

**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN BENCH
AT CHENNAI**

ORIGINAL APPLICATION No. 174 of 2020

Banothu Nandu Nayak

...Applicant

-vs-

The Singareni Collieries Company Ltd

And 6 others

...Respondents

REPLY FILED BY THE THIRD RESPONDENT

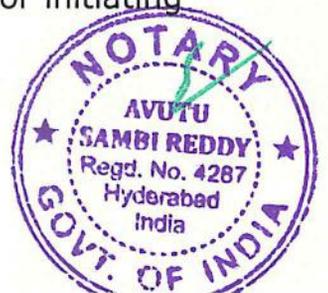
The third respondent, Telangana State Pollution Control Board states as follows:

1. The third respondent denies all the allegations, averments and statements contained in the application as false and incorrect, excepting those specifically admitted herein.
2. It is respectfully submitted that the above application has been filed by the Applicant, praying to appoint an independent experts Committee to verify the allegations raised by the applicant with respect to environmental violations, damage caused by the first respondent in the execution of Jalagam Vengal Rao Opencast Coal Mine at Sattupalli of Khamman District in Telangana State and prayed to direct the second and the third respondents to take appropriate action according to Environment Protection Act, 1986 for violations committed and loss caused by the first respondent and prayed to direct the District Collector to enumerate and assess the loss caused by the first respondent for restoring it to normalcy or providing housing scheme to the damaged houses as per the State Government Policy and prayed to direct the first respondent, State of Telangana and District Collector to setup health center under Corporate Social Responsibility at NTR Nagar Colony of Sattupalli of Khammam District to provide free health facilities as per Office Memorandum No. 3-11013/25/2014-IA.I, dated



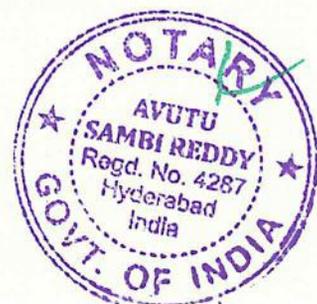
11.08.2014 of MoEF and to direct the second respondent to file action report on the violations recorded in the minutes of 48th meeting of EAC dated 13.06.2018 and 14.06.2018 for passing appropriate orders.

3. It is respectfully submitted that as regards the averments in para-1 are concerned, Singareni Collieries Company Ltd - the first respondent in the above application is having two coal mines projects in the name of Jalagam Vengal Rao Open Cast - I (JVR OC -I) and Jalagam Vengal Rao Open Cast -II (JVR OC-II) Coal Projects located in Ayyagarupeta (V) and Kommapelli (V) respectively in Sathupalli Mandal, Khammam District and these are carrying open cast mining.
4. As regards the averments in para-2 are concerned, the third respondent denies the averments and states that among the two mines JVR OC-I expansion was started in the year 2005 and 2007 with mining capacity of 2.5 Million TPA (Peak production) in mine lease area of 547.08 Ha (including Forest land of 380.52 Ha.). They obtained EC from the second respondent vide order dated 27.07.2007 (**ANNEXURE-R1**). They also obtained CFE from the third respondent herein vide order dated 27.09.2007(**ANNEXURE-R2**) and the third respondent has also issued latest CFO vide order dated 03.10.2016 with validity upto 30.06.2021 (**ANNEXURE- R3**). They applied for renewal of CFO, which is under process with the third respondent.
5. It is further submitted that subsequently they increased the production from 2.5 Million TPA to 5 Million TPA for JVR OC -I as per the coal demand to meet power requirement by the State Government for which they have not obtained EC and Consent of the third respondent. Later, they approached the MoEF&CC for violation of the EC on increase of production capacity and MoEF&CC directed to go for EC procedure and they obtained ToR (Terms of Reference) in which credible action is to be initiated which is one of the condition. The industry also requested the State Government to initiate Credible action against them and State Government has forwarded the same to the TSPCB for taking necessary action. As per the directions of the Head office, TSPCB, Hyderabad the Regional office, Kothagudem has filed a complaint against Singareni Collieries Company Ltd for initiating



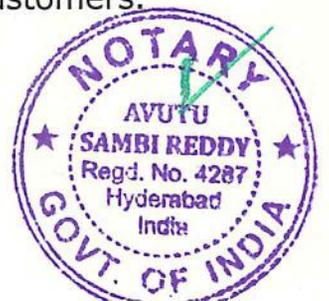
credible action regarding increase of production. The case was filed before Hon'ble First Class Judicial Magistrate, Sathupalli and the same is pending. I submit that in respect to JVR OC – I, Public hearing was also conducted on 14.02.2020 under EC procedure and they obtained EC for increased production capacity vide EC dated 01.02.2021.

6. It is respectfully submitted that the first respondent M/s Singareni Collieries Company Limited, Jalagam Vengal Rao opencast mine-II (JVR OC-II), Kommepalli (V), Sathupalli (M), Khammam District has obtained Environment Clearance from MoEF& CC vide letter No. J-11015/268/2007-IA.II (M) dated 28.03.2010 for mining capacity of 4 MillionTonnes per Annum (Normative) with a peak production of 5 Million Tonnes per Annum (**Annexure R-4**). They also obtained CFE from the third respondent herein vide order dated 26.06.2015 (**ANNEXURE-R5**). The industry has started coal mining activity in October 2017. The industry obtained latest CFO from this third respondent vide order dated 03.01.2018 with validity upto 31.10.2022 (**ANNEXURE-R6**).
7. It is further submitted that they proposed to increase the mining capacity from 5 MTPA to 10 MTPA by amalgamation of Jalagam Vengala Rao Opencast Mine Expansion (JVR OC-I Expansion) with Jalagam Vengala Rao Opencast Mine (JVR OC-II) in total mine lease (ML) area of 1953.46 Ha (including proposed area of 256.68 Ha.). After amalgamation, the project may be named as Jalagam Vengala Rao Opencast Mine (I&II Expansion).JVR OC –II obtained TOR (Terms of Reference) from the Ministry of Environment Forests and Climate Change, Government of India, New Delhi vide order dated 21.05.2019 to undergo the process of public hearing to obtain Environmental Clearance (EC) for proposed amalgamation of two mines and increase of mining capacity. In this regard, Public hearing was conducted on 14.02.2020 and minutes were communicated to MoEF&CC, New Delhi on 24.02.2020 for further process.
8. It is submitted that the first respondent is a Public Sector Company and carrying coal mining activity in different areas of the Telangana State and supply the coal as per demand by the power plants to



generate power and electrical power generation is necessary for State Government to supply power to farmers on free basis and other sectors i.e., Industries and Domestic etc.

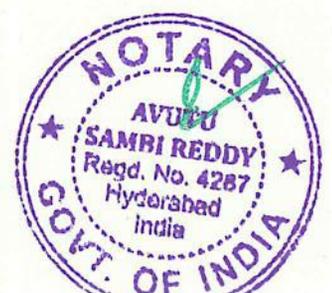
9. As regards the averments in para- 3 of the application are concerned, the third respondent denies those averments and states that the industry has to carry the coal mining activity as per the norms of the Director General of Mines & Safety (DGMS), Dhanbad. Open Cast Coal Mine involves exposing of coal seam by removing the overlying strata, extraction of the exposed coal seam and filling up the voids created by the extraction of coal with the overburden material removed. Sequence of operations involved in opencast mining is as follows: (I) Drilling of holes in overburden / coal benches (II) Charging of holes with explosive material (III) Blasting of overburden material / coal (IV) Lifting of broken overburden material, coal by using shovels and dumpers. Transportation of these overburden material up to the earmarked dump yards (External & Internal) etc.
10. It is further submitted that the first respondent Industry has provided water sprinkling at loading areas and on haul roads with two nos. of 28 KL water tankers and six Nos. of 12 KL mobile water sprinklers to control fugitive dust emissions. They are also having ETP consisting of settling tanks for treating effluents generated from Heavy engineering moving machinery workshop and treated effluents are being used for dust suppression within the premises. The industry provided garland drains to avoid soil erosion and water pollution. Part of the excess mine discharge is being utilized for dust suppression on haul roads and part of excess mine discharge is being sent to nearby irrigation tank and for ground water recharge. The industry developed green belt on OB dumps and within the mine lease area. Total plantation was taken up in an area of about 300 Ha for both JVR OC-I & OC-II. The industry is having Pit head Coal Handling Plant with crushers for JVR OC-I and they provided water spraying system to control dust emissions. These facilities are also being used by JVR OC-II as they have not established the same which are proposed in their project. The extracted coal is being transported to RCHP Rudrampur through covered Lorries from Sathupalli mine area for further rail transportation to the customers.



11. As regards the averments in para 4 to 6 are concerned, the third respondent denies those averments and states that, the Zonal office, TSPCB, Hyderabad has directed the Regional Office, TSPCB, Kothagudem to conduct monitoring of Singareni Collieries Company Ltd for their JVR OC Coal Projects located in Sathupalli, Khammam District and submit the report on 03.12.2020 in connection with complaint (O.A. No. 174 of 2020) filed by Applicant before Hon'ble NGT, Chennai against the first respondent regarding sound, air and soil pollution caused on account of the operation of Open Cast coal mining activity. The Regional office, TSPCB, Kothagudem has received complaint from the applicant and others on 10.12.2020. In this regard, the Board officials have inspected and conducted monitoring of the JVR Open Cast Coal mining projects (I & II) from 07.12.2020 to 09.12.2020 and submitted a report to the Head office on 14.12.2020. As per latest analysis reports for the water & Air samples collected during 07.12.2020 to 09.12.2020, the values are within the prescribed standards. Subsequently, the TSPCB, Hyderabad has reviewed Singareni in the Task Force committee meeting held on 06.02.2021 in connection with complaints. The TSPCB has issued directions vide order dated 22.02.2021 (**Annexure R-7**).

12. As regards the averments in para-7, the representatives of the first respondent company has informed that the JVR OC-1 mine is nearing to completion of coal mining. Presently, coal mining activity is not carried on and that the mine closure plan will be implemented as per the norms prescribed.

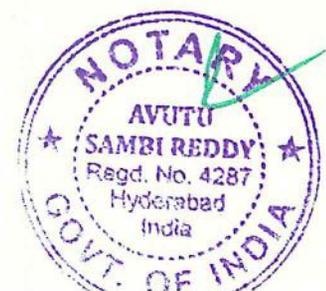
13. As regards the averments in para-8 and 9 are concerned, the third respondent denies them and states that as per EC order dated 28.03.2010 in condition No. 2 (A) (VIII), no coal transportation shall be undertaken by road. The industry submitted that EAC (Expert Appraisal Committee) of MoEF has agreed for modification for transportation of coal with mechanically covered trucks by road instead of transportation by road for a period of three years in the 19th EAC meeting held on 13th to 14th August 2014 (**ANNEXURE-R-8**). Earlier, keeping in view of the delay in progress of railway line works, SCCL requested Ministry



to extend the validity period of modification to enable transport of coal by road mode for a further period of two years. The proposal was considered by EAC in its 47th meeting held on 22nd August, 2019 and observed non - compliance of EC conditions. The EAC has recommended the Singareni that project proponent shall transport coal by road mode with covered tarpaulin only upto 31.12.2021 **(ANNEXURE-R9)** The first respondent has also proposed railway track from Kothagudem to Sathupalli with railway department for transportation of coal through railway wagons with investment of about Rs. 1000 Crores in which Singareni is spending an amount of Rs.700 Crores. Laying of railway track work is under progress and considerable work was completed. The industry representative has informed that railway track is expected to complete by the end of December 2021. The industry is transporting the coal by road from the project site in Sathupalli (not through Rejarla village as it is located other side of the mine) to Rudrampur village in Kothagudem Mandal and then transported through rail.

14. It is further submitted that the Industry is carrying air and water monitoring through EPTRI which is a Government Organization and having NABL accreditation and submitting the reports to the TSPCB, Regional office, Kothagudem. CER funds monitoring does not fall under the purview of the TSPCB. The industry has submitted Bank Guarantee for Rs. 26.67 Crores to the TSPCB, Hyderabad under EC violation prior to the Grant of EC. Subsequently, they obtained EC on 01.02.2021 for JVR OC-I Project

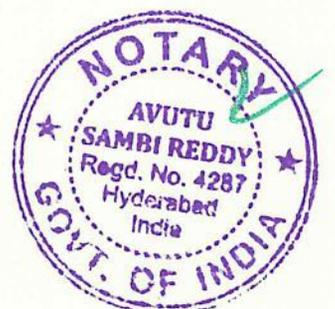
15. As regards to the averments in the Grounds A- E, the third respondent denies and states that the industry has submitted a reply on 03.10.2020 to this office notice issued by the Regional office, TSPCB, Kothagudem by stating that they carrying control blasting technique in the mine operations. Earlier, they carried study with CIMFR, Dhanbad at the existing JVR OC-I expansion project to control ground vibrations, noise and fly rock within safe limit keeping in view the nearby dwellings of Vengal Rao nagar and market yard and basing on the study they obtained necessary permissions from the DGMS (Director General of Mines & Safety) for conducting control blasting within 500 meters and



upto 100 meters of surface structures like Jinugupalli village, temple, tomb, PWD Road etc. They also reported that they have taken necessary air pollution control measures in and outside the mine area and that they are carrying regular Ambient Air Quality monitoring and the values are within the stipulated norms. **(ANNEXURE-R-10)**. In this regard, the Board officials have inspected and conducted monitoring of the JVR Open Cast Coal mining projects (I & II) during 07.12.2020 to 09.12.2020. During inspection, the following observations were made and submitted as below:

- a) The industry has stopped the discharge of mine water from JVR OC-I. Earthen ponds and drainage system for the discharge of mine water is empty and dry. Presently, they are discharging mine water from JVR OC-II mine into earthen ponds and then to Kistaram tank and chillavagu through earthen drain. The industry reported that they are carrying neutralization of the mine water with lime before its discharge. But, there is no provision / system provided for lime dosing as observed during inspection. Water samples of mine discharge water were collected during inspection.
- b) The industry is carrying water sprinkling / spraying at dust generating sources and on haul roads through mobile water tankers to control fugitive dust emissions.
- c) The industry has provided water spraying system at coal loading bunkers, coal transfer points in the mines and coal crusher.
- d) During blasting operations, noise monitoring was conducted in NTR Nagar on 07.12.2020 (3.15 PM to 3.30 PM) and at PO office, in the premises of Singareni on 09.12.2020 (3.20 PM to 3.40 PM). No noise and vibrations were sensed in NTR Nagar. In NTR Nagar colony, the complainant and others have informed that sounds due to blasting operations are not sensing presently due to mine location was shifted far away from their colony i.e. NTR Nagar.

e) But, noise and vibrations were sensed in Jalagam Vengal Rao Nagar and this may be due to mine area is nearer to this place.



f) House cracks were observed in complainant house and also other surrounding houses. This may be due to type of construction and also continuous exposes to vibrations due to blasting operations.

16. It is respectfully submitted that during inspection, the Board officials have conducted AAQ and Noise monitoring, collected water samples from Bore wells in NTR Nagar and Jalagam Vengal Rao Nagar and also mine discharge water from JVR OC-II. As per latest analysis reports for the samples collected in December 2020, the values are within the prescribed standards (**ANNEXURE-R-11**). The TSPCB, Hyderabad has reviewed Singareni in the Task Force Committee meeting held on 06.02.2021 in connection with complaints. The TSPCB has issued directions vide order dated 22.02.2021 (**ANNEXURE-R-12**). As per Task Force directions dated 22.02.2021, the industry shall treat the mine water and the treated mine water shall be reused in the premises and excess treated water shall only be discharged into nearby water bodies.

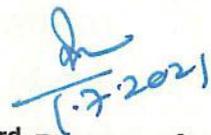
17. Therefore it is respectfully submitted that none of the grounds raised by the applicant merits any acceptance by this Hon'ble NGT and that the application deserves to be dismissed in limini.

18. Therefore, it is most humbly prayed that this Hon'ble Tribunal may be pleased to dismiss the above application and pass such further or other orders and thus render justice.

Dated at Hyderabad on this the 29th day of June, 2021.

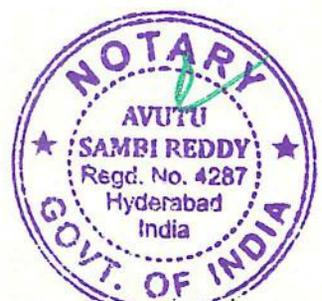


Counsel for 3rd Respondent



3rd Respondent

MEMBER SECRETARY
T.S. Pollution Control Board
Paryavaran Bhavan, A-3, I.E.,
Sanathnagar, Hyderabad-18.



VERIFICATION

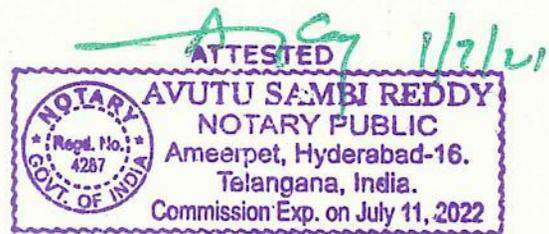
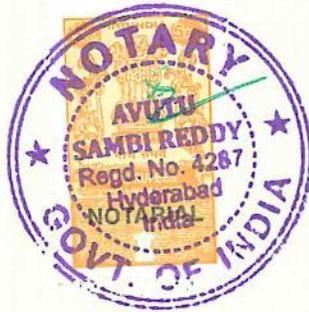
I, Neetu Kumari Prasad, I.A.S., W/o.Rajesh Kumar, aged about 47 years Member-Secretary of the Respondent Board, i.e., Telangana State Pollution Control Board, do hereby verify that what are all stated above are true and correct to the best of my knowledge, information and belief.

Verified at Hyderabad on this the 29th day of June, 2021.

Date: 29-06-2021.

Place: Hyderabad.


 3rd Respondent
 MEMBER SECRETARY
 T.S. Pollution Control Board
 Paryavaran Bhavan, A-3, I.E.,
 Sanathnagar, Hyderabad-18.



ANNEXURE-1

10

No.J-11015/301/2007-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O.Complex, Lodi Road,
New Delhi -110003.

Dated: 27th July 2007

To:
M/s Singareni Collieries Company Ltd.,
Kothagudam Collieries - 507 101,
Bhadrachalam Road Railway Station,
Khammam District, A.P.

Sub: Jalagam Vengal Rao Opencast-I Coal Mine Project (expansion in rated capacity from 0.70 MTPA to 2.0 MTPA with a peak production of 2.50 MTPA and increase in lease area from 410.58 ha to 547.08 ha) of M/s Singareni Collieries Company Ltd., located in village Ayyagaripeta, Mandal Sathupalli, District Khammam, Andhra Pradesh- environmental clearance - reg.

Sir,

This is in continuation to your application vide letter No. CRP/ENV/A/403/669 dated 14.10.2006 for Terms of Reference which was granted vide MOEF letter dated 15.01.2007. and with reference to your application for environmental clearance based on the prescribed Terms of Reference vide letter No. CRP/ENV/A/478/237 dated 31.03.2007 and your subsequent letter dated 19.07.2007 and E-mails dated 19.07.2007 and 20.07.2007 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project originally named **Sathupally Opencast Project-I** was granted environmental clearance vide MOEF letter NO. J-11015/240/2003-IA.II(M) dated 16.09.2004 for production of coal at a rated capacity of 0.7 MTPA in a lease area of 410.58 ha. The project has since been renamed as **Jalagam Vengala Rao Opencast-I Coal Mine Project**. The present application is for expansion in production from 0.7 MTPA to 2.50 MTPA (peak production) and for expansion in lease area from 410.58 ha to 547.08 ha of the Jalagam Vengal Rao Opencast (OCP)-I Coal Mine Project. The total lease area of the extension Block is 136.50 ha which consists of forestland. Forestry clearance has not been obtained for the extension area. Of the total lease area, area for excavation is 298.32 ha, 133.10 ha is for external OB dumps, 72.75 ha is for safety barrier, and drainage along the quarry, 18.13 ha is for service buildings, CHP, and sub-station, 14.78 ha is for road diversion, 10 ha is for colony/township with 175 dwelling units is proposed to be constructed in non-forestland. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the 10 km buffer zone. The NTR Canal (formerly Bethupally Floop Flow Canal) passes through the lease area and it is proposed to modify the natural drainage by diverting the canal for a total length of 18.32 km and will be realigned with the original course so as to retain the existing feeder channels of downstream irrigation tanks. NOC form the State Minor Irrigation Department has been obtained on 23.09.2004. A bund exists against protection of flood. Project involves R&K of one village within the blasting zone, namely, Vengal Rao Nagar involving 335 PAFs. Mining will be opencast by mechanised method and involves controlled blasting. Expansion of the rated capacity of the mine is from 0.70 million tonnes per annum (MTPA) to 2 MTPA of coal production with a peak production of 2.50 MTPA from 4th year onwards. Mineral transportation of coal is by by road to CHP at Kothagudam covering a road length of 65 km. A separate CHP for this project of 500 TPH capacity is under construction at a distance of 1.2 km. Ultimate working depth of the mine is 150 m below ground level (bgl). Water table in the core zone is in the range of 2.50m - 12.10m bgl -19.52m bgl during the pre-monsoon and in the range of 0.75m - 10.80m bgl in the post monsoon period. Mining has intersected water table. Clearance from the State Ground Water Department has been obtained on 06.07.2007. Peak water requirement is 826 m3/d, which will be met from mine pit water. An estimated 177 Mm3 of OB and topsoil will be generated in life of mine; of which about 135.84 Mm3 (76.75%) of the OB will be backfilled (of which 14.70 Mm3 of OB has been already accumulated in one external OB dump) and the balance 41.16

M(BW)

W
CP

W

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Mm3 will be dumped in the external dump of a max. height of 90m in 3 benches of 30m each. Backfilling will begin from 5th year onwards and concurrent backfilling from 11th year till end of mine life. A void of 129.17 ha will be left at the end of mine life which will be converted into a water reservoir. Public Hearing was held on 13.03.2007 for increasing the production from 7 lakhs TPA to 20 lakh TPA with a peak production of 25 lakh TPA (from 4th year onwards). Life of the mine at the rated capacity is 20 years. Mining Plan has been approved by Ministry of Coal on 21.05.2007 for 2 MTPA. Capital cost of the project is Rs. 131.06 crores.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Jalagam Vengala Rao Opencast-I Coal Mine Project of M/s Singareni Collieries Company Ltd. for expansion in production of coal from 0.7 MTPA to 2.50 MTPA (peak) rated capacity and expansion in lease area from 410.58 ha to 547.08 ha** under Section 12 of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Para 2.1.1 of MOEF Circular dated 13.10.2006 subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) No mining operations shall be undertaken in the 136.50 ha of forestland until forestry clearance has been obtained under the provisions of FC Act, 1980.
- (ii) Diversion of the NTR Canal (Bethupally Flood Flow Canal) for a length of 18.32 km shall be undertaken with the approval of the State Irrigation Department and shall ensure that it is realigned with the original course so as to retain the existing feeder channels of downstream irrigation tanks.
- (iii) Diversion of the PWD road passing through the lease shall be done with the prior approval of the competent authorities.
- (iv) Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- (v) OB should be stacked at earmarked external OB dumpsite(s) within ML area and shall be a maximum height of 90m only consisting of 3 benches of 30m each. The ultimate slope of the dump shall not exceed 28°. Backfilling shall begin at the end of 5th year in the decoaled area. Monitoring and management of existing reclaimed dumpsites 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.
- (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 utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.
Garland drains of suitable size, gradient and length and sump capacity should 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 provided for adequate retention period to allow proper settling of silt material.
- (vii) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (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, conveyor system, haulage roads, and transfer points.
- (ix) Drills should be wet operated only.

- (x) Controlled blasting shall be practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.
- (xi) Afforestation shall cover a total area of not less than 393.13 ha which includes reclaimed external OB dump (72.75 ha), reclaimed topsoil dump, backfilled area (169.15 ha), along ML boundary, along drains and along service buildings (18.13 ha) within the lease and in the township by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xii) A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 298.32 ha which shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. The balance 129.17ha of decolaed area being converted into a water reservoir shall be gently sloped, and the upper benches of which shall be stabilised and reclaimed with plantation and the reservoir peripherally fenced.
- (xiii) 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 groundwater if any, for mining operations.
- (xiv) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- (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 dewatering of 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 any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.
- (xvii) ETP should also be provided for workshop and CHP wastewater. Mine discharge water shall be treated to prescribed standards before discharge into any natural water course.
- (xix) A sewage treatment plant shall be installed in the combined township and in the proposed township to be established within the lease.
- (xx) 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 any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bangalore.
- (xxi) 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.

B. General Conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.

- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO₂ and NO_x 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.
- (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, dump trucks (loading and unloading) points should be provided and properly maintained.
- (v) Data on ambient air quality (SPM, RPM, SO₂ and NO_x) should 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.
- (vi) Adequate measures should 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.
- (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 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.
- (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.
- (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.
- (x) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.
- (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.
- (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.
- (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.
- (xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xv) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (xvi) The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned

within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>.

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.



(Dr. T. Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Andhra Pradesh, Secretariat, Hyderabad.
3. Chief Conservator of Forests, Regional office (SZ), Ministry of Environment & Forests, 4th Floor, F-Wing, Kenriya Sadan Block, Kormangala, Bangalore - 560034.
4. Chairman, Andhra Pradesh State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanalnagar, Hyderabad - 500038.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, ~~Khammam~~ Government of Andhra Pradesh.
8. Monitoring File 9. Guard File 10. Record File



ANNEXURE-2

REGD.POST WITH ACK.DUE

CONSENT ORDER FOR ESTABLISHMENT

Order No. 35/PCB/CFE/RO-KGM/HO/2007 -1475 Dt.27.09.2007

Sub: PCB - CFE - M/s. Singareni Collieries Co. Ltd., JVR OC-I Sathupalli Open Cast Project, Sathupalli (M), Khammam District - Consent for Establishment (Expansion) of the Board under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P&C of P) Act, 1981 - Issued - Reg.

- Ref:
- 1) Public hearing conducted on 13-3-2007 at Tahasildhar Office, Sathupalli, Khammam district.
 - 2) Environmental Clearance issued by MOE&F, GOI on 27.7.2007
 - 3) Industry's application received through SWCC on 3.8.2007
 - 4) R.O's inspection report dt. 29.8.2007.
 - 5) CFE Clearance Committee meeting held on 17.9.2007

1. In the reference 3rd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) (Expansion) for open cast coal mining with installed capacities as mentioned below, with a project cost of Rs.39.8 crores.

Sl. No.	Product	Existing	Proposed	After Expansion
1	Coal mining	0.7 million TPA	1.3 million TPA	2.0 million TPA

AEES Formula

Peak production of coal (2.5 million TPA) is expected in the 4th year.

As per the application, the above activity is to be located at Sy.No. 168 & 169, Near Sathupalli Town, Sathupalli (M), Khammam District. The details of area are as follows:

Sl. No.	Particulars	Forest land (Ha.)	Non-Forest Land (Ha.)	Total Land (Ha.)
1.	Already acquired	201.80	208.78	410.58
2.	Proposed for expansion	136.50	-	136.50
	Total	338.30	208.78	547.08

3. The above site was inspected by the Environmental Engineer, Regional office, Kothagudem, A.P Pollution Control Board on 21.8.2007 and found that the site is surrounded by

North : OC - I and followed by Vengal Rao Colony
 South : Lankapally Reserve forest
 East : Bethupalli Canal followed by Sathupalli
 West : Lankapally Reserve Forest

APP CB
 KOTHAGUDEM
 No. 1098
 Date 17/10/2007

4. The Board after careful scrutiny of the application and verification report of Regional Officer, hereby issues CONSENT FOR ESTABLISHMENT (Expansion) to your activity Under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. This order is issued to produce the product as mentioned at para (1) only.
5. This Consent Order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

Encl: Schedule 'A'
Schedule 'B'

Sd/-
MEMBER SECRETARY

To
M/s. Singareni Collieries Co. Ltd.,
JVR OC-I Sathupalli Open Cast Project,
Head Office, Kothagudem,
Khammam district - 507 101

Copy to: 1. The JCEE, Z.O., Vijayawada for information and necessary action.
2. The E.E., R.O, Kothagudem for information and necessary action.

/// T.C.F.B.O ///

P. R. Srinivas
JOINT CHIEF ENVIRONMENTAL ENGINEER (CFE)

29/9/07

SCHEDULE - A

1. Progress on implementation of the project shall be reported to the Regional Office, Kothagudem, A.P. Pollution Control Board once in six months.
2. The proponent shall obtain Consents for operation from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.
3. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions by the Board.
4. The consent of the Board shall be exhibited in the factory premises at a conspicuous place for the information of the inspecting officers of different departments.
5. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
6. Rain Water Harvesting (RWH) structure (s) shall be established on the mine site.
7. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public liability insurance Act, 1991 shall be followed.
8. This order is valid for period of 5 years from the date of issue.

SCHEDULE - BWater:

1. The source of water is Mine discharge water and the maximum permitted water consumption after expansion is 852 KLD.
2. The Effluent Treatment Plant (ETP) shall be constructed and commissioned and Air Pollution control equipment shall be installed along with the commissioning of the activity. All the units of the ETP shall be impervious to prevent ground water pollution.
3. The effluents from the workshop shall be treated to the on land for irrigation standards, stipulated under Environment (Protection) Rules, 1986, notified and published by Ministry of Environment and Forests, Government of India as specified in schedule VI vide G.S.R.422 (E), dt.19.05.1993 and its amendments thereof.
4. Details of ETP proposed:

Effluent source	Treatment proposed	Mode of final disposal
Excess mine water (1348 KLD)	Sedimentation tanks	Nearby irrigation tank and ground water recharge.
Hydraulic Earth Moving Machinery (HEMM) washings (100 KLD)	Oil and grease trap.	For development of plantation after treating to standards of on land for irrigation.
Domestic (17 KLD)	--	Septic tank followed by soak pit.

5. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.

- a) Industrial washings, spraying in mine pits.
- b) Domestic purposes.

Air:

6. The proponent shall comply with the following for controlling air pollution.

- To avoid the dust generation from the drilling operations, wet-drilling methods shall be adopted.
- Appropriate explosives shall be used for blasting and overcharging of blast-holes is to be avoided.
- The volume of dust raising from dumps by the action of wind shall be controlled by planting grass on slopes and plants on dumps soon after their formation.
- Dust from Coal and OB transport roads shall be controlled by taking following measures.
 - Black topping of permanent roads like routes to coal handling plant, permanent internal roads etc.
 - Water spraying on haul roads and permanent transport routes at required frequencies. Provisions for two mobile water sprinklers has been made for this purpose.
 - Avenue plantation along roads.
 - Taking up thick plantation around the quarry and OB dump, which will serve as a barrier to prevent the dispersion of dust.
- Effective dust suppression measures shall be taken up at Coal Handling Plant (CHP). Crusher house shall be enclosed to the extent possible and dust suppression arrangement shall be provided at suitable locations in the CHP. All conveyors, screens, crushers etc, shall be provided with covers fugitive dust during operation. The following measures shall be adopted at CHP in order to control dust emissions
 - Minimization of height of fall at all coal transfer points.
 - Internal lining of chutes and bins to take care of abrasion & dust.
 - Continuous water spraying arrangements for dust suppression.
- The exhaust emissions from HEMM containing CO, Sox & NOx shall be controlled by adhering to the schedule maintenance that includes periodical tuning of engines.



TELANGANA STATE POLLUTION CONTROL BOARD
 PARYAVARAN BHAVAN, A - 3, INDUSTRIAL ESTATE,
 SANATHNAGAR, HYDERABAD - 500 018

Phone: 23887500

Fax: 040-23815631

CONSENT ORDER FOR CFO RENEWAL - RED CATEGORY

CONSENT ORDER NO. 16082281186

DATED: 03/10/2016

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof.) Rules 2008 & Amendments thereof)

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof, (hereinafter referred to as 'the Acts', 'the Rules') and amendments thereof and the rules and orders made there under to M/s. Singareni Collieries Company Limited, JVR OC - I Expansion Project, Ayyagaripet (V), Sathupalli (M), Khammam District (hereinafter referred to as 'the Applicant /Industry') and the industry is authorized to operate the industrial plant to discharge the Effluents from the outlets and the quantity of Emissions per hour from the chimneys, by operating pollution control equipment, as detailed below,

i) Out lets for discharge of Effluents :

Outlet No.	Description of Outlet	Max Daily Discharge in KLD	Point of Disposal
1.	Excess mine discharge water	1348	After treatment in Settling ponds shall be used for Dust suppression and excess shall be discharged after meeting the standards at Schedule-B.
2.	Washings of HEMM	800	After treatment in Oil & Grease trap, shall be used for onland for gardening duly complying to the standards stipulated in Schedule-B
3.	Domestic	417	Septic tanks followed by soak pits.

This consent order is valid for Mining of Coal in Mine lease area of 923.27 Hectare for the following capacity:

Products	Capacity
Coal (Open cast mining)	2.5 Million Tons per annum (Peak production)

This order is subject to the provision of 'the Acts' and amendments made thereunder and further subject to the terms and conditions incorporated in the schedule A and B enclosed to this order.

This combined order of consents is valid for a period upto June 30, 2021

Sd/-
MEMBER SECRETARY

To
M/s. Singareni Collieries Company Limited,
JVR OC - I Expansion Project, Ayyagaripet (V),
Sathupalli (M), Khammam District
Pin: 507303

Copy to:

1. The JCEE, Zonal Office Hyderabad for information and necessary action.
2. The SEE, Cess. Cell, TSPCB Head Office, Hyderabad for information and necessary action.
3. The EE, Regional Office, Kothagudem for information and necessary action.

///T.C.F.B.O///

SENIOR ENVIRONMENTAL ENGINEER (UH-I)

SCHEDULE – A

1. The applicant shall make applications through online for renewal of Consent (under Water & Air Acts) at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts for obtaining Consent of the Board. The applicant can also apply for Auto Renewal of the CFO at least 30 days before the expiry of this order as per the procedure and eligibility stipulated in the Board Circular dt:19.11.2015 & 08.12.2015 (available in Board's Website: <http://tspcb.cgg.gov.in/Pages/Circulars.aspx>).

2. This order is issued in line with Board's CFO order dated 09.04.2015. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts. The industry shall comply with earlier CFO order dated 09.04.2015 still applicable.

3. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

4. The facility may explore the possibility of tapping the solar energy for their energy requirements.

5. All other conditions stipulated in the Schedule – A of the earlier CFO order remains same. The industry should ensure consistent compliance of the condition of Schedule-A.

6. The Board reserves its right to modify above conditions or stipulate any further conditions and to take action including revoke of this order in the interest of protection of public health and environment.

SCHEDULE - B

1. Total Water Consumption shall not exceed : 2252.00 KLD

S.No.	Purpose	Quantity
1	Others Process & Wash (Dust suppression, Plantation and washings of HEMM)	1730
2	Domestic	522

2. The Treated Effluent Discharged/pre-treated effluent sent to CETB shall not exceed the following prescribed standards

Outlet No.	Parameter	Limiting Standard
1	pH	5.5 – 9.0
	Total Suspended Solids (TSS)	100 mg/l
	Total Suspended Solids (TSS)	100 mg/l
	Oil & Grease	10 mg/l

	Biochemical Oxygen Demand (BOD)	30 mg/l
	Total Dissolved Solids (TDS)	2100 mg/l
	Chemical Oxygen Demand (COD)	250 mg/l
2	pH	5.5 – 9.0
	Total Suspended Solids (TSS)	200 mg/l
	Biochemical Oxygen Demand (BOD)	100 mg/l
	Total Dissolved Solids (TDS)	2100 mg/l

3. The Emission shall not exceed the following prescribed standards

Chimney No.	Parameter	Emission Standards
		NIL

4. The industry should ensure segregation of Acid Mine Discharges (AMD) from abandoned mines, coal stocks, coal handling facilities, washeries & coal waste tips etc. and should adopt adequate treatment to achieve prescribed standards for the AMD as stipulated at S.No.2 prior to disposal. The plan of action for segregation of AMD, technology of the proposed treatment and mode of disposal should be submitted to Board.

5. The industry should not produce beyond the permitted capacity as mentioned in this order, without obtaining prior CFE & CFO of the Board. The mining capacity of the coal also should not be increased more than IBM approved capacity.

6. The industry shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board. The industry shall provide separate water meters with necessary pipeline for assessing the quantity of water used for each of the purposes as per Cess Form-I.

7. The industry should comply with the ambient air quality standards of PM10 (Particulate Matter size less than 10µm) - 100 ug/ m³; PM2.5 (Particulate Matter size less than 2.5 µm) - 60 ug/ m³; SO₂ - 80 ug/ m³; NO_x - 80 ug/m³, outside the factory premises at the periphery of the industry.

Standards of other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009.

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)
Night time (10 PM to 6 AM) - 70 dB (A)

8. The project shall maintain separate water meters for recording water consumption for various purposes and also maintain daily records.
9. The project shall maintain the water spraying system properly by adopting preventive maintenance schedule to avoid fugitive dust emissions.
10. The project shall carryout water spraying on haul roads to avoid fugitive dust emissions due to vehicular movement.
11. The project shall develop and maintain greenbelt as per norms.
12. The project shall connect the CAAQM station data the PCB server and install additional CAAQM stations as per EC.
13. The project shall submit monthly AAQM data to RO, Kothagudem.
14. The industry shall use atleast 25% of fly ash on volume to volume basis of the total materials used for external dump of overburden and same percentage in upper benches of back filling of open cast mines, as per Fly Ash Notification.
15. The industry shall comply with MOE&F Notification No.GSR.02 (E), dt. 02.01.2014 for supply of coal with Ash content not exceeding 34% to coal based Thermal Power plants.
16. The personnel working in dusty areas should wear protective / respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
17. The industry should reuse the treated effluents generated from workshop for dust separation and for raising plantation.
18. Blasting should be sequential in such a manner as to achieve minimum vibration.
19. The industry should comply with the following for controlling air pollution.
 - a) To avoid the dust generation from the drilling operations, wet-drilling should be done.
 - b) Use of appropriate explosives for controlled blasting and avoid overcharging the blast holes.
 - c) The volume of dust rising from dumps by the action of wind should be controlled significantly by planting grasses on slopes and plants on dumps soon after their formation.
 - d) To overcome the problems of dust generation from mine haul roads, the following steps should be adopted.
 - i) Black topping of permanent roads like routes to coal handling plant, permanent internal roads etc.
 - ii) Water spraying on haul roads and permanent transport routes at required frequencies. Provision should be made for procurement of six water sprinklers for this purpose.
 - iii) Avenue plantation along roads should be adopted.

e) Effective dust suppression measures are proposed to be taken up at pit head coal handling plant (CHP). The crusher house should be enclosed to the extent possible and dust suppression arrangement should be provided at suitable locations in the CHP. All the conveyors, screens, crusher etc., should be provided with covers to avoid fugitive dust during operation. Some of the measures proposed to be adopted at CHP in order to control dust emission include:

- i) Height of fall to be minimized at all coal transfer points.
- ii) Internal lining of chutes and bins should be done to take care of abrasion & dust.

20. Dumping of overburden, if done, should use the retreating pyramid bench formation with concurrent, physical and biological reclamation. Dumps should be contoured and provided with relief control and stabilized. Dump tops should be compacted, leveled and be properly drained.

21. Soil binding and nitrogen fixing plants should plant in the Mining Lease Area. Biological reclamation should be done in two phase the first phase should be plant appropriate quick growing grass and shrubs and the second phase should grow slower native shrubs and trees.

22. Ground water table levels should be monitored every season. Any lowering of the ground water table in comparison to the previous season should be reported to the Board immediately. Discarded pits should be allowed to fill with water.

23. Vehicles should be well maintained and engine idling should be minimized. Vehicle cabs should be made dust-proof.

24. The applicant should submit Environment statement in Form V before 30th September of every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.

25. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991, should be followed.

26. The conditions stipulated in this order are without any prejudice to rights and contentions of this Board in any Hon'ble court of Law.

Sd/-
MEMBER SECRETARY

To
M/s. Singareni Collieries Company Limited,
JVR OC - I Expansion Project, Ayyagaripet (V),
Sathupalli (M), Khammam District
Pin: 507303

///T.C.F.B.O///

SENIOR ENVIRONMENTAL ENGINEER (UH-I)



Ministry of Environment & Forests (MOEF)

No.J-11015/268/2007-IA.II(M)

Paryavaran Bhawan,
C.G.O.Complex,
New Delhi -110510.

Dated: 28th March 2010

To
Director (P & P),
M/s Singareni Collieries Company Ltd.,
Kothagudam Collieries - 507 101,
Bhadrachalam Road Railway Station,
Khammam District, A.P.

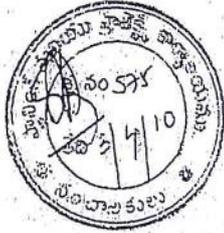
Sub: Jalagam Vengalrao Opencast Project-II (4 MTPA Normative and 5 MTPA peak) in a project area of 1409.81 ha) of M/s Singareni Collieries Company Ltd., located in village Kommepalli, Mandal Sathupalli, district Khammam, Andhra Pradesh - environmental clearance - reg.

Sir,

This is with reference to your application vide letter No. CRP/ENV/A/405/228 dated 29.03.2007 for Terms of Reference, which was granted vide MOEF letter dated 29.06.2007 and with reference to your application for environmental clearance based on the prescribed Terms of Reference vide letter No. CRP/ENV/A/405/530 dated 31.08.2009 and letters dated 07.10.2009 and 09.03.2010 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. The application is for opening a new opencast mine - Jalagam Vengala Rao Opencast Coalmine-II Project with an annual production capacity of 4 million tonnes per annum (MTPA) (normative) with a peak production of 5 MTPA in a total lease area of 1409.81 ha. Grade of coal is D and E. Of the total project area, 540.01 ha is agricultural land, 788.22 ha is forestland, 14.61 ha is grazing land, 13.32 ha is water bodies, 4.10 ha is for roads and 50 ha is for colony to be established outside the lease. Forestry clearance has been obtained for 12.02 ha and applied for 776 ha of forestland. Of the total lease area, area for excavation is 749.38 ha, 411.49 ha is for external OB dumps, 22.12 ha is for infrastructure, 4.13 ha is for roads, 16.76 ha is for conveyor & railways, 126.47 ha is for safety zone, 6.94 ha is for magazine, 22.52 ha is for infrastructure, and 50 ha is for colony outside the ML. A pithead CHP of 6 MTPA is also proposed within the ML. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the 10 km buffer zone. A number of streams flow such as the Tammileru and Kattaleru flow adjoining the ML and join River Godavari and form the main drainage of the area. The project involves modification of the existing drainage due to diversion of the Batupalli Flood Flow Canal. The mining is opencast by mechanised method involving shovel-dumper. Mineral transportation of 12121 TPD of coal is by conveyor-cum rail from CHP. Ultimate working depth of the mine is 363.45 m below ground level (bgl). Water table in the study area during pre-monsoon is in the range of 2.50-12.10m bgl and during post monsoon period is in the range of near surface 0.75-10.80m bgl. Peak water requirement is 2370 m3/d of

CRP PP	
W.No.	628
Date	06/04/10

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which 2100 m³/d is for dust suppression and would be met from mine pit water. Clearance from the State Ground Water Board has been obtained. An estimated 1045.68 Mm³ of OB would be generated over the life of the mine; of which about 835.59 Mm³ of the OB would be backfilled which includes 225.17 Mm³ of OB to be used to fill the void of JVR OC-I and the balance 261.73 Mm³ would be dumped in external dump of a max. height of 90m in 3 benches of 30m each of which 55.28 Mm³ of OB would be rehandled from west ext. OB dump to leave a void of a max. depth of 35m at the final mine closure stage. Backfilling will begin from 10th year onwards. The project involves R&R of one village Kommepalli and land losers from 4 villages - Kommepalli, Kistaram, Errakunta & Rejerla. Life of the mine is 54 years. Public Hearing was held on 21.05.2009. Mining Plan has been approved by Ministry of Coal on 16.03.2010. Capital cost of the project is Rs. 474.64 crores.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Jalagam Vengalrao Opencast Project-II (4 MTPA Normative and 5 MTPA peak) in a project area of 1409.81 ha) of M/s Singareni Collieries Company Ltd., under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and MOEF Circulars thereunder subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) No mining operations shall be undertaken in 776.20 ha of forestland until prior clearance has been obtained under the provisions of FC Act, 1980.
- (ii) Topsoil shall 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.
- (iii) Adequate safety distance/barrier shall be maintained from the drainage along the ML boundary. Diversion Bathupalli Flood Flow Canal flowing across the lease and its realignment at the boundary of the lease shall be carried out in consultation with the State Flood and Irrigation Department.
- (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 Mm³ of OB shall be rehandled from west ext. OB dump to backfill the decoaled void. The ultimate slope 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 Ministry of Environment & Forests and its Regional office located at Bangalore on a yearly basis.
- (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, etc. The drains shall be regularly desilted and maintained properly.

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 shall also provided for adequate retention period to allow proper settling of silt material.

- (vi) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- (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 operations, conveyor system, haulage roads, and transfer points.
- (viii) No coal transportation shall be undertaken by road.
- (ix) Drills shall be wet operated only.
- (x) Controlled blasting shall be practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- (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, backfilled quarry area (296.17), along ML boundary, along roads and along service buildings and CHP, and other areas within the lease (83.09 ha) by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xii) A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 296.17 ha which shall be backfilled from the 10th year of mining and backfill the void and by rehandling 55.28 Mm³ OB from the external OB dump and leaving a final mine void of 35m depth at the final mine closure stage. The backfilled quarry area shall be afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xiii) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.
- (xiv) ETP shall also be provided for workshop and CHP wastewater. Mine discharge water shall be treated to prescribed standards before discharge into any natural water course.
- (xv) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- (xvi) Mine discharge water 28,450 m³/d 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 Suspended Solids (TSS) before discharge into natural water courses/agriculture.

- (xvii) No groundwater 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.
- (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 any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bangalore.
- (xx) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- (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 utilised 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.
- (xxii) The costs for implementation of a Project specific R&R Plan of for R&R of one village Kommepalli involving 120 PAFs and land losers from 4 villages - 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.
- (xxiii) An amount not less than a capital expenditure of Rs 27.52 crores and a revenue expenditure of Rs 584.21 lakhs shall be earmarked and utilised 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.
- (xxiv) The project authorities shall carry out a pre-mining socio-economic survey based on the UNDP Human Development Report and monitor the socio-economic status of the adjoining villages to be taken up under CSR once every three years and maintain records thereof and report in their Annual Report, the socio-economic impact of CSR activities. The yearly activities undertaken 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.

B. General Conditions

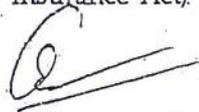
- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.
- (iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2 and NOx 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.
- (iv) Fugitive dust emissions (PM10 and PM 2.5) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.
- (v) Data on ambient air quality (PM10, PM 2.5, SO2 and NOx) 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.
- (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 shall be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- (ix) Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (x) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.
- (xi) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.

- D/170
GMP
- (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bangalore.
 - (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.
 - (xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
 - (xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
 - (xvi) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>.

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.


(Dr. T. Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Andhra Pradesh, Secretariat, Hyderabad.
3. Chief Conservator of Forests, Regional office (SZ), Ministry of Environment & Forests, 4th Floor, F-Wing, Kenriya Sadan Block, Kormangala, Bangalore - 560034.
4. Chairman, Andhra Pradesh State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanatnagar, Hyderabad - 500038.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Khammam, Government of Andhra Pradesh.
8. Monitoring File 9. Guard File 10. Record File



TELANGANA STATE POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, A - 3, INDUSTRIAL ESTATE,
SANATHNAGAR, HYDERABAD - 500 018

Phone: 23887500
 Fax: 040 - 23815631
 Website :www.appeb.ap.nic.in

REGD.POST WITH ACK.DUE

CONSENT ORDER FOR ESTABLISHMENT

Order No. 5/PCB/CFE/RO-KGM/HO/2015 570

Dt. 26.06.2015

Sub: PCB – CFE - M/s. Singareni Collieries Company Ltd (SCCL), Jalagam Vengalrao Opencast Project – II (JVR OC-II), Kommepalli (V), Sathupalli (M), Khammam District – Consent for Establishment of the Board under Sec.25 of Water (Prevention & Control of Pollution) Act, 1974 and Under Sec.21 of Air (Prevention & Control of Pollution) Act, 1981 - Issued - Reg.

Ref: 1) Public Hearing conducted on 21.05.2009.
 2) Environmental Clearance dt. 28.03.2010 issued by MOE&F, GOI.
 3) Industry's application received on 05.05.2015.
 4) R.O's inspection report dt. 03.06.2015.
 5) CFE Committee meeting held on 12.06.2015.

1. In the reference 3rd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for opening a new open cast mine – Jalagam Vengalrao Open Cast Coal Mine – II Project to produce the following products with installed capacities as mentioned below, with a project cost of Rs. 447.06 Crores.

S.No	Products / Activity	Proposed capacity
1.	Coal (Mining)	4 Million Tons per Annum (MTPA) (Normative) with a peak production of 5 MTPA.

2. As per the application, the above activity is to be located at Jalagam Vengalrao Opencast Project – II (JVR OC-II), Kommepalli (V), Sathupalli (M), Khammam District in an area of 1409.81 Ha. The mining is by open cast method involving Drilling, blasting, Excavation and loading, waste rock, coal extraction and loading, sizing / crushing and loading into trucks. The proponent submitted Environmental Clearance (EC) dated 28.03.2010 obtained from MoEF, GoI vide ref 2nd cited.
3. In the reference 3rd cited, the Regional Officer submitted verification report stating that the above site was inspected by Asst. Environmental Engineer, Regional office, Kothagudem, Telangana State Pollution Control Board on 03.06.2015 and observed that the site is surrounded by

North : JVR OC- I
South : Private land & Rejarla village
East : Private lands & Sathupalli – Vijayawada State high way.
West : Forest land

Office of the
 PO, JVR OC I
 Inw. No. 139/b
 Date 6/7/15

4. The Board, after careful scrutiny of the application along with verification report of Regional Officer, EC dt: 28.03.2010 issued by MoEF, Gol and after examining the issue in CFE Committee meeting held on 12.06.2015, hereby issues **CONSENT FOR ESTABLISHMENT** to your activity under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned' at para (1) only.**
5. This Consent order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

Encl: Schedule 'A'
Schedule 'B'

To,
M/s. Singareni Collieries Company Ltd (SCCL),
Jalagam Vengalrao Opencast Project - II (JVR OC-II),
Kommepalli (V), Sathupalli (M),
Khammam District

Sd/-
MEMBER SECRETARY

// T.C.F.B.O//


Senior Environmental Engineer
(Unit - I)

4/9

DGM (Smmr)

SCHEDULE – A

1. Progress on implementation of the project shall be reported to the concerned Regional Office, T.S. Pollution Control Board once in six months.
2. Separate energy meters shall be provided for Sewage Treatment Plant (STP) and Air pollution Control equipment to record energy consumed.
3. The proponent shall obtain Consents for Operation (CFO) from TSPCB, as required under Sec.25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under sec. 21/22 of the Air (Prevention & Control of Pollution) Act, 1981, before commencement of the activity.
4. **Notwithstanding anything contained in this consent order, the Board hereby reserves its right and power under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions by the Board.**
5. The consent of the Board shall be exhibited in the factory premises at a conspicuous place for the information of the inspecting officers of the concerned departments.
6. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
7. The industry shall maintain a good housekeeping.
8. Rain Water Harvesting (RWH) structure (s) shall be established at appropriate locations in the premises / colony.
9. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.
10. **This order is valid for period of 5 years from the date of issue.**

SCHEDULE – B**Water:**

1. The source of water is mine seepages.

S. No.	Purpose	Quantity (KLD)
1.	Process & wash	---
2.	Dust suppression	2160 KLD
3.	Washing of HEMM	50 KLD
4.	Plantation	60 KLD
5.	Domestic	70 KLD
	Total	2340 KLD

2. The maximum Waste Water Generation shall not exceed the following:

S. No	Source	Quantity (KLD)
1.	Washing of HEMM	90KLD
2.	Domestic	70KLD
	Total	160KLD

3. Treatment & Disposal : The proponent shall comply with the following:

S. No	Effluent	Treatment	Mode of final disposal
1.	Washings of HEMM	Oil & Grease Trap & settling tank	Plantation
2.	Domestic	STP*	Plantation.
3.	Mine seepages	Settling tanks	Natural drains / Irrigation tanks.

4. *The Proponent shall provide STP for the proposed colony. The Proponent shall submit detailed plan in this regard within two months.
5. Mine discharge water (28,450 m³/day) during peak monsoon shall be treated in three stage sedimentation tank along with coagulants, if required and shall meet standards described especially with respect to pH, As, F & total suspended solids (TSS) before discharge into natural water courses / agriculture.
6. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.
- Spraying in mine pits
 - Domestic purposes.
 - Processing, whereby water gets polluted and pollutants are easily bio-degradable.
 - Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.
7. The proponent shall take following mitigation measures as proposed to control water pollution:
- Garland drains to be provided all along the quarry surface area to prevent inrush of surface/ dump yard rain water into quarry.
 - Water accumulated due to rain as well as seepage to be led to the main sump of the pit for removal of suspended solids and to be subsequently pumped to the surface. The mine water to be utilized for dust suppression, vehicle washing, plantation etc.
 - Check dams/ rock fill dams to be constructed wherever necessary to facilitate water retention and reduce siltation of nearby water bodies.

- iv) Provision of oil and grease traps in Heavy Earth Moving Machinery (HEMM) workshop for treatment of effluent generated from washing of HEMM and treated water to be recycled/ reused.

Air:

8. The fugitive emissions generated from blasting, OB removal, coal extraction area, coal handling plant, transportation in the haul roads, loading & unloading points and HEMM equipment movement shall be controlled by adopting the following mitigation measures:
- i) Water spraying of haul roads and other transport routes at regular intervals.
 - ii) Continuous dust suppression arrangements at conveyer belts and coal transfer points at Coal Handling Plant (CHP). Effective dust suppression measures shall be taken up at pit head CHP.
 - iii) The crusher house shall be enclosed to the extent possible and dust suppression arrangement shall be provided at suitable locations in the CHP.
 - iv) All the conveyors, screens, crusher etc shall be provided with covers to avoid fugitive dust during operation.
 - v) Following measures shall be adopted at CHP to control dust emission:
 - Height of fall to be minimized at all coal transfer points.
 - Internal lining of chutes and bins to be done to take care of abrasion and dust.
 - Continuous water spraying arrangement to be made for dust suppression.
 - vi) Wet drilling shall be carried out for minimizing dust generation.
 - vii) Volume of dust rising from dumps by the action of winds shall be control by planting grass on slopes and plants on dumps soon after their formation.
 - viii) Black topping of coal transport roads like routes to coal handling plant, permanent internal roads etc., shall be taken up.
 - ix) Avenue plantation shall be developed along the roads.
 - x) Periodical maintenance of Heavy Earth Moving Machinery shall be carried out.
 - xi) Avoiding overloading of coal carrying trucks during transportation of coal and covering with tarpaulin to avoid coal spillage / fugitive emissions.
 - xii) Green belt development in the mining and surrounding areas.
 - xiii) Reclamation and plantation on the overburden dumps, green belt along the roads, around quarry and external overburden dump. Plantation shall be taken up in three rows which will serve as barrier to prevent dispersion of dust.

9. The mechanical equipment and vehicles shall be periodically maintained to reduce noise pollution.
10. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the Regional Office of Telangana State Pollution Control Board.
11. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MOE&F, GOI vide notification No. GSR 826(E), dated. 18.11.2009 during construction and regular operational phase of the project.
12. 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 shall be provided with ear plugs/muffs.
13. The industry shall take following mitigation measures as proposed to control noise pollution:
 - i) Controlled blasting technique with optimum explosive charge shall be scientifically designed for controlling noise and vibrations.
 - ii) Periodical maintenance and tuning of machinery to be ensured.
 - iii) Effective mufflers to be maintained on all HEMM.
 - iv) Green belt to be provided around the quarry, service buildings and dump yard, to screen the noise, as well as for arresting dust.

Solid Waste:

14. The solid waste generation from the proposed project is over burden material (OB) of 1045.65 Mm³ during entire life of the project. The over burden and top soil excavated from the quarry shall be dumped separately at pre-determined place. The top soil shall be utilized in spreading over external dumps and back filled areas as a part of reclamation.
15. The following rules and regulations notified by the MoE&F, GoI shall be implemented.
 - a) Municipal Solid Waste (Management and Handling) Rules, 2000.
 - b) Hazardous waste (Management, Handling and Transboundary Movement) Rules, 2008 and amendments thereof.
 - c) Batteries (Management & Handling) Amendment Rules, 2010.
 - d) E-Waste (Management & Handling) Rules, 2011

Other Conditions:

16. A separate environmental management cell with suitable qualified personnel shall be set up.
17. Measures for prevention and control of soil erosion and management of silt shall be undertaken.
18. The recommendations / commitments made during the Public Hearing held on 21.05.2009 shall explicitly be followed from pollution control point of view.
19. The proponent shall comply with all the directions issued by the Board from time to time.
20. Concealing the factual data or submission / fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts.
21. The Board reserves its right to modify above conditions or stipulate any further conditions in the interest of environment protection.

Sd/-
MEMBER SECRETARY

To,
M/s. Singareni Collieries Company Ltd (SCCL),
Jalagam Vengalrao Opencast Project – II (JVR OC-II),
Kommepalli (V), Sathupalli (M),
Khammam District.

// T.C.F.B.O//


Senior Environmental Engineer
(Unit – I)

5/9



TELANGANA STATE POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, A - 3, INDUSTRIAL ESTATE,
SANATHNAGAR, HYDERABAD - 500 018

Phone: 23887500

Fax: 040-23815631

CONSENT FOR OPERATION (FRESH)

CONSENT ORDER NO. 170421033095

DATED: 03/01/2018.

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof, and the rules and orders made there under to M/s. Singareni Collieries Company Ltd, Jalagam Vengalrao Opencast Project - II (JVR OC - II), Kommepalli(V), Sathupalli (M), Khammam District(hereinafter referred to as 'the Applicant /Industry') and the industry is authorized to operate the industrial plant to discharge the Effluents from the outlets and the quantity of Emissions per hour from the chimneys, by operating pollution control equipment, as detailed below,

i) Out lets for discharge of Effluents :

Outlet No	Description of Outlet	Max Daily Discharge in KLD	Point of Disposal
1.	Washings of HEMM	90	After treatment in Oil & Grease trap, shall be used for onland for gardening duly complying to the standards stipulated in Schedule -B.
2.	Domestic effluents	70	After treatment in STP, shall be used for greenbelt duly complying to the standards stipulated in Schedule -B.

This consent order is valid for Opencast coal mining in Mine lease area of 1409.81Hectare for the following capacity:

S.No.	Name of the Product	Capacity
1	Coal (Open cast mining)	4 MTPA (normative) with a peak production of 5 MTPA

This order is subject to the provision of 'the Acts' and the Rules and amendments made thereunder and further subject to the terms and conditions incorporated in the schedule A, B and C enclosed to this order.

This combined order of Consents and Authorization is valid for a period ending with the .October 31, 2022

Sd/-
MEMBER SECRETARY

To
The Project officer,
M/s. Singareni Collieries Company Ltd,
Jalagam Vengalrao Opencast Project - II (JVR OC - II),
Kommepalli(V), Sathupalli (M), Khammam District.
Pin: 507303

///T.C.F.B.O///


SENIOR ENVIRONMENTAL ENGINEER (FAC)
(Unit-I)

SCHEDULE – A

1. The applicant shall make applications through online for renewal of Consent (under Water & Air Acts) and Authorisation under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts for obtaining Consent & HW Authorisation of the Board. The applicant can also apply for Auto Renewal of the CFO atleast 30 days before the expiry of this order as per the procedure and eligibility stipulated in the Board Circular dt.19.11.2015 & 08.12.2015 (available in Board's Website: <http://tspcb.cgg.gov.in/Pages/Circulars.aspx>).
2. This order is issued in line with Board's CFE order dated 26.06.2015. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts. The industry shall comply with earlier CFE order dated 26.06.2015.still applicable.
3. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) as constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution)Act,1981.
4. The industry shall immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions etc.
5. a) All the fugitive emissions shall be controlled with proper measures.
b)The applicant shall also install the equipment such as wind speed recorder, wind direction recorder.
6. The applicant shall not change or alter either the quality or the quantity or the rate of the discharge or the route of discharge and shall not change or alter either the prescribed quality or the rate of emission without the previous written permission of the Board.
7. The applicant shall, not later than 30 days from the date of issue of this consent order, certify in writing to the Board that the applicant has installed or provided for an alternative electric power source sufficient to operate all facilities installed by the applicant, to comply with the terms and conditions of this consent. In absence of alternative electric power source sufficient to operate all facilities installed by the applicant, to comply with the terms and conditions of this consent, production shall be stopped.
8. Any up-set condition in any plant/plants of the industry, which result in, increased effluent discharge and/ or violation of standards stipulated in this order or the emission of any Air Pollutant into the environment in excess of the standards laid down by the Board, occurs or is apprehended to occur due to accident, or other unforeseen act or event, the person-in-charge of the premises, from where such discharge / emission occurs or is apprehended to occur shall forthwith intimate the fact of such occurrence or the apprehension of such occurrence to this Board, by fax / email under intimation to the Collector and District Magistrate.
9. In case of such episodal discharges / emissions mentioned in item 6 above, the industry shall take immediate action to bring down the discharge / emission below the limits prescribed in this order.
10. A good house keeping shall be maintained both within the factory and in the premises. All hoods, pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the effluent collection system only and shall not be allowed to find their way into storm drains or open areas.
11. a)The industry shall carryout analysis of waste water discharges or emissions through chimneys, for the parameters mentioned in Schedule – B of this order at regular intervals.
b)The industry shall maintain following records to accessible to the Board, whenever required.
 - i. Analysis reports of waste water/ emissions.
 - ii. Log book for operation of pollution control systems.
 - iii. Inspection book

12. The applicant shall set up FOUR Ambient Air Quality Monitoring Stations for continuous recording of relevant critical parameters mentioned in Schedule – B as per the CPCB guidelines and submit monthly reports.
13. Separate power connection with energy meter shall be provided for the Pollution Control Equipments and record of power consumption and chemicals consumption for the operation of pollution control equipment shall be maintained separately.
14. The applicant shall comply with the directives/orders issued by the Board in this order and at all subsequent times without any negligence on his part. The applicant shall be liable for such legal action against him as per provisions of the Law/Act in case if non-compliance of any order/directive issued at any time and/or violation of the terms and conditions of this consent order.
15. The applicant shall furnish to the visiting officer and / or the Board any information regarding the construction, installation or operation of the effluent treatment system / air pollution control equipment / secured storage area of Hazardous Waste and such other particulars as may be pertinent for preventing and controlling pollution.
16. The industry is liable to pay compensation for any environmental damage caused by it, as fixed by the Collector and District Magistrate as Civil liability.
17. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 shall be followed.
18. Any unauthorized change in personnel, equipment as working condition as mentioned in the application by the person authorized shall constitute a breach of his authorization.
19. The applicant shall comply with the provisions of Batteries (Management & Handling) Rules, 2001.
20. The applicant shall put up two sign boards (6x4 ft. each) at publicly visible places at the main gate. The first sign board shall provide information on specific conditions of CFO. The second sign board shall display online data on quantity and nature of hazardous chemicals being used in the plant, as well as water, air emissions and solid waste generated within the premises.
21. The applicant may explore the possibility of tapping the solar energy for their energy requirements.
22. The applicant shall exhibit the Consent order of the Board in the premises at a prominent place for the information of the inspecting officers of the different departments.
23. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves the right and powers under Section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and its amendments thereof and under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and its amendments thereof to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.

SCHEDULE - B

1. Total Water Consumption shall not exceed : 2340.00 KLD.

S.No	Purpose	Quantity in KLD
1	Dust suppression	2160
2	Washings of HEMM	50
3	Domestic	70
4	Greenbelt	60

2. The Treated Effluent Discharged shall not exceed the following prescribed standards

Outlet No.	Parameter No.	Limiting Standards
1 & 2	pH	5.5 – 9.0
	Total Suspended Solids (TSS)	100 mg/l
	Oil & Grease	10 mg/l
	BOD (3 days at 27 ^o C)	30 mg/l
	Total Dissolved Solids (TDS)	2100 mg/l
	Chemical Oxygen Demand (COD)	250 mg/l

3. The industry should not produce beyond the permitted capacity as mentioned in this order, without obtaining prior CFE & CFO of the Board. The mining capacity of the coal also should not be increased more than IBM approved capacity.
4. The industry should comply with the ambient air quality standards of PM₁₀(Particulate Matter size less than 10um) - 100 ug/ m³; PM_{2.5}(Particulate Matter size less than 2.5 um) - 60 ug/ m³; SO₂ - 80 ug/ m³; NO_x - 80 ug/m³, outside the mine premises at the periphery of the mine.
5. Standards of other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009.
- i. Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)
 - ii. Night time (10 PM to 6 AM) - 70 dB (A).
6. The project shall submit the details of additional load takenup in JVR – OC-I, within a month.
7. The project shall maintain separate water meters for recording water consumption for various purposes and also maintain daily records.
8. The project shall provide STP to treat 70 KLD Domestic wastewater generated from colony, etc., within 6 months. They shall submit time bound action plant to the Board within a month.
9. The project shall maintain the water spraying system properly by adopting preventive maintenance schedule to avoid fugitive dust emissions.
10. The project shall carryout water spraying on haul roads to avoid fugitive dust emissions due to vehicular movement. The project shall provide permanent water sprinkling system along the haul roads.
11. The project shall install 3 fixed AAQM stations and one CAAQM station in core area for monitoring of ambient air and connect the CAAQM data to TSPCB server. They shall submit monthly AAQM data to RO, Kothagudem.
12. The project shall develop and maintain greenbelt as per norms.
13. The industry shall take effective measures such as covering coal transport vehicles with tarpaulins, mechanical sweeping of roads, etc to avoid fugitive emissions.
14. The industry shall maintain water mist sprayers at coal bunkers to control fugitive emissions.
15. The industry shall supply coal with ash content not exceeding 34% to Thermal Power plants as per the MOE&F,GOI notification GSR.02(E), dt.02.01.2014.
16. The vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.

17. The personnel working in dusty areas should wear protective / respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
18. The industry should reuse the treated effluents generated from workshop for dust separation and for raising plantation.
19. Blasting should be sequential in such a manner to achieve minimum vibration.
20. The industry should comply with the following for controlling air pollution.
 - To avoid the dust generation from the drilling operations, wet-drilling should be done.
 - Use of appropriate explosives for controlled blasting and avoid overcharging the blast holes.
 - The volume of dust rising from dumps by the action of wind should be controlled significantly by planting grasses on slopes and plants on dumps soon after their formation.
 - To overcome the problems of dust generation from mine haul roads, the following steps should be adopted.
 - Black topping of permanent roads like routes to coal handling plant, permanent internal roads etc.
 - Water spraying on haul roads and permanent transport routes at required frequencies. Provision should be made for procurement of six water sprinklers for this purpose.
 - Avenue plantation along roads should be adopted.
 - Effective dust suppression measures should be taken up at pit head coal handling plant (CHP). The crusher house should be enclosed to the extent possible and dust suppression arrangement should be provided at suitable locations in the CHP. All the conveyors, screens, crusher etc., should be provided with covers to avoid fugitive dust during operation. Some of the measures proposed to be adopted at CHP in order to control dust emission include:
 - Height of fall to be minimized at all coal transfer points.
 - Internal lining of chutes and bins should be done to take care of abrasion & dust.
21. Dumping of overburden, if done, should use the retreating pyramid bench formation with concurrent, physical and biological reclamation. Dumps should be contoured and provided with relief control and stabilized. Dump tops should be compacted, leveled and be properly drained.
22. Soil binding and nitrogen fixing plants should be planted in the Mining Lease Area. Biological reclamation should be done in two phases. The first phase should be plant appropriate quick growing grass and shrubs and the second phase should grow slower native shrubs and trees.
23. Ground water table levels should be monitored every season. Any lowering of the ground water table in comparison to the previous season should be reported to the Board immediately. Discarded pits should be allowed to be filled with water.
24. Vehicles should be well maintained and engine idling should be minimized. Vehicle cabs should be made dust-proof.
25. The applicant should submit Environment statement in Form V before 30th September of every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.

26. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991, should be followed.
27. The conditions stipulated in this order are without any prejudice to rights and contentions of this Board in any Hon'ble court of Law.

Sd/-
MEMBER SECRETARY

To
The Project officer,
M/s. Singareni Collieries Company Ltd,
Jalagam Vengalrao Opencast Project - II (JVR OC - II),
Kommepalli(V), Sathupalli (M), Khammam District.
Pin: 507303

///T.C.F.B.O///


SENIOR ENVIRONMENTAL ENGINEER (FAC)
(Unit-I)



TELANGANA STATE POLLUTION CONTROL BOARD

Paryavarana Bhavan, A-III, Industrial Estate, Sanathnagar, Hyderabad-500 018
Phones : 040-23887500 Fax: 040 - 23887519

BY REGD. POST WITH ACK. DUE

Order No. MHB-19/TSPCB/U-I/TF/2021- 1022

Dt.22.02.2021

Sub : M/s Singareni Collieries Company Limited, Jalagam Vengal Rao Open Cast (JVR OC) Coal Mining Project, Sathupalli area, Khammam District – Water (Prevention and Control of Pollution) Amendment Act, 1988 - Air (Prevention and Control of Pollution) Amendment Act, 1987 - **DIRECTIONS – ISSUED** – Reg.



- O.A. No. 174 of 2020 in Hon'ble NGT, Chennai
Complaints filed by residents of Rejerla (V), Sathupalli (M), Khammam District.
3. Inspection of your industry by the Board officials on 07.12.2020 to 09.12.2020.
 4. Hearing held on 06.02.2021 at Board office.

1. WHEREAS, Singareni Collieries Company Ltd is having two coal mines projects in the name of Jalagam Vengal Rao Open Cast – I Expansion (JVR OC –I Expansion) and Jalagam Vengal Rao Open Cast -II (JVR OC-II) Coal Projects located in Sathupalli, Khammam District.
2. WHEREAS, JVR OC –I expansion was started in 2005 & 2007 with mining capacity of 2.5 Million TPA (Peak production) in mine lease area of 547.08 Ha. (including Forest land of 380.52 Ha.). You have obtained EC from MoEF&CC and also obtained CFE & CFO from the TSPCB. CFO is valid upto 30.06.2021.
3. WHEREAS, the Board has received complaints from residents of Rejerla (V), Sathupalli (M), Khammam District regarding air, water and noise pollution due to Singareni mines.
4. WHEREAS, O.A. No. 174 of 2020 was filed before Hon'ble NGT, Chennai against your open cast (JVR OC) Coal Mining Project, Sathupalli area, Khammam District regarding sound, air and soil pollution caused due to operation of Open Cast Coal Mining activity.
5. WHEREAS, the Board has received complaints on 21.05.2020 & 30.05.2020 alleging that your industry is discharging the mine discharge water into the Jenugupalli Cheruvu and causing pollution problem to the surrounding environment.
6. WHEREAS, the Board officials inspected your industry on 30.05.2020 and following observations were made:
 - i. The canal which is connecting the JVR OC – I to Jinugupalli cheruvu is in wet condition which is showing that industry is discharged the mine discharge water into the Jinugupalli cheruvu and some quantity of water is also observed in the tank.
 - ii. Water from JVR OC-I F4 sump is partly pumping to Kistaram cheruvu after mixing of lime (in pipeline).
 - iii. Water from JVR OC – I sump is pumping to adjacent JVR OC-II sump. The industry representative informed that presently, JVR OC-II sump is using for storage of mine discharge water and the same water is using for sprinkling purpose to arrest dust emissions.
 - iv. The soil in the Jinugupalli cheruvu is in orange/ golden yellow colour.
 - v. This office officials directed the industry to stop discharging the mine discharge water outside the industry and also within the industry premises immediately.
 - vi. During inspection, water and soil samples were collected from following locations and submitted to Zonal Laboratory, Warangal for analysis:
 - Soil & water samples collected from mine sump within mine area of JVR OC-I open cast coal mine project.
 - Soil & water samples collected from drain within the mine area of JVR OC-1.
 - JVR OC-1 mine F4 sump Soil & water samples collected before discharging into drain leading to Kistaram cheruvu.
 - JVROC-1 mine Soil & water samples collected from stagnated water in earthen tank(near CHP) connected to Kistaram Cheruvu.

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- Soil & water samples collected from Kistaram Cheruvu .
- Soil & water samples collected from Jenugupally cheruvu.
- Soil & water samples collected from drain leading to Jenugupally cheruvu.

Complainants allegations & requests are as follows:

- They informed that the industry has discharged the water into Jenugupalli cheruvu.
 - They also informed that the industry has stopped the discharge of mine discharge water into the Jenugupalli cheruvu after the inspection of the Tahsildar, Sathupally(M).
 - They requested Singareni to allow water from mines to Jeenugupalli Cheruvu after proper treatment only for irrigation purpose.
- vii. As per the Analysis reports of the soil and water samples collected on 01.05.2020, the values of pH, TDS, Iron, Sulphate and COD values are exceeding the Boards prescribed standards. The details are furnished as below:

S. No.	Date of collection	Sample description	Parameter exceeded
1	01.05.2020	Water sample collected from settling ponds of overburden bench of JVR OC-II Open Cast Coal mine discharge water.	pH, TDS
2	01.05.2020	Mine water sample collected from mine sump within mine area of JVR OC-I Open Cast Coal mine project.	pH, TDS, Iron
3	01.05.2020	Soil sample collected from Jilugupalli cheruvu, Rejerla.	pH
4	01.05.2020	Soil sample collected from stagnated water from old NTR canal connected to Jilugupalli cheruvu.	pH
5	01.05.2020	Soil sample collected from settling ponds of overburden bench of JVR OC-II Open Cast coal mine discharge water.	pH
6	01.05.2020	Soil sample collected from mine sump within mine area of JVR OC-II Open cast coal mine project	pH
7	01.05.2020	Water sample (rain water collected from Jinugupalli cheruvu, Rejerla.	pH, Electrical conductivity
8	01.05.2020	Stagnated rain water sample collected from old NTR canal connected to Jinugupalli cheruvu.	pH
9	01.05.2020	Ground water sample collected from Bore well located in Vemula Prasad poultry form.	Sulphates, COD

viii. AS. Zonal Laboratory, Warangal & AEE.I, AES & AS of RO-Kothagudem have inspected and conducted monitoring of the JVR Open Cast Coal mining projects (I & II) from 07.12.2020 to 09.12.2020. The details are submitted as below:

- Singareni Collieries Company Ltd is having two coal mines projects in the name of Jalagam Vengal Rao Open Cast - I Expansion (JVR OC -I Expansion) and Jalagam Vengal Rao Open Cast -II (JVR OC-II) Coal Projects located in Sathupalli, Khammam District.
- JVR OC -I Expansion was started in 2005 & 2007 with mining capacity of 2.5 Million TPA (Peak production) in mine lease area of 547.08 Ha. (including Forest land of 380.52 Ha.). They obtained EC from MoEF&CC and also obtained CFE & CFO from the TSPCB. CFO is valid upto 30.06.2021.
- Subsequently they increased the production from 2.5 Million TPA to 5 Million TPA as per the coal demand to meet power requirement by the State Government for which they have not obtained EC and Consent of the TSPCB. Later, they approached the MoEF&CC for violation of the EC on increase of production capacity and MoEF&CC directed to go for EC procedure and they obtained ToR (Terms of Reference) in which credible action is to be initiated is one of the condition. The industry also requested the State Government to initiated Credible action against them and State Government has forwarded the same to the TSPCB for taking necessary action. As per the directions of the Head office, TSPCB, Hyderabad the Regional office, Kothagudem has filed a complaint against Singareni Collieries Company Ltd for initiating credible action regarding increase of production.

JVR OC- I is nearing to closing as coal reserves have exhausted. They may close the mine by March 2021 as per the information of the Singareni.

JVR OC -II was started in 2017 with mining capacity of 4.0 Million TPA (5.0 Million TPA Peak production). They obtained EC from MoEF&CC and also obtained CFE & CFO from the TSPCB. CFO is valid upto 31.10.2022.

Wastewater Treatment systems:

- The industry is pumping mine water from mine to earthen ponds for settling and utilized for water sprinkling, domestic purpose. The excess mine water is discharged into nearby water tanks / streams and the same are utilized by the farmers for their irrigation purpose.
- The industry has provided separate earthen ponds (2Nos.) for JVR OC-I & JVR OC-II.
- The industry provided vehicular servicing units in some mine areas and provided treatment systems to treat the wastewater.
- Domestic effluents are discharged into individual septic tanks in the mine area and office buildings.

Air pollution sources and its control measures:

- Excavation, drilling & blasting and loading & vehicular movement within the mine area. Fugitive dust emissions are generated during these operations.
- The industry is carrying water sprinkling / spraying at dust generating sources and on haul roads through mobile water tankers to control fugitive dust emissions.
- The industry has provided water spraying system at coal loading bunkers, coal transfer points in the mines and coal crusher.

Blasting operations: The industry reported that they adopted control blasting technique using delay detonators, nonels to reduce the fly rock, vibrations & noise to the surroundings.

7. During the inspection, following observations were made :

- The industry has stopped the discharge of mine water from JVR OC-I and earthen ponds and drainage system for the discharge of mine water is empty and dry. Presently, they are discharging mine water from JVR OC-II mine into earthen ponds and then to Kistaram tank and chilla vagu through earthen drain. The industry reported that they are carrying neutralization of the mine water with lime before its discharge. But, there is no provision / system was provided for lime dosing as observed during inspection. Water samples of mine discharge water were collected during inspection.
- The industry is carrying water sprinkling / spraying at dust generating sources and on haul roads through mobile water tankers to control fugitive dust emissions.
- The industry has provided water spraying system at coal loading bunkers, coal transfer points in the mines and coal crusher.
- During blasting operations, noise monitoring was conducted in NTR Nagar or 07.12.2020 (3.15 PM to 3.30 PM) and at PO office, in the premises of Singareni or 09.12.2020 (3.20 PM to 3.40 PM). No noise and vibrations were sensed in NTR Nagar. In NTR Nagar colony, the complainant and others have informed that sound due to blasting operations are not sensing presently due to mine location was shifted far away from their colony i.e. NTR Nagar.
- But, noise and vibrations were sensed in Jalagam Vengal Rao Nagar and this may be due to mine area is nearer to this place.
- House cracks were observed in complainant house and also other surrounding houses. This may be due to type of construction and also continuous exposes vibrations due to blasting operations. The residential houses are affecting in form cracks to walls of the houses. The industry has to carry the study in surrounding areas and provide proper compensation to the affected peoples to renovate the

- vii. No dust emissions were observed in NTR Nagar.
 - viii. The Zonal Laboratory has conducted AAQ and Noise monitoring, collected water samples from Bore wells in NTR Nagar and Jalagam Vengal Rao Nagar and also mine discharge water from JVR OC-II. The reports are enclosed.
 - ix. During inspection, the complainant and others of NTR Nagar were contacted and they expressed as below:
 - a. They informed that sounds due to blasting operations are not sensing presently due to mine location was shifted far away from their colony i.e. NTR Nagar.
 - b. Earlier, they suffered from blasting operations thereby their houses were affected badly and requested for compensation to repair their houses by Singareni.
 - c. They also requested the Singareni to construct new houses in place of existing houses as their houses are damaged due to blasting operations since long period.
 - d. They also suffered from dust pollution during blasting operations and vehicular movement.
 - e. They requested to spend CSR funds for their habitation and surrounding villages.
 - f. They requested to establish full-fledged hospital in their area.
 - g. They requested to provide employment in Singareni.
 - h. They requested to provide mineral water plants in their colonies and surrounding villages.
8. WHEREAS, the Board has reviewed the status in the Task Force Committee meeting held on 06.02.2021. Your industry representative and complainant attended the meeting.

The Committee noted that, complaints were received from residents of Rejerla (V), Sathupalli (M), Khammam District regarding air, water and noise pollution due to Singareni mines and O.A. No. 174 of 2020 was filed by Sri Banothu Nandu Nayak before Hon'ble NGT, Chennai against the industry regarding sound, air and soil pollution caused due to operation of Open Cast Coal Mining activity. Complaints were also received alleging that industry is discharging the mine discharge water into the Jenugupalli Cheruvu and causing pollution problem to the surrounding environment.

The Complainant informed that your industry is causing air and water into pollution in the surrounding areas and further informed that blasting operations were being carried out, thus causing noise pollution and causing damage to the nearby houses. The industry is discharging the untreated mine water into the nearby water bodies which re acidic in nature.

The Committee noted that, your industry was discharging excess mine water into nearby water tanks / streams and the same are utilized by the farmers for their irrigation purpose, Fugitive dust emissions are generated during the operations, noise and vibrations were sensed in Jalagam Vengal Rao Nagar and this may be due to mine area.

The Regional Officer, Khammam informed that, they received complaints regarding burning of bushes and observed various non-compliances and issued notice to the industry on 14.12.2020. The industry was carrying out blastings due to which the nearby houses are damaged. The industry was discharging the mine discharge water into the nearby water bodies ie., without treatment due to which, the pH values of the mine discharges were acidic in nature and are in Golden colour.

Your industry representative informed that, the unit have stopped discharging the mine water into nearby water bodies and the mining was stopped, taken-up neutralization with time in settling tank, regarding blasting they have taken measures.

After detailed discussion, the Committee recommended to issue certain directions to the industry to comply with.

9. After careful consideration of material facts of the case, the Board hereby issues following directions to your facility:

- i. The mine shall comply with all the CFO & HWA conditions issued by the Board.
- ii. The industry shall treat the mine water and the treated mine water shall be reused in the premises and excess treated water shall only be discharged into nearby water bodies.
- iii. The industry shall stop open burning of the bushes and other wastes. The industry shall carryout composting / vermin composting of the organic waste.
- iv. The industry shall carryout limited blasting and ensure that there shall not be any vibration to the surrounding areas.
- v. The mine shall provide water meters to measure the actual water consumption and waste water discharge and maintain a log register to record the readings.
- vi. The mine shall construct garland drain and siltation ponds of appropriate size at working area to arrest flow of silt and sediment. The water collected should be utilized for watering the mine area, roads, greenbelt development etc., after treatment.
- vii. The mine shall regularly carryout sprinkling of water at raw material loading and at transfer points to control dust emissions.

10. These directions are issued under Sec.33 (A) of Water (Prevention and Control of Pollution) Amendment Act, 1988 and under Sec. 31 (A) of Air (Prevention and Control of Pollution) Amendment Act, 1987.

11. The above mentioned directives shall be implemented by the industry, failing which legal action will be initiated against your industry under Sec.33 (A) of Water (Prevention and Control of Pollution) Amendment Act, 1988 and under Sec. 31 (A) of Air (Prevention and Control of Pollution) Amendment Act, 1987 directing closure of the industry in the interest of Public Health and Environment.

Sd/-
MEMBER SECRETARY

To
M/s Singareni Collieries Company Limited,
Jalagam Vengal Rao Open Cast (JVR OC)
Coal Mining Project,
Sathupalli area,
Khammam District

Copy to:

1. The JCEE., Z.O., Hyderabad for information and necessary action.
2. The EE, RO. Kothagudem for information and necessary action.
3. Concerned file.

// T.C.F.B.O //


Senior Environmental Engineer (FAC)
(UH - V)

**MINUTES OF THE 19th EAC (THERMAL & COAL MINING PROJECTS) MEETING
HELD ON 13th -14th August, 2014 IN NEW DELHI**

The 19th EAC (Thermal & Coal mining projects) Meeting was held on 13th -14th August, 2014 in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the proponents are given at Annexure-1 and 2 respectively.

B. Confirmation of Minutes: The Committee confirmed the minutes of the 17th EAC meeting held on 23rd -25th July, 2014.

C. The following proposals were considered:

19.1 Bijari OCP (1.50 MTPA normative and 2.25 MTPA peak in an ML area 269.025 ha) of M/s South Eastern Coalfields Ltd., Dist., Raigarh, Chhattisgarh –EC based on TOR granted on 18.11.2008.

19.1.1 The proposal is seeking environment clearance for Bijari OCP (1.50 MTPA normative and 2.25 MTPA peak in an ML area 269.025 ha) of M/s South Eastern Coalfields Ltd., Dist., Raigarh, Chhattisgarh.

19.1.2 The proponent made the presentation and informed that:

- i. The project was accorded TOR vide letter no. J-11015/433/2008-IA.II (M) dated 18.11.2008. TOR validity extended by one year on 16.12.2013.
- ii. The latitude and longitude of the project are 20° 15' 28" to 20° 15' 49" North and 83° 20' 59" to 83° 22' 37" East respectively.
- iii. Joint Venture: There is no Joint Venture.
- iv. Coal Linkage: New project, at present there is no railway siding nearby. This project is to be linked to various consumers through road sale consumers or Robertson railway siding situated at a distance of 50 km. After rail corridor comes to existence the coal dispatch of the project shall be linked to the nearest rail corridor.
- v. The land usage of the project will be as follows:

Pre-mining:

i. Pre-mining	
Total land involved	:273.375ha.
Breakup is as follows:-	
Tenancy	: 227.433Ha.
Forest	: Nil
Government	: 41.592Ha.
Total Land	: 269.025Ha
*Forest land falls in safety zone, (not to be acquired)	: 4.350Ha
Total land involved	:273.375Ha.
ii. Post- Mining :	
a) Total quarry area	: 198.483Ha
1. Void / Water body	: 36.363Ha
2.Reclaimed Internal Dump/ Backfilled Area	: 162.120Ha
b) Reclaimed External OB dump	: 17.550Ha

<p>maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.</p>	<p>dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.</p>
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19.13.3 The Committee recommended the corrections as stated in para 19.13.2 above.

19.14 Jalagam Vengal rao Opencast Project-II (4 MTPA Normative and 5 MTPA peak in a project area of 1409.81 ha) of M/s Singareni Collieries Company Ltd., located in village Kommepalli, Mandal Sathupalli, dist. Khammam, Andhra Pradesh. – EC Modification.

19.14.1 The proposal is for modification in EC condition of expansion (under 7(ii) of EIA Notification 2006) of Jalagam Vengal rao Opencast Project-II (4 MTPA Normative and 5 MTPA peak in a project area of 1409.81 ha) of M/s Singareni Collieries Company Ltd., located in village Kommepalli, Mandal Sathupalli, dist. Khammam, Andhra Pradesh.

19.14.2 The Environment Clearance was granted to the project vide letter no. J-11015/268/2007-IA.II (M) dated 28.03.2010. As per the EC Condition No. (viii) "No coal transport shall be under taken by road". Project proponent requested for modification in EC condition.

19.14.3 The proponent made the presentation and informed that:

- i. Initial survey for laying railway line from Sathupalli to Kothagudem has been completed. The Project cost is Rs. 360.00 crores and CCDAC sanctioned 70% of the project cost i.e., Rs. 252.00 crores and SCCL also paid percentage charges of Rs. 6.38 crores. The SC Railway, Secunderabad awarded contract to M/s. Kawre & Jawda Project Pvt. Ltd. Nagpur. Final field survey by the contractor was completed on 15.04.2013. Final alignment plan submitted on 24.10.2013 South central railway submitted DPR on 13.03.2014 The construction of railway line will take another 5 years.
- ii. SCCL requested MoEF to modify the condition of rail transport for permission to transport coal from the proposed project by road to the linked customers till the railway line is completed. SCCL will implement all mitigative measures to control air pollution during the phase of coal transportation by road. As such, EAC is requested to kindly recommend to modify the conditions with a permission to transport coal by road till the railway line is completed in view of the shortage of coal to power plants in the region.

19.14. 4 The Committee, after detailed deliberations, has agreed for the modifications in the EC conditions that the railway line should come into operation within a period of three years and until that time the coal may be transported by road with mechanically covered trucks. The Proponent shall take up the matter with concerned authorities to expedite railway line construction and shall maintain the road at its own cost for transportation of coal.

19.15 Mohanpur OCP Expansion of (1 MTPA to 2 MTPA in ML area of 164.91 ha) M/s Eastern Coalfields Ltd., Dist. Burdwan, West Bengal - EC under 7(ii) of EIA Notification 2006.

19.15.1 The proposal is for environment clearance for Mohanpur OCP (under 7(ii) of EIA Notification 2006) (from 1 MTPA to 2 MTPA in ML area of 164.91 ha) M/s Eastern

MINUTES OF 8th MEETING OF THE EXPERT APPRAISAL COMMITTEE (COAL) FOR ENVIRONMENTAL APPRAISAL OF COAL MINING PROJECTS HELD ON 11th FEBRUARY, 2021.

Friday, 11th February, 2021

Confirmation of the Minutes of 7th Meeting of the EAC (Coal) held on 29th January, 2021: No comment was made from members of the committee on the minutes of the 7th meeting of the EAC held during 29th January, 2021 therefore the Minutes of the Meeting (MoM) of 7th EAC meeting was confirmed.

Opening Remarks of the Chairman: At the outset, the Chairman welcomed the Expert members & other participants and requested to start the proceeding as per the agenda adopted for this meeting.

Consideration of Proposals: The 8th meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on 11th February, 2021 through video conferencing with support NIC team due to Covid-19 lockdown. The EAC considered proposals as per agenda adopted for the meeting. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

Agenda No. 8.1

Modernization of Jamadoba Underground Coal Mine of 0.34 MTPA in ML Area of 927.17 ha by M/s Tata steel Limited at village Jorapokhar, PattiyaDungri, Tehsil Jharia, District Dhanbad (Jharkhand) – reg Environment Clearance

[Online Proposal No. IA/JH/CMIN/109757/2019; File No. J-11015/91/2017-IA.II (M)]

8.1.1 The proposal is for grant of Environment Clearance (EC) for Modernization of Jamadoba Underground Coal Mine of 0.34 MTPA in ML Area of 927.17 ha by M/s Tata steel Limited at village Jorapokhar, Pattiya Dungri, Tehsil Jharia, District Dhanbad (Jharkhand). M/s. Vimta Consultant Pvt. Ltd alongwith M/s Tata Steel representative made a presentation on the key parameters and salient features of the project to the EAC (Coal).

8.1.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting are given as under:

- (i) The project area is covered under Survey of India Topo-Sheet No.- Points 1 (23° 41' 53.3" N 86° 22' 09.5" E); Points 12 (23° 43' 17.0" N 86° 22' 08.9" E); Points 15 (23° 43' 35.9" N 86° 22' 16.5" E); Points 55 (23° 42' 43.1" N 86° 23' 58.8" E); Points 63 (23° 41' 04.6" N 86° 24' 46.4" E); Points 66 (23° 41' 06.6" N 86° 24' 30.4" E); Points 89 (23° 41' 22.0" N 86° 23' 08.8" E) and Points 90 (23° 41' 21.4" N 86° 22' 58.1" E)
- (ii) Coal linkage of the project: It is a captive Mine.

- (iii) PP shall submit one-month noise monitoring data conducted at night time and vibration monitoring data, data of treated effluent from ETP.
- (iv) PP shall submit the riverine/riparian ecosystem conservation and management plan.
- (v) PP should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years.
- (vi) Plan for coal transportation from pithead to Amrapali Railway Siding through belt conveyer to be completed in 2 years with committed plan of actual status.
- (vii) Plan, design, alignment for diversion of stream and environment mitigation measures to be adopted along the diverted stream.
- (viii) PP shall submit Environmental Capital Expenditure by excluding Cost of rehabilitation. R&R cost should never be considered as Environmental expenditure.
- (ix) Environment Mitigation measures for the villages involved in R&R i.e. Manwatongri and Binglat till they are rehabilitated and other villages nearby.
- (x) Environment mitigation measures taken at Shivpur Railway siding and along the transportation till conveyer belt with silo loading is implemented.
- (xi) PP shall reply to concerns raised in PH specially on River water becoming dirty after CCL started work and Cracks being developed in houses due to blasting and pollution due to coal transportation.

The proposal is deferred in above lines

Agenda 8.9

Jalagam Vengalrao Opencast Project-II of 4 MTPA (Normative)/5 MTPA (peak) of M/s The Singareni Collieries Company Ltd in ML area 1409.81 ha located in village Kommepalli, District Khammam (Telangana)- Amendment in Environmental Clearance – reg.

[Online Proposal No. IA/TG/CMIN/196357/2021; File No. J-11015/268/2007-IA.II(M)]

8.9.1 The proposal is for Amendment in EC for Jalagam Vengalrao Opencast-II Project of 5 MTPA capacity in mine lease area of 1409.81 ha located in village Kommepalli, Mandal Sathupalli, District Khammam (Telangana).

8.9.2 The EAC during deliberations noted the following:

Earlier, the environment clearances to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/268/2007-IA.II(M) dated 28.03.2010 for 4.0 (Peak_5.00) MTPA in mine lease area of 1409.81 ha.

Total mining lease area as per block allotment is 1409.81ha. Mining Plan was approved by the MoC, GoI vide O.M. 13016/14/2009-CA-II, dated 05th April, 2010. Mine Closure Plan was approved by MoC, GoI vide O.M. 13016/14/2009-CA-II, dated 10th February, 2016

788.22 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 776.20 ha of forest land was been obtained vide

MoEF&CC letter No.F.No.8-56/2014-FC, dated 30th May,2017 and 12.02 ha of forest land covers in 244.02 ha of forest land diverted for JVR OCP-I Vide letter No. F.No.8-129/2003-FC, dated 02nd February, 2005.

Ground Water Clearance was obtained vide Memo No. 4693/HgII (2)/2008 dated 01st November, 2008 from state ground water department.

Consent to Operate for the existing capacity was obtained from the State PCB on 03.01.2018 and is valid till 31st October, 2022.

Two cases have been admitted by National Green Tribunal, Southern Bench, Chennai.

Case No. O.A. 174 of 2020 (SZ), dt: 08.09.2020 - Basing on a complaint received from Sri Banothu Nandu Nayak, R/o Sathupalli in regard to environmental violations and damage caused to houses by SCCL in operation of JVR Opencast mines.

Present Status: NGT appointed a Joint Committee comprising of District Collector, Senior Officers from MoEF&CC (RO, Chennai), TSPCB and DMG. It was stated that MoEF&CC, Regional Office, Chennai will be the nodal agency for co-ordination. 1st meeting was convened by the Joint Committee with SCCL on 02.12.2020 through video conference.

Case No. O.A.No.20 of 2021(SZ), dt:27.01.2021 - Basing on a complaint received from Sri Oggu Srinivasa Reddy, R/o Sathupalli and another in regard to violation of environmental conditions by SCCL in operation of JVR OCP-II.

Present Status: Case has been registered by NGT and adjourned to 26.03.2021.

EC dated 28th March, 2010 has a specific condition No. 2(A) (viii) of EC "*No coal transportation shall be undertaken by road*".

Earlier, keeping in view the delay in progress of railway line works, SCCL requested Ministry to extend the validity period of modification to enable transport of coal by road mode for a further period of two years. The proposal was considered by EAC in its 47th meeting held on 22nd August, 2019 and observed non-compliance of EC conditions. Ministry after deliberation on the recommendation of EAC sought clarification from the Project Proponent.

SCCL submitted the status of progress of railway line works vide Lr.No.CRP/ENV/A/405/698 dated 19th October, 2020, and requested to extend the validity period of modification to enable transport of coal by road mode up to March, 2022, considering the existing pandemic Covid19.

Ministry after examining the submission and request of SCCL and advised to apply for necessary amendment and subsequently apprise the EAC on status of compliance.

Accordingly, PP has submitted the proposal for extending the validity of modification to specific condition No.2(A) (viii) of the Environmental clearance to enable transport of coal by road mode up to March, 2022.

Transportation of coal has been proposed by Trucks/Dumpers from mine to pit head, from surface to siding (pit head CHP to RCHP, Kothagudem) by Road and from siding (RCHP Kothagudem) to customers by rail

8.9.3 The EAC after deliberations and considering the advance status of implementation of railway line recommends the proposal for grant of amendment in Environment Clearance JalgamVengalrao Opencast Project-II of 4 MTPA (Normative)/5 MTPA (peak) of M/s The Singareni Collieries Company Ltd in ML area 1409.81 ha located in village Kommepalli, District Khammam (Telangana), as per EIA Notification, 2006 with all the condition stipulated in EC dated 28th March, 2010 shall remain the same and subject to additional conditions as mentioned below for environment safeguards:

- (i) PP shall transport coal by road mode with covered tarpaulin only up to December 31st 2021
- (ii) PP shall only transport the coal in 40-50 tonnes trucks/dumper.
- (iii) State Pollution Control Board while granting CTO shall ensure that PP must follow all the norms of Ambient Air Quality.
- (iv) 5 fog cannon shall be permanently installed to reduce the impact of road transportation.
- (v) Mist type mobile water sprinkler arrangement shall be installed for dust suppression in areas like Loading operations, Crusher points, transfer points and CHPs etc.
- (vi) Thick green belt around the mining area and along the transportation route (Road side) (50000 nos) shall be developed by planting native species.
- (vii) CAAQMS to monitor ambient air quality parameters like PM10, PM2.5, SOx, NOx etc. shall be installed at locations in the population / habitation areas/ receptor villages.
- (viii) PM10 Analyser shall be installed at a particular point on the road to monitor the fugitive dust emission from coal transfer activities
- (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 mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- (x) PP shall comply with the judgment/orders of the two NGT cases Case No. O.A. 174 of 2020 (SZ), dt: 08.09.2020 - Basing on a complaint received from Sri Banothu Nandu Nayak, R/o Sathupalli in regard to environmental violations and damage caused to houses by SCCL in operation of JVR Opencast mines. 2. Case No. O.A.No.20 of 2021(SZ) , dt:27.01.2021 - Basing on a complaint received from Sri Oggu Srinivasa Reddy, R/o Sathupalli and another in regard to violation of environmental conditions by SCCL in operation of JVR OCP-II.

The meeting ended with thanks to the Chair.



Singareni Collieries Company Limited
(A Government Company)
Sathupalli, Kothagudem Area

P.O: Sathupalli-507 303,
Khammam District, T.S.

Phone : 08761-282734

Email: po_jvroc@scclmines.com

Ref.No. KGM/JVR/AGT/2020/335/ 522

Date: 26.09.2020

To

The Environmental Engineer,
Telangana State Pollution Control Board
Regional office, Kothagudem.



Sir,

Sub: PCB-RO-KGM- Toll Free Complaints (ID No.2008007) filed by Sri Nishanth Reddy on 02.08.2020 and by Sri Bharath Chintala (ID No.20080015) on 04.08.2020 of Rejerla (V), Sathupalli (M), Khammam District against M/s SCCL, Sathupalli Area regarding uncontrolled blasting thereby causing air pollution and they are affected by fly rocks from mine - Reply to Notice- Reg.,

Ref: Notice No. 5/PCB/RO/KGM/Complaint/2020-356, dt. 29.08.2020

This is with reference to the notice issued by TSPCB based on the complaints filed by Sri Nishanth Reddy on 02.08.2020 and Sri Bharath Chintala on 04.08.2020 of Rejerla (V), Sathupalli (M), Khammam District regarding uncontrolled blasting thereby causing air pollution and they are affected by fly rocks from the mine due to blasting activity in Singareni mines.

SCCL is the only coal mining company existing in Southern India and supplying coal to the major power utilities like NTPC, TSGENCO, APGENCO, KPCL and Mahagenco. Total Coal produced during 2019-20 is 64.02 MT and total coal supplied to customers by SCCL during FY 2019-20 is 62.45 MT. Coal demand is increasing at rapid pace every year majority of which is from power industries.

The installed thermal power capacity in South India is 33000 MW requiring about 127 MTPA. The demand is expected to further increase with envisaged establishment of additional capacity of 4200 MW by TSGENCO and 4000 MW by NTPC in the state of Telangana which require 30 MTPA of coal. SCCL also has constructed a power plant of 1200 MW capacity in Srirampur area and another 800 MW power plant is envisaged. With the addition of new power plants, there will be an additional demand for SCCL coal over and above the existing supplies. Therefore, SCCL being a state-owned public sector company has onerous responsibility of catering to the needs of the new power plants coming up in the State.

SCCL is presently operating three opencast mines in Sathupalli Area, namely, JVR OC-I Expansion, JVR OC-II and Kistaram OCP in order to cater the needs of thermal power plants located in the region. SCCL has always been in the forefront in implementation of various environmental safeguards and is carrying out coal mining operations in the opencast mines in a sustainable and eco-friendly manner.

The clarifications on implementation of various pollution mitigation measures in opencast mines as directed by TSPCB regarding the allegations made in the complaints are furnished hereunder.

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I. Adopt control blasting techniques and other measures to control air

pollution in surrounding areas

Clarification: Both coal and overburden requires drilling and blasting prior to excavation. These operations are being suitably modified to ensure separation in mining of coal and OB and to suit local site conditions. Accordingly, the blast parameters have been established after actual field trials considering the local geo-mining conditions.

Reg. No.196 (3) of Coal Mines Regulations 2017 issued by Director General of Mines Safety (DGMS) stipulates that:

"In the case of an opencast working, where any permanent building or structure of permanent nature not belonging to the owner lies within the danger zone, the aggregate maximum charge per delay and per round shall not exceed the amount fixed by the Chief Inspector, by a permission in writing granted on the basis of a scientific study, and subject to such other conditions as he may specify therein".

Accordingly, SCCL made several scientific studies on ground vibrations through reputed Government Institutes to optimize the blast design parameters to control ground vibrations, noise and fly rock within safe limit for the nearby dwellings & colony.

In the year 2006, a scientific study to suggest for optimization of blast design parameters was conducted through CIMFR, Dhanbad at the existing Jalagam Vengala Rao Opencast-I Expansion Project to design the blast design parameters in order to control ground vibrations, noise and fly rock within safe limit keeping in view the nearby dwellings of Vengala Rao Nagar Colony and Market yard. Basing on the scientific study, permission was accorded by DGMS for deep hole blasting within 300 m and up to 125 m of the Jalagam Vengala Rao Nagar area and Market yard, not belonging to owner at Jalagam Vengala Rao Opencast-I, vide. Lr. No. H1 / JVROC / Perm / 2006 / 1543, dated 21st August, 2006.

Further, permissions were obtained from DGMS for conducting controlled blasting within 500 m and up to 100 m of surface structures like Jinugupalli Village, Temple, Tomb, PWD Road, etc vide Ltr No.H1/1191131339/JVROC/Perm107(1B)/2015, from Gol, Ministry of Labour & Employment, DGMS, Hyderabad Region No.1, Dt.15.09.2015. A copy of DGMS permissions are enclosed as **Annexure-I**.

Also, a scientific study was carried out on "blast vibrations and air over pressure at nearby villages of JVR OC-I" through Department of Mining Engineering, University College of Engineering, Kakatiya University, Kothagudem in the year 2018-19. The nearby habitations namely, NTR colony, Rejarla Village and public road were covered under the scientific study. The conditions stipulated in the DGMS permissions and the recommendations of scientific studies are being strictly followed by the project authorities to make progress of workings and it is ensured that the stability of residential structures in the surrounding villages are unaffected due to blast induced vibrations. A copy of scientific study report on blasting methodology is enclosed as **Annexure-II**.

The following measures are being implemented in the opencast mines for controlling noise and blast vibrations.

- Controlled blasting technique using non-electric (NONEL) delay detonators to reduce blast vibrations substantially.
- Regulating Charge per delay to minimize blast vibrations.
- Optimum delay sequence and stem to column ratio to minimize the fly rock distance and ground vibration intensity.
- Basing on the distance of the nearest sensitive areas from the epicenter of the blast, charge weight alteration to meet the stipulated standards.

- Design of optimum blast hole geometry considering bench height, diameter of hole, type of explosive, nature of rock, level of fragmentation required etc.
- Carrying out blasting operations only during day time.
- Drilling, charging and blasting operations under strict supervision as per DGMS stipulations.
- To avoid secondary blasting with detonating fuse, carrying muffle blasting operations.
- Making pre-splitting holes on the village side
- Ensuring free face for effective blasting operations
- Muffle blasting will be implemented wherever situation warrants

The following measures are also implemented while carrying out blasting operations which helps in reducing the intensity of air over pressure and also minimize the noise level associated with the air blasts.

- Avoiding overcharging of blast holes
- Adequate stemming
- Maintaining proper inter-hole & inter-row delays.

There are no mining operations in JVR OC-I at present. However, the distance of Rejarla village from the quarry of JVR OC-I Mine is 1.960 km. The distance of Rejarla village from the present quarry operations in JVR OC-II Mine is 0.325 km. SCCL has been regularly monitoring the impact of blasting operations on the structures of nearby villages and monitored data is periodically submitted to DGMS and MoEF&CC, Chennai.

Peak particle velocity (ppv) is the criteria globally used for assessment of damage to structures due to blast induced vibrations. DGMS Technical Circular No.7, dt. 29.8.97 stipulates that depending on the type of structures and the dominant excitation frequency, the peak particle velocity (PPV) on the ground adjacent to structures should not exceed the values given below:

The peak particle velocity (ppv) at the foundation level of structures in mining areas in mm/s

Type of Structure		Dominant Excitation frequency, Hz.		
		< 8 Hz	8-25 Hz	>25 Hz
(A) Buildings/Structures not belonging to the owner				
i	Domestic houses / structures (kuchha brick and cement)	5	10	15
ii	Industrial Buildings (RCC & Framed Structures)	10	20	25
iii	Objects of historical importance & sensitive structures	2	5	10
(B) Buildings belonging to the owner with limited span of life				
i	Domestic houses / structures (kuchha brick and cement)	10	15	25
ii	Industrial Buildings (RCC & Framed Structures)	15	25	50

The blast induced vibrations are measured and recorded with a Seismograph. The four channel seismograph is provided with tri-axial transducers for monitoring blast induced vibrations. The seismograph records vibration in three directions that is longitudinal, vertical, and transverse and records principal frequency of vibration and computes the vibration in terms of peak particle velocity (PPV) in mm/sec.

The daily blast vibrations are being monitored for every blast as per the Director General of Mine Safety (DGMS) guidelines. The blast vibrations recorded in ppv at

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quarry edge, NTR colony, Rejarla and Kistaram villages during last six months with reference to blasting operations carried out in JVR OC-I, JVR OC-II and Kistaram mines are given as **Annexure-III**. The ppv values recorded at Rejarla village are in the range of 0.091 to 2.091, which are within the stipulated limit of 10 mm/sec as the frequency is 8-25 Hz.

From the blast vibration monitoring data, it can be inferred that, the blast induced ground vibrations are found to be within the permissible standards stipulated by Directorate General of Mines Safety (DGMS), Dhanbad.

Hence, it is clearly evident that by adopting controlled blasting technology in the OC mines, the blast induced vibrations will not have any significant impact on the residential structures in the nearby villages including Rejarla village. It is also verified from a field survey conducted by SCCL that the structures in Rejarla Village are not damaged due to ongoing blasting operations in opencast mines of SCCL.

II. Take necessary air pollution control measures in and also outside the mine area:

Clarification: SCCL is taking various air pollution mitigation measures in its coal mining operations in order to safeguard the surrounding environment. The air quality management measures, which are being implemented in the opencast mines, are as follows:

- Wet drilling and controlled blasting.
- Use of appropriate explosives for blasting and avoiding over charging of blast holes.
- Proper wetting of blasted coal before loading in to dumpers/dump trucks.
- Avoidance of overloading of dumpers/dump trucks.
- Regular compaction and grading of haul roads.
- Scheduled maintenance and periodical tuning of engines of HEMM for containing the exhaust emissions i.e. CO, SO₂ & NO_x.
- Greenbelt development all along the mine lease area, vacant land near office buildings and plantation on OB dumps,.
- Provision of enclosed cabins for HEMM and other vehicles.
- Extensive water sprinkling arrangements on haul roads and other dust generating sources. Water spraying is being done on haul roads, coal transport roads and loading places using mobile water sprinklers of 28 KL (3 No's), 20 KL (3 No's), 16 KL (4 No's) and 12 KL (3 No's) capacity to suppress fugitive dust emissions.

The extracted coal is transported from the quarry to pit-head CHP by dumpers/dump trucks. Effective dust suppression measures are taken up at pit head coal handling plant (CHP). Some of the measures being implemented at the pit head CHP in order to control dust emissions include:

- Water spraying arrangements are made at unloading points and crushers at CHP to control dust emissions.
- Internal lining of chutes and bins to take care of abrasion & dust.
- Provision of belt conveyors of adequate width.
- Regular dust suppression by water spraying in CHP premises.
- Covering the coal loaded trucks with tarpaulin while transporting coal.
- Loading of coal up to brim level of trucks to avoid spillage.
- Black topping of permanent road link routes to CHP, permanent internal roads.
- Minimizing height of fall at coal unloading points and transfer points.
- Restricted speed of the vehicles in the project premises.
- Use of pre-weigh bins to avoid overloading of trucks

The following mitigation measures are also taken for further reduction of air pollution in and around the opencast mines:

- Frequency of water spraying on haul roads and coal transportation roads within the mine will be increased to reduce fugitive dust emissions.
- Water spraying arrangements at the pit head CHP will be strengthened.
- Green belt will be further developed all around the project boundary, in vacant lands within the project so as to control dust propagation.
- Coal Transportation from Sathupalli OC mines to RCHP at Kothagudem will be switched over to rail mode immediately after laying of railway line, which will be completed by 2021. Photographs showing the progress of railway line construction work are enclosed herewith.
- SCCL will continue to organize free medical camps to monitor the health status of the people in surrounding villages and extend necessary medical aid.

Regular monitoring for air quality within the lease area and other adjoining villages is being carried out as part of the Post Project Environment Monitoring (PPEM) through EPTRI, a CPCB recognized and NABL accredited laboratory and the monitoring data reports are being submitted to TSPCB and MoEF&CC, Regional office, Chennai.

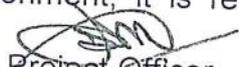
As a part of environmental monitoring programme, ambient air quality is being monitored at the opencast mines and surrounding villages on fortnightly basis. The monitored data is compared with standards stipulated for coal mines and National Ambient Air Quality Standards.

1. JVROC Project Office,
2. JVROC Base Work Shop,
3. JVROC Pit Head CHP,
4. Kistaram OC PO Office,
5. Sathupalli Town,
6. Kistaram Village,
7. Venkatapuram Village,
8. Pallewada Village,
9. Rejerla Village,
10. Chaudavaram Village.
11. Cherukupalli Village,
12. Kommugudem Village,
13. Vengalarao Nagar.

The ambient air quality data monitored at above mentioned locations during April 2019 to August 2020 is furnished as **Annexure-IV**.

The ambient air quality data at the work zone are within the standards stipulated for coal mines and that of surrounding villages (including Rejarla Village) is well within the stipulated limits as per National Ambient Quality standards. Thus, SCCL is taking adequate dust suppression measures in opencast mines in Sathupalli Area so as to ensure that ambient air quality is within the stipulated norms.

In view of continuous efforts made by SCCL authorities in the opencast mines of Sathupalli area for safeguarding the surrounding environment, it is requested to kindly condone any action against SCCL.


 Project Officer,
 JVR-OCPs, Sathupalli,
 Kothagudem Area

Cc to: GM, Kgm Area.
 GM (Env), Corp,
 PO, Kistaram OCP.
 Area Env. Officer, Kgm Area.

	TELANGANA STATE POLLUTION CONTROL BOARD ZONAL LABORATORY: HYDERABAD ZONE H.No : 1-8-269, Balasamudram, Warangal – 506001
	ISO-9001 & OHSAS-18001 Certified Laboratory Certificate's No:- Q-180211 & 180204-S

Form IV
Report by the State Board Analyst
(See rule 14)

Sample Codes. ZLWGL20-123215 & 123216
Dated the 22nd December, 2020

I hereby certify that I, Smt. R. Parvathi, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received the day of 10.12.2020 from the Regional office, Kothagudem, effluent samples of M/s. Singareni Collieries Company Limited, JVR OC-I & II Expansion Project, Ayyagaripet (V), Sathupalli (M), Khammam District collected on 09.12.2020. The sample was in a condition fit for analysis reported below:

Sample code	Sample source
ZLWGL20-123215	Inlet of ETP (Before workshop)
ZLWGL20-123216	Outlet of ETP before utilization for on-land gardening within mine area (Base workshop).

I further certify that I have analyzed the aforementioned samples from 10.12.2020 to 22.12.2020 and declare the result of the analysis to be as follows: -

S. No.	Parameter	Method (*)	Unit	Sample Code		CFO Standards
				123215	123216	
				Values		
1	pH at 25°C	4500-B	-	8.01	8.37	5.5-9.0
2	Total Suspended Solids	2540-D	mg/l	19	7	100
3	Total Dissolved Solids	2540-C	mg/l	819	761	2100
4	COD	5220-B	mg/l	32	20	250
5	BOD ₃ at 27 deg.C	IS-3025 (1993)	mg/l	-	2	30
6	Oil & grease	5520 A	mg/l	-	NIL	10

The condition of the seals, fastening and containers on receipt was intact.

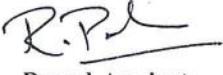
Signed this on 22nd December, 2020

- Note:**
- *Standard methods of APHA, 23rd Edition.
 - Results related to sample as received.

- Units:**
- All values are expressed in mg/l, except pH.

Address:

R. Parvathi
Senior Environmental Scientist (FAC),
T.S. Pollution control Board,
Zonal Laboratory, Warangal.


 Board Analyst
BOARD ANALYST
 T.S. Pollution Control Board
 Zonal Laboratory Hyderabad Zone
 Warangal-506 001.

	TELANGANA STATE POLLUTION CONTROL BOARD ZONAL LABORATORY: HYDERABAD ZONE H.No : 1-8-269, Balasamudram, Warangal – 506001
	ISO-9001 & OHSAS-18001 Certified Laboratory Certificate's No:- Q-180211 & 180204-S

Form IV
Report by the State Board Analyst
(See rule 14)

Sample Codes. ZLWGL20-123217 to 123219

Dated the 22nd December, 2020

I hereby certify that I, Smt. R. Parvathi, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received the day of 10.12.2020 from the Regional office, Kothagudem, effluent samples of M/s. Singareni Collieries Company Limited, JVR OC-I & II Expansion Project, Sathupalli, Khammam District collected on 09.12.2020. The sample was in a condition fit for analysis reported below:

Sample code	Sample source
ZLWGL20-123217	Water sample collected from stagnated water in earthen tank near CHP area.
ZLWGL20-123218	Water sample collected from drain before joining into Kistaram Cheruvu.
ZLWGL20-123219	Water sample collected from drain connected to Chillavagu which is passing through reserve forest area.

I further certify that I have analyzed the aforementioned samples from 10.12.2020 to 22.12.2020 and declare the result of the analysis to be as follows: -

S. No.	Parameter	Method (*)	Unit	Sample Code			CFO Standards
				123217	123218	123219	
				Values			
1	pH at 25°C	4500-B	-	7.61	7.84	7.40	5.5-9.0
2	Total Suspended Solids	2540-D	mg/l	9	70	4	100
3	Total Dissolved Solids	2540-C	mg/l	1025	726	792	2100
4	COD	5220-B	mg/l	24	8	32	250
5	BOD ₃ at 27 deg.C	IS-3025 (1993)	mg/l	2	0.4	3	30
6	Oil & grease	5520 A	mg/l	NIL	NIL	NIL	10

The condition of the seals, fastening and containers on receipt was intact.

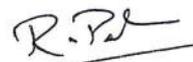
Signed this on 22nd December, 2020

- Note:
- *Standard methods of APHA, 23rd Edition.
 - Results related to sample as received.

- Units:
- All values are expressed in mg/l, except pH.

Address:

Smt. R. Parvathi
Senior Environmental Scientist (FAC),
T.S. Pollution control Board,
Zonal Laboratory, Warangal.



Board Analyst

BOARD ANALYST

T.S. Pollution Control Board
Zonal Laboratory Hyderabad Zone
Warangal-506 001.

	TELANGANA STATE POLLUTION CONTROL BOARD ZONAL LABORATORY: HYDERABAD ZONE H.No : 1-8-269, Balasamudram, Warangal – 506001
	ISO-9001 & OHSAS-18001 Certified Laboratory Certificate's No:- Q-180211 & 180204-S

ANALYSIS REPORT

Sample Code	: ZLWGL20-123220
Sample description	: Complaint filed by Residents of Rejerla Village against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Date of Collection	: 08.12.2020
Date of submission	: 10.12.2020
Sample Collected & Submitted by	: Zonal laboratory, Warangal
Point of Sample	
123220	Water sample collected from bore well in the premises of Sri Sri Kali Matha temple, Rejerla Road, Sathupalli, Khammam District.

S. No.	Parameters	Result	IS 10500 : 2012 Drinking Water Standards	
		123220	Acceptable Limit	Permissible Limit
1.	pH at 25°C	6.54	6.5-8.5	No Relaxation
2.	Electrical Conductivity	1215	-	-
3.	Total Suspended Solids	32	-	-
4.	Total Dissolved Solids (TDS)	763	500	2000
5.	Chemical Oxygen Demand	9	-	-
6.	Chlorides as Cl ⁻	48	250	1000
7.	Sulphates as SO ₄ ⁻²	240	200	400
8.	Total Alkalinity as CaCO ₃	328	200	600
9.	Total Hardness as CaCO ₃	565	200	600
10.	Calcium as Ca+2	142	75	200
11.	Magnesium as Mg+2	51	30	100
12.	Sodium	38	-	-
13.	Potassium	5	-	-
14.	Fluoride	0.52	1.0	1.5
15.	Nitrates	3.5	45	No Relaxation
16.	Phosphates	0.001	-	-
17.	Boron	BDL	0.5	1.0
18.	% Sodium	12.6	-	-
19.	SAR	0.5	-	-
20.	Copper as Cu	BDL	0.5	1.5
21.	Iron as Fe	9.24	0.3	No Relaxation
22.	Zinc as Zn	20.58	5	15
Note:	Results related to sample as received. BDL: Below detectable limit.			

R. Pal

SENIOR ENVIRONMENTAL SCIENTIST (FAC)
 Senior Environmental Scientist
 T.S. Pollution Control Board,
 Zonal Laboratory Hyderabad Zone
 WARANGAL-506 001.

	TELANGANA STATE POLLUTION CONTROL BOARD ZONAL LABORATORY: HYDERABAD ZONE H.No : 1-8-269, Balasamudram, Warangal – 506001
	ISO-9001 & OHSAS-18001 Certified Laboratory Certificate's No:- Q-180211 & 180204-S

ANALYSIS REPORT

Sample Code	: ZLWGL20-123221 to 123223
Sample description	: Complaint filed by Sri Nandhu Naik and others, Residents of NTR nagar, Against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Date of Collection	: 08.12.2020
Date of submission	: 10.12.2020
Sample Collected & Submitted by	: Zonal laboratory, Warangal.

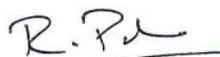
Point of Sample:

123221	Water sample collected from bore well in the premises of house of Sri MD. Muzebur Rehman, S/o Amed, H.No. 13-108, 8 th Ward, NRT Nagar, Sathupalli, Khammam Dist.
123222	Water sample collected from the Municipal Bore well located in front of House of Sri Sesh kumar Kommalla, S/o Satyamurthy, H.No. 14-132, 8 th Ward, NRT Nagar, Sathupalli, Khammam Dist.
123223	Water sample collected from the Municipal Bore well located in front of House of Sri M. Laxman, S/o Venkataiah, H.No. 10-184, Main Road, JVR Nagar, Sathupalli, Khammam Dist.

S. No.	Parameters	Result			IS 10500 : 2012 Drinking Water Standards	
		123221	123222	123223	Acceptable Limit	Permissible Limit
1.	pH at 25 ^o C	6.75	7.40	7.64	6.5-8.5	No Relaxation
2.	Electrical Conductivity	1253	699	1074	-	-
3.	Total Suspended Solids	70	26	3	-	-
4.	Total Dissolved Solids (TDS)	804	428	646	500	2000
5.	Chemical Oxygen Demand	12	5	8	-	-
6.	Chlorides as Cl ⁻	128	58	122	250	1000
7.	Sulphates as SO ₄ ⁻²	102	42	54	200	400
8.	Total Alkalinity as CaCO ₃	315	252	325	200	600
9.	Total Hardness as CaCO ₃	390	285	360	200	600
10.	Calcium as Ca ⁺²	96	72	92	75	200
11.	Magnesium as Mg ⁺²	37	26	32	30	100
12.	Sodium	102	44	92	-	-
13.	Potassium	7	3	6	-	-
14.	Fluoride	0.12	0.39	0.23	1.0	1.5
15.	Nitrates	6.8	5.0	1.2	45	No Relaxation
16.	Phosphates	0.004	BDL	BDL	-	-
17.	Boron	BDL	BDL	BDL	0.5	1.0
18.	% Sodium	35.7	24.9	35.2	-	-
19.	SAR	1.6	0.8	1.5	-	-
20.	Copper as Cu	BDL	BDL	ND	0.5	1.5
21.	Iron as Fe	0.16	4.99	0.20	0.3	No Relaxation
22.	Zinc as Zn	0.19	0.67	BDL	5	15

Note:

Results related to sample as received.
BDL: Below detectable limit, **ND:** Not Detected.



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ANALYSIS REPORT

Sample Code	: ZLWGL20-123224
Sample description	: Complait filed by Residents of Rejerla Village, Sathupalli, Against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam Dist.
Date of Collection	: 08.12.2020
Date of submission	: 10.12.2020
Sample Collected & Submitted by	: Zonal Laboratory, Warangal.
Point of Sample	: 123224-Water sample collected from Jeenugupalli Cheruvu, Rejerla, Sathupalli, Khammam Dist.

Sl. No.	Parameter	Sample No.	CPCB Water Quality Criteria				
		123224	Class-A	Class-B	Class-C	Class-D	Class-E
		Values					
1.	pH	6.80	6.5-8.5	6.5-8.5	6.0-9.0	6.5-8.5	6.0-8.5
2.	Electrical Conductivity ($\mu\text{S}/\text{cm}$)	166	-	-	-	-	2250 Max
3.	Dissolved Oxygen	7.5	≥ 6.0	≥ 5.0	≥ 4.0	≥ 4.0	-
4.	Chemical Oxygen Demand (COD)	8	-	-	-	-	-
5.	BOD 3days at 27°C	0.4	≤ 2.0	≤ 3.0	≤ 3.0	-	-
6.	Total Coliform	78	≤ 50	≤ 500	≤ 5000	-	-
7.	Fecal Coliform	NIL	-	-	-	-	-
8.	Free Ammonia	BDL	-	-	-	≤ 1.2	-
9.	Boron as B	BDL	-	-	-	-	2 Max
10.	Sodium Absorption Ratio	0.2	-	-	-	-	26 Max
11.	Cadmium as Cd	ND	-	-	-	-	-
12.	Lead as Pb	ND	-	-	-	-	-
13.	Nickel as Ni	ND	-	-	-	-	-
14.	Total Chromium as Cr	ND	-	-	-	-	-
15.	Iorn as Fe	0.4	-	-	-	-	-
16.	Zinc as Zn	BDL	-	-	-	-	-
17.	Copper as Cu	ND	-	-	-	-	-
Units:	All values are expressed in mg/l except pH, Electrical Conductivity, Total Coliform, Fecal Coliform and Sodium Absorption Ratio.						
Note:	ND-Not Detected. BDL-Below Detectable Limit.						

Class of Water use:

Class-A: Drinking Water Source without conventional treatment but after disinfection.

Class-B: Outdoor bathing (Organised).

Class-C: Drinking water source after conventional treatment and disinfection.

Class-D: Propagation of Wild life and Fisheries.

Class-E: Irrigation, Industrial Cooling, Controlled Waste disposal.

Below Class E: Not meeting A, B, C, D and E criteria.

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ANALYSIS REPORT

Sample Code	: ZLWGL20-123225
Sample description	: M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam Dist.
Date of Collection	: 09.12.2020
Date of submission	: 10.12.2020
Sample Collected & Submitted by	: Zonal Laboratory, Warangal.
Point of Sample	: 123225-Water sample collected from Kistaram Cheruvu, Kistaram, Sathupalli, Khammam Dist.

Sl. No.	Parameter	Sample No.	CPCB Water Quality Criteria				
		123225	Class-A	Class-B	Class-C	Class-D	Class-E
		Values					
1.	pH	7.94	6.5-8.5	6.5-8.5	6.0-9.0	6.5-8.5	6.0-8.5
2.	Electrical Conductivity (μ S/cm)	702	-	-	-	-	2250 Max
3.	Dissolved Oxygen	7.1	≥ 6.0	≥ 5.0	≥ 4.0	≥ 4.0	-
4.	Chemical Oxygen Demand (COD)	9	-	-	-	-	-
5.	BOD 3days at 27°C	0.5	≤ 2.0	≤ 3.0	≤ 3.0	-	-
6.	Total Coliform	124	≤ 50	≤ 500	≤ 5000	-	-
7.	Fecal Coliform	NIL	-	-	-	-	-
8.	Free Ammonia	BDL	-	-	-	≤ 1.2	-
9.	Boron as B	BDL	-	-	-	-	2 Max
10.	Sodium Absorption Ratio	0.8	-	-	-	-	26 Max
11.	Cadmium as Cd	BDL	-	-	-	-	-
12.	Lead as Pb	ND	-	-	-	-	-
13.	Nickel as Ni	ND	-	-	-	-	-
14.	Total Chromium as Cr	ND	-	-	-	-	-
15.	Iron as Fe	0.17	-	-	-	-	-
16.	Zinc as Zn	BDL	-	-	-	-	-
17.	Copper as Cu	ND	-	-	-	-	-
Units:	All values are expressed in mg/l except pH, Electrical Conductivity, Total Coliform, Fecal Coliform and Sodium Absorption Ratio.						
Note:	ND-Not Detected. BDL-Below Detectable Limits.						

Class of Water use:

Class-A: Drinking Water Source without conventional treatment but after disinfection.

Class-B: Outdoor bathing (Organised).

Class-C: Drinking water source after conventional treatment and disinfection.

Class-D: Propagation of Wild life and Fisheries.

Class-E: Irrigation, Industrial Cooling, Controlled Waste disposal.

Below Class E: Not meeting A, B, C, D and E criteria.

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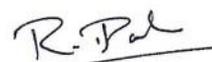
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ANALYSIS REPORT

Sample Code	: ZLWGL20-123226
Sample description	: Complaint filed by Residents of Rejerla Village, Sathupalli, Against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam Dist.
Date of Collection	: 08.12.2020
Date of submission	: 10.12.2020
Sample Collected & Sample submitted by	: Zonal Laboratory, Warangal.
Point of Sample	: 123226-Soil sample collected from Jeenugupalli Cheruvu, Rejerla, Sathupalli, Khammam Dist.

Parameter (s)	Results	Standards as per CRIT and TCLP Standards as per Schedule – II of HWM Rules 2016
	123226	
Colour	Brown	-
State	Solid	-
pH (1:5)	6.68	≤2 (Hazardous) ≥12.5 (Hazardous)
Electrical Conductivity μs/cm (1:5)	126	-
TCLP Copper (mg/l)	BDL	25
TCLP Zinc (mg/l)	0.34	250
TCLP Cadmium (mg/l)	ND	1.0
TCLP Lead (mg/l)	BDL	5.0
TCLP Nickel (mg/l)	BDL	20
TCLP Total Chromium (mg/l)	BDL	5.0
TCLP Arsenic (mg/l)	ND	5.0
TCLP Mercury (mg/l)	ND	0.2
NOTE:	Results related to sample as received.	
	BDL-Below Detectable Limit.	
	ND-Not Detected.	



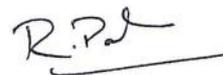
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ANALYSIS REPORT

Sample Code	: ZLWGL20-123227
Sample description	: M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam Dist.
Date of Collection	: 09.12.2020
Date of submission	: 10.12.2020
Sample Collected & Sample submitted by	: Zonal Laboratory, Warangal.
Point of Sample	: 123227-Soil sample collected from Kistaram Cheruvu, Kistaram, Sathupalli, Khammam Dist.

Parameter (s)	Results	Standards as per CRIT and TCLP Standards as per Schedule – II of HWM Rules 2016
	123227	
Colour	Light Brown	-
State	Semi Solid	-
pH (1:5)	7.38	≤2 (Hazardous) ≥12.5 (Hazardous)
Electrical Conductivity μs/cm (1:5)	213	-
TCLP Copper (mg/l)	BDL	25
TCLP Zinc (mg/l)	0.11	250
TCLP Cadmium (mg/l)	ND	1.0
TCLP Lead (mg/l)	BDL	5.0
TCLP Nickel (mg/l)	0.3	20
TCLP Total Chromium (mg/l)	ND	5.0
TCLP Arsenic (mg/l)	ND	5.0
TCLP Mercury (mg/l)	ND	0.2
NOTE:	Results related to sample as received.	
	BDL-Below Detectable Limit.	
	ND-Not Detected.	



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Ambient Level Noise Monitoring Report

Name of the Noise Source :	Complaint filed by Sri Banothu Nandhu Naik and Others Residents of NTR Nagar, against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam Dist.	
Date of Monitoring:	07.12.2020	
Time of Monitoring:	03:42 pm to 04:20 pm (Day time)	
Report No.	ZLWGL20-123228	
Samples Collected & Submitted by :	Sri. P. Narsimha Assistant Scientist, Zonal laboratory, Warangal.	
Instrument make:	3M Sound Scanner USA	Model No.: SE40110501

Monitoring location	Observed Noise Level dB(A) Leq
(*) Back ground noise level conducted at Residence of Sri Racharla Mohan Rao, S/o Vishwanatham, H.No. 13-167, NTR Nagar, Sathupalli, Khammam Dist. (03:42 pm to 03:49 pm).	55.00
(**) Noise level conducted at Residence of Sri Racharla Mohan Rao, S/o Vishwanatham, H.No. 13-167, NTR Nagar, Sathupalli, Khammam Dist. (03:50 pm to 04:20 pm).	56.11

Actual ambient sound pressure levels are calculated as per the formula :

$$L \text{ pressure} = 10 \cdot \log(10^{Lp/10} - 10^{pw \text{ background } Lp/10})$$

The reported values are calculated as per the above formula.

*Standards: National Ambient Air Quality Standards in respect of Noise, [(Schedule III) (Rule 3)] of E (P), Act, 1986.

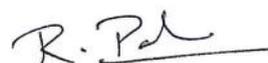
Note: All values are corrected to back ground noise.

Ambient Noise Standards* Schedule-III (Rule-3) of E(P) Act, 1986.

Area Code	Category of Area / Zone	Day time dB(A) Leq	Night time dB(A) Leq
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day time shall mean from 6.00 am to 10.00 pm.
- Night time shall mean from 10.00 pm to 6.00 am.

Note:	(*) Back ground Noise levels (Ambient Noise level) are measured during Blasting was not in operation.
	(**) Noise levels (Ambient Noise level) are measured during Blasting was in operation.



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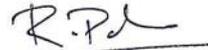
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Ambient Level Noise Monitoring Report

Name of the Noise Source :	M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam Dist.
Date of Monitoring:	09.12.2020
Time of Monitoring:	03:17 pm to 04:00 pm (Day time)
Report No.	ZLWGL20-123229
Samples Collected & Submitted by :	Sri. P. Narsimha Assistant Scientist, Zonal laboratory, Warangal.
Instrument make: 3M Sound Scanner USA	Model No.: SE40110501

Monitoring location	Observed Noise Level dB(A) Leq		
(*) Back ground noise level conducted at terrace of Project office. (03:17 pm to 03:22 pm).	60.21		
(**) Noise level conducted at terrace of Project office. (03:30 pm to 04:00 pm).	75.78		
<i>Actual ambient sound pressure levels are calculated as per the formula :</i> $L_{pressure} = 10 \cdot \log(10^{pw} L_p/10 - 10^{pw} background L_p/10)$ <i>The reported values are calculated as per the above formula.</i>			
*Standards: National Ambient Air Quality Standards in respect of Noise, [(Schedule III) (Rule 3)] of E (P), Act, 1986.			
Note: All values are corrected to back ground noise.			
Ambient Noise Standards* Schedule-III (Rule-3) of E(P) Act, 1986.			
Area Code	Category of Area / Zone	Day time dB(A) Leq	Night time dB(A) Leq
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40
1. Day time shall mean from 6.00 am to 10.00 pm. 2. Night time shall mean from 10.00 pm to 6.00 am.			
Note:	(*) Back ground Noise levels (Ambient Noise level) are measured during Blasting was not in operation. (**) Noise levels (Ambient Noise level) are measured during Blasting was in operation.		

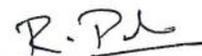

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Ambient Air Quality Analysis Report

Sample No. :	ZLWGL20-123202
Name of the industry:	Complaint filed by Residents of Rejerla Village against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Samples Collected & Submitted by :	Zonal laboratory, Warangal.

Sampling Location	Date of sampling	Time and duration of sampling	PM ₁₀ µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³
Ambient Air Quality Monitoring conducted on the terrace of house of Sri Maddikuntla. Venkatachenna Rammohan Rao, S/o Satyanarayana, BC Colony, Rejerla (V), Sathupalli (M), Khammam (D).	07.12.2020	03:45pm to 11:45pm	91	5	10
				6	9
Average			91	6	10
National Ambient Air Quality Standards (NAAQS)			100	80	80
NAAQS, CPCB Notification, New Delhi Dt. 18.11.2009[(Schedule VII) (Rule 3(3B)) of E(P), Act,1986. PM ₁₀ – Particle size less than 10 micrometers.					


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Ambient Air Quality Analysis Reports

Sample No. :	ZLWGL20-123203 to 123205
Name of the industry:	Complaint against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Samples Collected & Submitted by :	Zonal laboratory, Warangal.

Sampling Location	Date of sampling	Time and duration of sampling	PM ₁₀ µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³
Ambient Air Quality Monitoring conducted on the terrace of house of Sri Racharla. Mohan Rao, S/O Vishwanatham, H.No. 1-3-167, NTR Nagar, Sathupalli (V & M), Khammam (D).	07.12.2020 & 08.12.2020	12:40 pm to 08:40 pm	100	5	9
		08:40 pm to 04:40 am	83	6	26
	04:40 am to 12:40 pm	56	5	17	
		10	13		
	5	14			
24 Hrs Average			80	7	17
National Ambient Air Quality Standards (NAAQS)			100	80	80
NAAQS, CPCB Notification, New Delhi Dt. 18.11.2009[(Schedule VII) (Rule 3(3B)) of E(P), Act,1986.					
PM ₁₀ – Particle size less than 10 micrometers.					


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Ambient Air Quality Analysis Reports

Sample No. :	ZLWGL20-123206 to 123208
Name of the industry:	Complaint filed by Sri Banoth Nandhu Naik and others Residents of NTR Nagar against M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Samples Collected & Submitted by :	Zonal laboratory, Warangal.

Sampling Location	Date of sampling	Time and duration of sampling	PM ₁₀ µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	
Ambient Air Quality Monitoring conducted on the terrace of house of Sri SK. Khurshida Bagum, H.No. 10-59, Road No. 4, JVR Nagar, Sathupalli (V & M), Khammam (D).	08.12.2020	10:00 am to 06:00 pm	63	9	28	
		06:00 pm to 02:00 am	43	12	48	
	09.12.2020	06:00 pm to 02:00 am	43	9	57	
		02:00 am to 10:00 am	59	9	20	
	24 Hrs Average			55	9	37
	National Ambient Air Quality Standards (NAAQS)			100	11	36
				10	38	
				80	80	

NAAQS, CPCB Notification, New Delhi Dt. 18.11.2009[(Schedule VII) (Rule 3(3B)) of E(P), Act,1986.
 PM₁₀ – Particle size less than 10 micrometers.


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Ambient Air Quality Analysis Reports

Sample No. :	ZLWGL20-123209 to 123211
Name of the industry:	M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Samples Collected & Submitted by :	Zonal laboratory, Warangal.

Sampling Location	Date of sampling	Time and duration of sampling	PM ₁₀ µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	
Ambient Air Quality Monitoring conducted South side of the CHP, near Substation of CHP area.	07.12.2020 & 08.12.2020	02:15 pm to 10:15 pm	186	10	25	
		10:15 pm to 06:15 am	96	7	32	
		06:15 am to 02:15 pm	120	9	36	
	24 Hrs Average			134	10	27
	Ambient Air Quality Standards (AAQS) for Coal Mines			250	120	30
	NAAQS, CPCB Notification, New Delhi Dt. 18.11.2009[(Schedule VII) (Rule 3(3B)) of E(P), Act,1986.					120
Filed observations:	Internal vehicular movement was observed during monitoring.					

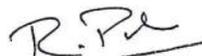

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 Zonal Laboratory Hyderabad

	TELANGANA STATE POLLUTION CONTROL BOARD ZONAL LABORATORY: HYDERABAD ZONE H.No : 1-8-269, Balasamudram, Warangal – 506001
	ISO-9001 & OHSAS-18001 Certified Laboratory Certificate's No:- Q-180211 & 180204-S

Ambient Air Quality Analysis Reports

Sample No. :	ZLWGL20-123212 to 123214
Name of the industry:	M/s. SCCL, JVR OC-I & II, Expansion, Sathupalli, Khammam District.
Samples Collected & Submitted by :	Zonal laboratory, Warangal.

Sampling Location	Date of sampling	Time and duration of sampling	PM ₁₀ µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	
Ambient Air Quality Monitoring conducted on the terrace of Project Office.	08.12.2020	01:15 pm to 09:15 pm	106	6	34	
		09:15 pm to 11:15 am	71	10	30	
	09.12.2020	09:15 pm to 11:15 am	71	7	33	
		05:15 am to 01:15 pm	77	9	24	
	24 Hrs Average			85	8	32
	Ambient Air Quality Standards (AAQS) for Coal Mines			250	120	120
NAAQS, CPCB Notification, New Delhi Dt. 18.11.2009[(Schedule VII) (Rule 3(3B)) of E(P), Act,1986.						
PM ₁₀ – Particle size less than 10 micrometers.						
Filed observations:	Internal vehicular movement was observed during monitoring.					


Senior Environmental Scientist (FAC)
 Senior Environmental Scientist
 T.S. Pollution Control Board,
 Zonal Laboratory Hyderabad Zone
 WARANGAL-506 001.