Board. Monitoring data are within the limits. Also, one continuous online ambient air quality station (CAAQMS) was also established at the project in the year 2017-18 and connected to TSPCB for real time uploading of air quality data.
		This project is amalgamated with adjacent JVR Opencast Project-II under the name of JVR OC

S. No	Condition	Compliance Status
		Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently Monitoring of ambient air quality being continued in JVR OC Mine (I&II Expansion) project.
iv)	Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading and dump tracks (loading & unloading) points should be provided and properly maintained.	This project is amalgamated with adjacent JVR Opencast -II Project under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. PP informed that fugitive dust emissions were controlled by water/mist spraying arrangements and were 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. PP mentioned that the monitoring data results are within the limits stipulated DGMS (Tech) (S&T).
V)	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> and NO <sub>x</sub> ) should be regularly submitted to the Ministry including its Regional Office at Bangalore and the A.P Pollution Control Board and the Central Pollution Control Board once in six months.	Data on ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> SO <sub>2</sub> & NO <sub>2</sub> ) was regularly submitted to the Ministry including its Regional Office at Chennai/Hyderabad. Ambient air quality monitoring data is also being submitted to the TS Pollution Control Board, Regional Office, Kothagudem once in six months. This project is amalgamated with adjacent JVR Opencast -II Project under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021. Presently Monitoring of ambient air quality and heavy metals being continued in JVR OC Mine (I&II Expansion) project. Monitoring data of ambient air quality and heavy metals for the period of Apr' 2023 to Sep'2023 pertaining to JVR OC Mine(I&II Expansion) is enclosed as <u>Appendix-13</u> .
vi)	Adequate measures should be taken for control of noise levels below 85dB(A) in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc. should be provided with ear plugs / muffs.	Regular tuning of vehicles is being taken for control of noise levels below 85 dB(A) in the work environment and workers engaged in blasting and drilling operations, operations of HEMM, etc. have been provided with ear plugs / muffs. Controlled blasting techniques with the use of Non-electric (Nonel) delay detonators are being practiced to control ground vibrations, noise and big boulders. The ambient noise level in the work environment and nearby villages is being monitored regularly. This project is amalgamated with adjacent JVR Opencast -II Project under the name of JVR OC Mine (I&II Expansion) for which EC was granted on 11 <sup>th</sup> October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.

S. No	Condition	Compliance Status
vii)	Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and Grease trap should be installed before discharge of workshop effluents.	Mine water is being discharged through 7 Nos. of settling ponds and check dams and used within the mine premises for plantation. ETP was provided for treatment of waste water from Workshop and treated water has been partly re- cycled and partly used for plantation and dust suppression within mine premises.
viii)	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Vehicular emissions are being kept under control through regular maintenance of vehicles and vehicles having valid PUC certificate from authorized pollution testing centers are only engaged. Vehicles used for transporting the mineral are being covered with tarpaulins and are optimally loaded. Vehicular emissions are being monitored regularly through MoEF&CC, CPCB, recognized and NABL accredited laboratory M/s.EPTRI Hyderabad. This project is amalgamated with adjacent JVR Opencast -II Project under the name of JVR OC Mine(I&II Expansion) for which EC was granted on 11th October,2021 and the same is continued in JVR OC Mine (I&II Expansion) project.
		Vehicular emissions for the period of Oct, 2022 to Mar, 2023 pertaining to JVR OC Mine(I&II Expansion) (10.00 Mtpa, granted on 11 <sup>th</sup> October, 2021) is enclosed as <u>Appendix-15.</u>
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.	Regional Laboratory has been established by EPTRI at Kothagudem with two qualified staff members for analysis of critical parameters in the field. Post Project Environmental Monitoring is being carried out through external agency M/s. Environment Protection Training and Research Institute (EPTRI), Hyderabad.
x)	Personnel working industry areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to	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 workmen's is being under taken periodically as per Mines Act and records are being maintained.
	observe any contractions due to exposure to dust and take corrective measure, if needed.	SCCL is providing free medical treatment to all the workmen and their family members in the 7- area hospital (with a total of 821 beds) and 21 dispensaries established in all the workings areas of the company.
		The annual expenditure incurred by SCCL in maintenance of health care facilities during 2022-

S. No	Condition	Compliance Status
		23 is Rs.307.00 Crores.
		SCCL is also conducting regular health camps in villages located in the vicinity of project to study the health status of the people and is providing free treatment in SCCL hospitals.
		In addition, SCCL established eleven Initial Medical Examination (IME) /Periodical Medical Examination (PME) centres in the company, i.e., at Kothagudem, Manuguru, Yellandu, Godavarikhani Sector-III Colony(Godavarikhani), Bellampalli, Ramakrishnapur, Mandamarri, Srirampur, Bhupalpally and Sathupalli for conducting IME/PME of the employees including contract employees.
		All the PME Centres are equipped with necessary infrastructure for carrying out IME/PME and maintenance of data base. All the Chest radiographs of the Initial and Periodical Medical examinations are being classified for detection, diagnosis and documentation of Pneumoconiosis in accordance with the ILO classification for Pneumoconiosis according to DGMS guidelines. All the PME Doctors employed except gynaecologists, paediatricians, surgeons and ortho surgeons are trained to read PME XRays in accordance with ILO classification of Pneumoconiosis.
		Out of a total of 209 Doctors on roll as on date, 123 Doctors are trained in reading the chest radiographs as per the ILO guide lines. SCCL has one Occupational Diseases Board
		(Pneumoconiosis Board) in existence since 1965. Chief of Medical Services, Radiologist constituted the Occupational Diseases Board, Physician and Occupational Health Physician together.
		In SCCL, Every employee above 45 years age is examined at an interval of once in three years and employees of below 45 years age are examined once in five years under PME. If, on examination his health status is found to be normal, he will be reviewed after completion of 5/3 years period.
		Eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
		The PME details are being submitted to the Ministry and to the DGMS at regular intervals. In SCCL, Every employee above 45 years age is examined at an interval of once in three years

S. No	Condition	Compliance Status	
		and employees of below 45 years age are examined once in five years under PME. If, or examination his health status is found to be normal, he will be reviewed after completion or 5/3 years period. Eye refraction test is being done for vehicle drivers and HEMM operators at ar interval of once in a year. The PME details are being submitted to the Ministry and to the DGMS at regular intervals.	
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.	Company level environment cell 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. To carryout functions relating to environmental management at this project, an environment management committee (EMC) has been constituted with the following members:1.SO to GM Chairman 2.2.Project officer Member3.Area engineer (E&M) Member4.Area civil engineer Member5.Area forest officer Member6.Area estates officer Member7.Project Manager Member8.Project engineer Member9.Project engineer Member10.Project env.officer Member11.Area env. officer Member12.Sr.Hydro Geologist Member13.Area Survey Officer Member14.BaseWorkshop Incharge Member	
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 located at Bangalore.	Funds (both capital and recurring) earmarked for environmental control measures are not being diverted for any other purpose and being spent for environmental protection measures only. Year wise expenditure is being reported to the Ministry and its Regional Office of MoEF&CC.	
xiii)	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation of the office(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Complied	
xiv)	A copy of the clearance letter will be marked to concern Panchayat / local NGO, if any, from whom and suggestion / representation has been	This condition was compiled immediately after obtaining EC from MoEF&CC, New Delhi.	

S. No	Condition	Compliance Status
	received while processing the proposal.	
xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Center and Collector's Office/Tehsildar's office for 30 days.	SCCL requested APPCB vide letter CRP/PP/A/ 403/553 dated 31.07.2007 to display the EC letter 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 issue 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 web site of the Ministry of Environment & Forests at http://envfor.aic.in.	The project authorities have advertised in Deccan Chronicle (English) and Eenadu (Telugu) on 06.08.2007 informing that the project has been accorded environmental clearance.
3.	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	
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.	
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.	All the measures are being taken to avoid Air & water pollution due to the mining operations. CFE and CFO were obtained for the project under air and Water Acts. PLI policy is also being taken every year. The latest PLI policy was taken from The New India Assurance Co.Ltd., bearing no. 6136013623330000001, valid from 30.04.2023 to 29.04.2024. Enclosed as <u>Appendix-32</u>

A periodic progress report regarding environmental protection measures for the period ending Apr' 2023 to Sep'2023 is enclosed as Part - II.

Project Officer R OC Mine - (I&II Expn.,)

## Status of implementation environmental clearance conditions of Jalagam Vengal Rao Opencast-II coal mine project up to Sep'2023 - Amendment in Environmental Clearance vide Ir.no. J-11015/268/2007-ia-ii (m) dated 19.04.2021

### Terms & Conditions / Specific Conditions:

SI. No.	Condition	Compliance Status
(i)	PP shall transport coal by road mode with covered tarpaulin only up to December 31 <sup>st</sup> , 2021.	EC was obtained JVR OC (I&II Expansion) project for 10.00 MTPA on 11.10.2021 wherein extension for coal transportation by road mode was given up to 2 years from grant of EC ie., up to 30 <sup>th</sup> December 2023.
		However, railway line of 54 km from Sathupalli to Kothagudem was commissioned on 28 <sup>th</sup> May, 2022 and coal is being transported by rail mode.
(ii)	PP shall only transport the coal in 40-50 tones trucks/dumper.	Coal is being transported through rail mode.
(iii)	State Pollution Control board while granting CTO shall ensure that PP must follow all the norms of Ambient Air Quality.	TSPCB issued Consent to operate (CFO) for JVR OC (I&II Expansion) project for 10.00 MTPA on 13.04.2022 (valid up to 31.06.2026) after ensuring that air quality is within the national ambient air quality standards. Copy of CFO is enclosed as <u>Appendix-10.</u>
(iv)	5 fog cannon shall be permanently installed to reduce the impact of road transportation	10 No.s of Fog canons were established in JVR OC Mine (I&II Expansion) at CHP, crushers and at railway siding to reduce impact of air pollution.
(v)	Mist type mobile water sprinklers arrangements shall be installed for dust suppression in areas like loading operations, crusher points,	Coal handling plant is being operated with water spray/sprinklers with effective control measures. CHP installed with closed conveyors, side cladding, and automatic water sprinkling system.
	transfer points and CHPs etc.	Coal stock pile/crusher/feeder and breaker material transfer points were provided with dust suppression system. Belt-conveyors were fully covered to avoid air borne dust. Side cladding all along the conveyor gantry was made to avoid air borne dust.
(vi)	Thick green belt around the mining area and loading the transportation route (Road side) (50000 Nos) shall be developed by planting native species.	Thick Green Belt has been developed with native species around the project and transportation route. Total 355.74 ha of land is reclaimed with plantation in and around the project up to the end of March, 2023 as per the approved EMP. The plantation area includes 161.95 ha in dump, block plantation of 50.89 ha and 10.90 ha of avenue plantation within the project area and 132.00 ha adjacent to the project
		In addition, a Mound Barrier of around 1.5 km length is made at north and east side boundaries of the quarry and thick green belt are developed over it.
		The plantation area also includes 80.00 ha of Gap

SI. No.	Condition	Compliance Status
		Plantation carried out in Forest Land between Mine Boundary & R&B Road beyond mandate and 52 ha of Safety Zone along the outer boundary of the mining lease area.
(vii)	CAAQMS to monitor Ambient Air Quality parameters like PM <sub>10</sub> , PM <sub>2.5</sub> , SOx, NOx etc. shall be installed at locations in the pollution/habitation areas/receptor villages.	Continuous Ambient Air Quality Monitoring Station was established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> . Monitoring data of ambient air quality for the period of Apr, 2023 to Sep, 2023 pertaining to JVR OC
(viii)	PM <sub>10</sub> analyzer shall be installed at a particular point on the road to monitor the fugitive dust emission from coal transfer activities.	Mine(I&II Expansion) is enclosed as <u>Appendix-13</u> PM <sub>10</sub> analyzer was installed while coal transport was done by road mode at Kistaram village to monitor the fugitive dust emission. However, SCCL switched over to rail mode to transport coal from 28.05.2023.
(ix)	The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mini9ng activities and the land to a condition which is fit for growth of fodder, flora, fauna etc.	After completion of mining operations, re- grassing/reclamation of the disturbed area due to mining activities will be taken up and restored as per the approved Mining Plan & Final Mine Closure Plan. The implementation report will be submitted to the Regional Office of the MoEF&CC during the post closure stage.
(x)	PP shall strictly comply with the judgment/orders of the two NGT cases No. OA. 174 of 2020 (SZ) dt: 08.09.2020 - Basing on a compliant received from Sri Banoth Nandu Nayak, R/o Sattupalli in regard to environmental voilations and damage caused to houses by SCCL in opeartion of JVR Opencast mines. 2. Case No. OA 20 of 2021 (SZ), dtas and when judgment is pronounce dt:27.01.2021 - Basing on a complaint received from Sri Oggu Srinivas Reddy, R/o. Sattupalli and another in regard to violation of environmental conditions by SCCL in operation of JVR Opencast from Sri Oggu Srinivas Reddy, R/o. Sattupalli and another in regard to violation of environmental conditions by SCCL in operation of JVR OCP-II	directed to be adjusted towards the remediation plan] within a period of 3 (Three) months with the Telangana State Pollution Control Board. However, SCCL approached Hon'ble Supreme Court regarding the common judgment and the apex court while granting stay order directed SCCL to deposit 50% of amount as imposed by Hon'ble NGT. SCCL deposited 50% of the amount with the Tribunal, the case is presently pending with the Hon'ble Supreme Court for final judgment in the matter.
		SCCL will comply with the Hon'ble Supreme Court verdict

FIGUUC	tion Details (OC-1):		Production Details (OC-1): Coal (in MT) Overburden (M.Cu.M)						
S.No.	lo. Year —		-		. ,				
		As per EC	Actual	As per EMP	Actual				
1	2005 - 2006	2.50	0.520	2.920	5.965				
2	2006 - 2007	2.50	1.280	6.950	8.776				
3	2007 - 2008	2.50	1.917	6.940	5.408				
4	2008 - 2009	2.50	2.679	14.510	12.183				
5	2009 - 2010	2.50	3.573	7.450	13.143				
6	2010 - 2011	2.50	3.529	3.550	9.638				
7	2011 - 2012	2.50	4.135	5.870	8.947				
8	2012 - 2013	2.50	3.963	9.920	5.222				
9	2013 - 2014	2.50	4.898	8.610	12.288				
10	2014 - 2015	2.50	4.500	8.500	10.224				
11	2015 - 2016	2.50	4.545	10.750	22.768				
12	2016 - 2017	2.50	5.219	10.800	18.921				
13	2017 - 2018	2.50	4.955	10.900	14.380				
14	2018 - 2019	2.50	4.710	10.950	13.934				
15	2019 - 2020	2.50	3.815	11.180	7.845				
16	2020 - 2021	2.50	0.307	10.50	0.161				

# <u>PART - II</u>

### 2. Production Details (OC-2):

S.No.	Year	Coal (in MT)		Overburden (M.Cu.M)	
5.NO.	rear	As per EC	Actual	As per EMP	Actual
1	2017 – 2018		0.749	14.67	7.573
2	2018 – 2019	5.0	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

### 3. Production Details (OC-1 & 2 Combined) as per EC:

S.No.	Year	Coal (in MT)		Overburden (M.Cu.M)	
5.NO.	leal	As per EC	Actual	As per EMP	Actual
1.	2021 - 2022	7.40	7.34	47.09	38.20
2.	2022 – 2023	10.00	10.00	47.31	43.60
3.	2023-2024 (April-Sep)	10.00	5.200	38.67	27.80

# 4. Topsoil Management:

1	Total Topsoil	14.190 MB.Cum
2	Topsoil extracted since inception	7.124 MB.Cu.m
3	Topsoil preserved for future use	2.022 MB.Cu.m
4	Top soil removed in last 6 months	0.724 MB.Cu.m.
5	Top soil spread in last 6 months	2.916 MB.Cu.m.

### 5. <u>Overburden Management:</u>

1.	Total Overburden as per revised estimates.	1046.89 (as	per MP)		
2.	Total OB removed since inception	306.20 M Cu	ı.m.		
3.	Total OB removed during last 6months	27.80 M Cu.m.			
4.	Details of External OB dumps	Area (in Ha)	Quantity in (M.Cu.M)		Overall slope
		(III ⊓a)	(101.00.101)	(m)	siope
	Dump	470.00	306.20	+90	25 <sup>0</sup>

# 6. Plantation:

	Total area brought under plantation so far in Ha.	Total Area = 390.52 Ha. i.AvenuePlantation-10.90Ha.	
1.	(JVROC-I & JVROC-II)	ii.Dumps- 186.86Ha. (Int.D/Y=34.80, Ex.D/Y=152.06) iii.Other Areas- 192.76Ha.	
2.	Total no of plants planted so far since inception	9,75,519 No's.	
3.	Species of plants planted	Dendrocalamus strictus Inga dulcii, Albezia odoratissima, Delberzia sissoo, Ficus Sps.	

## 7. <u>Water Balance Statement:</u>

S.No.	Description	Quantity in KLD
Α.	Average quantity of water pumped out of the mine	1200
В.	Water utilization:	
1.	Water used for dust suppression	300
2.	Water sprinkling along coal transport road	100
3.	Water used for washing of HEMM	100
4.	Water used for domestic and plantation	100
C.	Final discharge point of excess water let out	600

## 8. Soil Erosion Control Measures:

S.No.	Description	Quantity							
1.	Length of toe Walls	2.973	2.973 KM						
2.	Length of garland drains around the quarry	18000 mts							
	Length of garland drains around external dump	13000 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	6						
5.	No. of cribs	8 No's						
6.	No. of rock fill dams	4						

# 9. Micro-meteorological Monitoring:

Micro-meteorological station was installed at the project office. The summary of the monitoring from Apr' 2023 to Sept' 2023 is as follows:

S.No	Parameter (s)	Min	Max	Mean	
1.	Temperature ( <sup>0</sup> C)	20.2	44.4	29.2	
2.	Wind Speed (m/s)	Calm 11.34%	10.6	1.8	
3.	Relative Humidity (%)	5.9	99.8	62.8	
4.	Predominant Wind direction for the study period	South-South West (S-SW), followed by South West (SW direction			
5.	Total Rainfall (mm)	736.6mm			

# 10. 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 ( $SO_2$ ) 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.	JVR OC-I &II PO Office	Core Zone		CA6
2.	JVR OC-I &II Pit head CHP	Core Zone		CA7
3.	JVR OC-I &II	Core Zone		CA8

Post project Ambient Air quality monitoring stations:

	BWS			
4.	JVR OC-I &II New CHP -SITE OFFICE	Core Zone		CA9
5.	Kistaram Village	Buffer Zone	W & 1.0 KM	BA9
6.	Sathupalli Town	Buffer Zone	NE & 1.5 KM	BA10
7.	Rejarla Village	Buffer Zone	S & 6KM	BA11
8.	Pallewada	Buffer Zone	SW & 6.3 KM	BA12
9.	NTR Nagar	Buffer Zone	NE& 0.9KM	BA16
10.	Siddaram Village	Buffer Zone	NE & 3.00KM	BA17

**Monitoring data:** The summary of the air quality monitoring data from Apr' 2023 to Sep' 2023 is as follows. (All values in  $\mu g/m^3$ )

is as	s follows.	(All values in μg/m°)						
S.No.	Location	Direction &	PM <sub>10</sub>					
5.110.	Loodion	Distance	Min.	Max.	Avg.	98%tile	Standard	
1.	JVR OC-I &II PO Office	Core Zone	74	111	96.9	110.56		
2.	JVR OC-I &II Pit head CHP	Core Zone	147	202	185.9	201.34	250	
3.	JVR OC-I &II BWS	Core Zone	106	140	128.7	139.34	250	
4.	JVR OC-I &II New CHP -SITE OFFICE	Core Zone	141	205	180.8	202.14		
5.	Kistaram Village	W & 1.0 KM 50 66 58.3						
6.	Sathupalli Town	NE & 1.5 KM	43	58	53.1	57.78		
7.	Rejarla Village	S & 6KM	48	64	58.5	63.78	100	
8.	Pallewada	SW & 6.3 KM	41	56	50.5	55.78	100	
9.	NTR Nagar	NE& 0.9KM	42	55	50.4	54.56		
10.	Siddaram Village	NE & 3.00KM	45	60	54.0	59.78		
S.No.	Location	Direction &			PM <sub>2.5</sub>			
3.NU.	Location	Distance	Min.	Max.	Avg.	98%tile	Standard	
1.	JVR OC-I &II PO Office	Core Zone	74	111	96.9	110.56		
2.	JVR OC-I &II Pit head CHP	Core Zone	52.8	78	69.2	77.52		
3.	JVR OC-I &II BWS	Core Zone	36.8	48.8	45.0	48.60	] -	
4.	JVR OC-I &II New CHP -SITE OFFICE	Core Zone	50.2	75	65.3	73.94		
5.	Kistaram Village	W & 1.0 KM	21.3	26.9	24.3	26.88		
6.	Sathupalli Town	NE & 1.5 KM	18.6	25	22.8	24.93		
7.	Rejarla Village	S & 6KM	20.8	28.8	25.9	28.78	1	
8.	Pallewada	SW & 6.3 KM	16.4	23.7	20.9	23.70	60	
9.	NTR Nagar	NE& 0.9KM	17.3	22.5	20.9	22.46		
10.	Siddaram Village	NE & 3.00KM	18.7	24.8	22.5	24.76	-	
	-	Direction &			SO <sub>2</sub>			
S.No.	Location	Distance	Min.	Max.	Avg.	98%tile	Standard	
1.	JVR OC-I &II PO Office	Core Zone	14	16.3	14.9	16.19		
2.	JVR OC-I &II Pit head CHP	Core Zone	13.7	18.4	16.1	18.33	120	
3.	JVR OC-I &II BWS	Core Zone	13.4	17.7	15.5	17.59	120	
4.	JVR OC-I &II New CHP -SITE OFFICE	Core Zone	13.8	18.7	16.1	18.52		

5.	Kistaram Village	W & 1.0 KM	11.5	14.4	12.8	14.38		
6.	Sathupalli Town	NE & 1.5 KM	12	14.5	13.1	14.46		
7.	Rejarla Village	S & 6KM	10.6	14.4	12.2	14.27	00	
8.	Pallewada	SW & 6.3 KM	10	13.6	11.6	13.49	80	
9.	NTR Nagar	NE& 0.9KM	10	13.4	11.6	13.31		
10.	Siddaram Village	NE & 3.00KM	9.9	13.6	11.5	13.47		
S No.	Location	Direction &			NO <sub>2</sub>			
S.No.	Location	Distance	Min.	Max.	Avg.	98%tile	Standard	
1.	JVR OC-I &II PO Office	Core Zone	21.2	25.2	22.6	25.00		
2.	JVR OC-I &II Pit head CHP	Core Zone	20.7	28.5	24.8	28.39	420	
3.	JVR OC-I &II BWS	Core Zone	20.4	27.1	23.9	27.01	120	
4.	JVR OC-I &II New CHP -SITE OFFICE	Core Zone	20.1	28.4	23.9	28.11		
5.	Kistaram Village	W & 1.0 KM	16.7	21.7	19.2	21.66		
6.	Sathupalli Town	NE & 1.5 KM	17.6	21.6	19.5	21.53		
7.	Rejarla Village	S & 6KM	15.5	21.5	18.1	21.30	80	
8.	Pallewada	SW & 6.3 KM	14.4	19.9	17.1	19.88	00	
9.	NTR Nagar	NE& 0.9KM	14.8	19.7	17.4	19.55		
10.	Siddaram Village	NE & 3.00KM	14.9	20.1	17.5	19.95		

JVR OC Mine (I&II Expansion) HYMR Report From 'Apr' 2023 – Sep' 2023'

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' 2023 to Sep' 2023 is enclosed as **Annexure – 13**.

### 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 SO<sub>2</sub>, NO<sub>2</sub> & CO in the exhaust emissions.
- No burning of coal or wood or cotton waste impregnated with oil and grease is done in the mine premises.
- 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.

#### 11. 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 13 water samples i.e., 10 sample from surface and 3 samples from groundwater were collected and analyzed for various physico-chemical and bacteriological parameters.

Station Code	Name of the Stations	Latitude	Longitude
SW4	Kistaram Tank	17°12'35.92"N	80°46'56.30"E
SW5	Pedda Cheruvu (Kistaram)	17°13'13.812"N	80°46'57.348"E
SW6	Chilla Vagu	17°11'46.11"N	80°46'17.79"E
SW7	Rajarla Tank	17°10'11.95"N	80°49'15.41"E
SW8	Veshyakanthala Cheruvu -	17°12'22.45"N	80°50'48.85"E
SW9	Tamara Cheruvu	17°13'21.28"N	80°49'24.81"E
SW10	Cherukupalli Tank	17°15'30.85"N	80°47'8.68"E
SW11	Yedutla Cheruvu	17°12'34.92"N	80°44'36.64"E
SW12	Guruvai Cheruvu	17°13'18.42"N	80°44'30.26"E
SW-13	Pedda Cheruvu (Choudavaram)	17°10'23.89"N	80°46'8.31"E
GW-5	Rejarla Village	17°10'10.35"N	80°48'15.06"E
GW-6	NTR Nagar	17°12'1.05"N	80°49'46.09"E
GW-7	Kistaram Village	17°12'29.03"N	80°46'39.52"E
EW6	JVR OC -I & II Mine Discharge	17°11'2.06"N	80°46'12.70"E
EW7	JVR OC -I & II Base Workshop	17°12'32.00"N	80°48'39.17"E
EW8	JVR OC -I & II OB Dump Runoff /	17°12'16.49"N	80°46'44.82"E
EW12	JVR OC I&II EXP CHP ETP Outlet	17°12'11.88"N	80°47'37.07"E

#### Water Sampling Locations

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' 2023 to Sep' 2023 is enclosed as **Annexure – 20, 19 and Annexure – 17** respectively. The summarized data on effluent water quality in respect of four critical parameters stipulated for coal mines is furnished hereunder.

S.No	Location	Concentr ation	Parameter					
			pH (at 25⁰ C)	TSS At 105º C	TDS at 180⁰C	COD	BOD	Oil & Grease
1	JVR OC -I & II	Min	7	9	689	16	2.6	<1
	Mine Discharge	Max	7.9	22	1126	28	3.8	<1
2	JVR OC -I & II	Min	5.7	11	573	15	2	2.6
	Base Workshop ETP Outlet	Max	7.7	21	796	34	3.8	4.9
3	JVR OC -I & II	Min	7	10	691	18	2.6	<1
	OB Dump Runoff / Settling Pond Outlet	Max	7.8	25	1124	31	3.8	<1
4	JVR OC I&II	Min	7.1	8	512	15	2.4	2
	EXP CHP ETP Outlet	Max	7.8	28	789	29	3.8	4.8
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 18**.
- 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 **Annexure 20, 19 and Annexure 17** respectively.

### 12. 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 – 18**.

The phreatic surface levels are being monitored in 21 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 2019 to 2023 (up to monsoon season) is enclosed as **Annexure – 18**.

### 13. Noise Level Monitoring:

The summary of noise quality data is as furnished below. The detailed noise quality data monitored from Apr' 2023 to Sep' 2023 is enclosed as **Annexure – 21**.

S.No.	Location	Direction &	Day Time					
5.NO.	Location	Distance	Min	Max	Avg	Standard		
1.	JVR OC - I Site Office	Core Zone	53.9	60.2	57.26	75		
2.	JVR OC - I Base Workshop	Core Zone	60.7	67.1	62.70	15		

3.	Kistaram Village	NW & 5.0 KM	50.4	53.6	52.08	
4.	Sathupalli Town	NE & 1.5 KM	49.3	52.7	50.99	
5.	Rejarla Village	S & 6 KM	50.2	53.4	51.92	55
6.	Pallewada	SW & 6.3 KM	48.2	51.4	50.01	
7.	NTR Nagar	NE& 0.9KM	49.0	52.6	51.00	
S.No.	Location	Direction & Distance	Night Time			
			Min	Max	Avg	Standard
1.	JVR OC - I Site Office	Core Zone	35.3	41.3	38.47	70
2.	JVR OC - I Base Workshop	Core Zone	40.2	45.4	43.21	70
3.	Kistaram Village	NW & 5.0 KM	38.6	43.4	40.90	
4.	Sathupalli Town	NE & 1.5 KM	38.9	43.2	40.67	
5.	Rejarla Village	S & 6 KM	38.5	42.9	40.46	45
6.	Pallewada	SW & 6.3 KM	38.8	41.4	39.98	
7.	NTR Nagar	NE& 0.9KM	38.2	41.9	39.75	

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.

14. Capital and Revenue Expenditure incurred on Environment Management and Pollution Control Measures in 1<sup>st</sup> April'2023 to 30<sup>th</sup> Sep'2023:-

S.No.	Pollution Control measure	Expenditure in Rs.		
1.	Air pollution (prevention & control)	91557077		
2.	Water Pollution (prevention & control)	2313288		
3.	Land Development	6775176		
4.	Plantation	674529		
5.	Plant & Machinery for Env. Protection	6134135		
6.	Consultancy payments/ Scientific studies	0		
7.	OB Dump/Subsidence Stabilization	0		
8.	Others (Env.management cell etc.)	9474540		
	TOTAL	11,69,28,744		

#### 15. 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 - 28.

- **16. 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 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.

• Laying of CC roads in sathupally Nagara panchayat in Khammam Dist.

• Laying of CC roads in Kistaram of GP kistaram & Rejerla of GP rejerala in sathupally in Khammam Dist.

• Laying of CC roads in Rajeev Nagar GP Siddaram& kothuru of GP Rajerala panchayat in Khammam Dist.

- Laying of CC Drains in Rajeev Nagar GP Rajerala panchayat in Khammam Dist.
- Laying of CC Roads sathupally Nagara panchayat under CSR Budget 2021-21.
- Laying of CC Roads at Rajeev Nagar of Sathupalli under CSR Budget 2021-21

• Laying of CC Roads and side drains in Rajupeta, Rajupeta Bazar and Madadinarasaiahgudem villages under CSR Budget 2021-21.

• Construction of Panchyat office Building at Kistaram Village and Grampanchayat at sathupalli, under CSR 2020-21.

• Construction of Primary agricultural Co-operative Society building with godown at Kistaram, at Sathupalli.under CSR-2020-21.

• Providing dining hall with Kitchen shed at ZPH School, old center, sathupalli. Under CSR 2021-22.

 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 sathupalli.
- 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.
- Tailoring course started at Rudrakshapally from 18.02.2023 to 18.05.2023 for 30 Persons for a period of 3 Months.

#### Medical Camps, etc.:-

- Health Awareness Programme on Breast Lump Cancer and Cervical Cancer for Female Employees of SCCL and for Female Dependants 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.
- 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 utilized. From 13.04.2019 to 30.09.2023 about 6875 beneficiaries got utilized.

#### 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, 2021,2022 &2023 was observed from 5<sup>th</sup> June – 30<sup>th</sup> June in all mines and departments.
- f) Organised massive plantation under Vriksharopan Abhiyan in the month of August-2021

Project Officer JVR OC Mine – (I&II Expn.,)