

**THE SINGARENI COLLIERIES COMPANY LIMITED
(A Government Company)
KHAIRAGURA OPENCAST EXPANSION COAL MINE PROJECT,
BELLAMPALLI AREA.**



**HALF YEARLY COMPLIANCE REPORT OF ENVIRONMENTAL
CLEARANCE CONDITIONS UP TO 31st MARCH, 2015.**

FOR

**KHAIRAGURA OPENCAST EXPANSION COAL MINE PROJECT,
BELLAMPALLI AREA.**

**Project Officer,
Khairagura opencast expansion project,
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THE SINGARENI COLLIERIES COMPANY LIMITED
(A Government Company)
KHAIRAGURA OPENCAST EXPANSION COAL MINE PROJECT,
BELLAMPALLI AREA.

PART - I

Half yearly compliance report of environmental clearance conditions up to 31st March, 2015.

SALIENT FEATURES OF THE PROJECT:

1.	Name of the Project	:	Khairagura opencast expansion coal mine project
2.	Organization	:	Singareni Collieries Company Limited
3.	Coalfield.	:	Godavari Valley Coal Field
4.	Type of Mine	:	Opencast
5.	Technology	:	Shovel –Dumper Combination
6.	Environmental Clearance		
	A. Letter No & date	:	J-11015/28/2013-IA.II (M), Dated: 06th February, 2015.
	B. Sanctioned capacity	:	3.75 MTPA
	C. Mining Lease Area	:	1217.50 Ha.
	D. Date of Public Hearing	:	09.03.2007
7.	Location of the Project		
	A. Village	:	Khairagura
	B. Tehasil	:	Tiriyani
	C. District	:	Adilabad
	D. State	:	Telangana state
	E. Latitude	:	North 19 ⁰ 14' 10" to 19 ⁰ 15' 20"
	F. Longitude	:	East 79 ⁰ 16' 00" to 79 ⁰ 18' 15"
	G. Topo Sheet	:	56 & 56 $\frac{M}{8}$
	H. Nearest railway station	:	Rebbanna(14 KM)
	I. Nearest Airport	:	Hyderabad (306 km)
	J. Nearest town	:	Bellampalli(42 km)
8.	Address for Correspondence		
	A. Name	:	Sri.G.Mohan Reddy
	B. Designation	:	Project Officer, Khairagura opencast expansion project
	C. Address	:	Project office, Goleti Township-village Rebbanna- Mandal Adilabad (District), Telangana state
	D. Pin Code	:	504292

	E. E-mail ID	:	po_khg@scclmines.com
	F. Telephone No.	:	08735-231100, PO's cell no.9491144264,
	G. Fax No.	:	08735-231662
9.	Life of the Project		
	A. Date of Opening	:	01.07.2005
	B. Date of expansion of project.	:	22.10.2007
	C. Total Life of the project as per revised annual capacity i.e.3.75MTPA	:	14 years from 01.04.2013
	D. Balance Life	:	12 years from 01.04.2015
10.	Seams		
	A. No. of Seams Present	:	3
	B. Seams being worked	:	3
11.	Depth		
	A. Minimum Depth (m)	:	25
	B. Maximum Depth (m)	:	222
	C. Present working depth (m)	:	131
12.	Reserves		
	A. Total Geological Reserves	:	74.31 MT
	B. Total Extractable Reserves	:	66.87 MT
	C. Reserves already Extracted	:	20.397 MT
	D. Balance Reserves	:	46.473 MT
	E. Coal production during last 6 months	:	1.926 MT
13.	Over Burden		
	A. Total hard OB (excluding topsoil)	:	573.91 Mm ³
	B. Hard OB extracted since inception (excluding topsoil)	:	115.68 Mm ³
	C. Hard OB removed in last 6 months (excluding topsoil)	:	14.86 Mm ³
	D. Avg.stripping ratio	:	1: 9.86 (present-1 : 6.03)
14.	Top Soil		
	A. Total Topsoil	:	10.86 Mm ³
	B. Topsoil extracted since inception	:	5.443 Mm ³
	C. Topsoil removed in last six months	:	0.470 Mm ³
15.	Land Requirement		
	A. Total Requirement	:	1217.50 Ha.
	B. Forestland Involved	:	296.86 Ha.
	C. Non-forestland	:	920.64 Ha.
16.	Activity wise Land Requirement in Ha.	As per EMP	Present Status
	A. Quarry Area	: 542.91 Ha.	288.94 Ha.

	B. External OB Dumps	:	388.57 Ha.	361.91 Ha.
	C. Infrastructures	:	9.80 Ha.	9.80 Ha.
	D. Other	:	276.22 Ha.	125.67 Ha.
	E. Total	:	1217.50 Ha.	786.32 Ha.
17.	Statutory Clearances			
	A. Mining plan approval	:	Revised mining plan was approved by MoC vide .Lr.No. 13016 /2 /2006 -CA-II, dated:17th October, 2014.	
	B. Ground Water Clearance	:	: Lr.No.441/T/2007, Dated:02.07.2007.	
	C. Consent For Establishment	:	APPCB/PTN/NZB/46/CFE/HO/2007-2199 16.01.2008	
	D. Consent For Operation	:	APPCB/PTN/NZB/46//HO/W&A2007-2199 10.01.2008, valid up to 30 th Sept-2014. Further, an application was submitted vide letter no. BPA/ENV/C-05/2014/ 149, dt:14.07.2014. for renewal of CFO.	
	E. Forest Clearance	:	The Forest land required is 296.86 Ha. and non forest land required is 920.64 Ha. There is no change in total land requirement of the project. Forest clearance was obtained for 296.86 Ha. and details are furnished below 1. Lr.No F.No.8-28/94-FC, dated:28 th September, 2000 for 29.85Ha. 2. Lr. No.F.No.8-102/2000.FC, dated: 10th September, 2003 for 140.30Ha. 3. Lr.No. F.No.8-28/94-FC, dated:1 st July 2011 for 126.71Ha.	
	F. Mining Lease	:	Tandur Mining Lease	
	G. Others (Specify)	:	nil	
18.	R & R Involved	:	480 PDFs	
19.	Men on roll	:	367 employees.	

PART-I

STATUS OF IMPLEMENTATION OF ENVIRONMENTAL CLEARANCE CONDITIONS FOR KHAIRAGURA OPENCAST EXPANSION COAL MINE PROJECT AS ON 31st MARCH, 2015.

4A.SPECIFIC CONDITIONS:

cond. no.	condition	compliance status
(i)	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	The year wise coal and OB excavation details are furnished in table-1 of part-II and the year wise coal production is within the prescribed limit i.e.3.75MTPA.
(ii)	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.	The life of the project is 14 years from 01.04.2013 as per EC.
(iii)	The voids shall be filled up to the near ground level by the OB from the new Ullipetta Dorli mine. The coal transportation on road by mechanically covered trucks.	At final stage of the project, the void of the project will be filled up to the near ground level by the OB from the proposed Ullipitta Dorli relay project. Coal transport lorries are being covered with Tarpaulin before leaving the mine premises and over loading of lorries is avoided.
(iv)	The coal loading at siding shall be by conveyer trucks.	The coal handling plant (CHP), Goleti is under construction. After completion of construction of Goleti CHP, the coal shall be loaded by enclosed conveyer through pre-weigh bin into wagons.
(v)	The social audit report of the CSR be submitted to the MOEF for record and be uploaded on to the Company's website.	The social audit will be carried out on CSR activities and report will be submitted to MoEF&CC, R.O., Chennai and will be uploaded on to the company's website i.e. www.sclmines.com.
(vi)	Instead of provision of bag filters, effective sensor operated water sprinkling system be provided for dust suppression at crusher house and transfer points at pit head coal handling arrangement.	Sensor activated water spraying system has been provided at crusher house and transfer points of pit head coal handling plant for dust suppression. Permanent water sprinkling arrangement was provided around pre-weigh bin and it is working well. A sensor activated wetting point was provided to wet loaded dumpers before unloading into the crushers. A 10 KL capacity water sprinkler is being deployed in every shift for

cond. no.	condition	compliance status
		<p>sprinkling water on the internal roads & in the premises of CHP, and along coal transport road from KHG OCP to IB Tandur via. Goleti I & IA, BPA OCP-II. etc.</p> <p>Three nos. of 28 KL & nine nos. of 10 KL capacity water sprinklers are being deployed in every shift for dust suppression on haul roads and approach roads, dumps, coal transport road, etc.</p> <p>Transport lorries are being covered with tarpaulin before leaving the mine premises and over loading of lorries is being prevented.</p>
(vii)	The proponent shall utilize the final void for dumping of overburden generated from the proposed “Ullipetta Block” (Relay Project) which is adjacent to the Khairagura OC Project.	The final void of the project shall be utilized for dumping of overburden generated from the proposed new “Ullipitta Block” (Relay Project) which is adjacent to the Khairagura OC Project.
(viii)	The final mine closure plan will be submitted to MOEF 5 years in advance of final mine closure for approval.	The balance life of the project is 12 years. The final mine closure plan will be submitted to the MoEF&CC 5 years before final mine closure for approval i.e., in the year-2021.
(ix)	Coal transportation in pit Crusher to surface CHP through belt conveyor (1.5 Km length). Surface to siding by trucks 14Km and siding to loading by wagon.	In pit crusher technology was planned for the expansion project and it is under implementation. At present coal is being transported by dumpers to pit head CHP and there by to Rebbana siding & SRP CHP by lorries covered with tarpaulin.
(x)	The production shall be within the same Mining Lease area.	The coal is being excavated within the same mining lease area.
(xi)	The depth of the internal void shall be 40m from the ground level and should be adequate for fishery purpose.	At final stage of the project, the depth of internal void will be maintained at 40m from the ground level for productive use.
(xii)	All safety measures shall be taken as per CMR, 1957 and related circulars.	All safety measures are being taken as per CMR, 1957 and related circulars. The respective regional Director of Mines Safety & Dy. Director of Mines

cond. no.	condition	compliance status
		Safety, Hyderabad, are making inspections periodically and monitoring the compliance status.
(xiii)	The production shall be within the same Mining Lease area.	The coal is being excavated within the same mining lease area.
(xiv)	The OB shall be completely re-handled at the end of the mining and will be back filled up to the ground level and covered with about a meter thick top soil and put to use. The land after mining shall be brought back for agriculture purpose.	<p>The OB is being dumped at earmarked external dump sites within ML area as envisaged in the approved EMP. The OB and topsoil details are furnished in table-2 & 3 of part-II respectively.</p> <p>At final stage of the project, the OB shall be re-handled and back filled up to the ground level and covered with top soil for agriculture purpose.</p> <p>The balance life of the project is 12 years and a final mine closure plan will be submitted to the MoEF&CC, Chennai before 5 years of final mine closure for approval i.e., in the year-2021.</p> <p>Reclamation will be taken up as per approved mine closure plan approved by MoEF&CC.</p>
(xv)	Garland drains be provided.	<p>Garland drain for a length of 3.6Km, deck drains of 2.6 Km length on first deck terrace and 1.9 Km length on second deck terrace were made for proper drainage system for dump-I.</p> <p>Garland drains were also made for a length 2.1Km around dump-II and 0.8Km length around dump-III.</p> <p>Eight siltation ponds of size 30 m x 30 m x 2 m were made followed by check dams for dumps to arrest silt and sediment flows from soil. Trench is provided around the quarry.</p> <p>The garland drains, deck drains, etc., are being regularly de-silted and maintained properly.</p>
(xvi)	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to	The 1 st stage diversion of Vattivagu was completed with the approval from state Irrigation department and as per the design of the State Irrigation & CAD

cond. no.	condition	compliance status
	the mine.	<p>only. The 2nd stage diversion of Vattivagu will be taken up only after obtaining necessary approval from state Irrigation department and will be done as per the design of the State Irrigation & CAD.</p> <p>An earthen bund was made for 3.0Km length all along the Vattivagu reservoir (dimensions: top width-10m, bottom width-16m & height-3m above the HFL) to with stand the peak water flow and to prevent mine inundation. A toe wall is constructed for 2.0Km length along the earthen bund. The slopes of the earthen bund will be stabilized with plantation during the monsoon of the year, 2015.</p>
(xvii)	The CSR cost should be Rs.5 per tonnes of coal produced which should be adjusted as per the annual inflation.	The CSR plan for the project is under preparation as per this condition and CSR plan will be implemented as per the CSR policy approved by SCCL Board of Directors. The details of CSR activities taken up during last year are enclosed as annexure-I.
(xviii)	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.	<p>Protective ware like dust respirators or dust masks are being provided to workmen exposed to dusty environment periodically and adequate training is being imparted to the workmen at the Mine Vocational Training Center provided in the area.</p> <p>341 nos. of dust respirators were issued during last six months.</p> <p>589 nos. of persons were given training on safety and health aspects at mine vocational training centre during last six months.</p> <p>Details of dust respirators & ear-plugs issued at the mine and Mine Vocational Training details are enclosed as annexure-II of part-II.</p>
(xix)	Dust mask to be provided to everyone working in the mining area.	Protective ware like dust respirators or dust masks are being provided to every workman exposed to dusty

cond. no.	condition	compliance status
		<p>environment periodically and adequate training is being imparted to the workmen at the Mine Vocational Training Center provided in the area.</p> <p>341 nos. of dust respirators were issued during last six months.</p> <p>Details of dust respirators & ear-plugs (issued) and Mine Vocational Training are enclosed as annexure-II of part-II.</p>
(xx)	<p>The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.</p>	<p>The supervisory staff are ensuring wearing of dust mask by workmen working in the core area while carrying out inspection of core area.</p> <p>The concerned supervisors were instructed in writing to ensure that all workmen working in core area must wear dust masks.</p>
(xxi)	<p>People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.</p>	<p>The SCCL has well-established health centers with qualified doctors & with all facilities as per NIOH, Ahamadabad (occupational health specialist) in each area for monitoring and identification of occupational diseases.</p> <p>Occupational health surveillance programme of the workers (Periodical Medical Examination (PME)) is being carried out in the well established SCCL's hospitals to check the health profile of the workmen i.e. for the lung diseases, hearing impairment, eye testing, heart functioning, hypertension, diabetes, chest X-Ray, complete blood and urine picture, etc. 29 nos. of employees from different categories have been subjected to occupational health check up during last six months. PME details are enclosed as annexure-III.</p>
(xxii)	<p>The mining area should be surrounded by green belt having thick closed canopy of the tree cover.</p>	<p>The mining area is surrounded by green belt having closed thick canopy of the tree cover.</p> <p>Plantation is being taken up as per approved EMP by planting native species at 2500 no. of plants /Ha. So</p>

cond. no.	condition	compliance status
		far plantation was done in an area of 252.41Ha. (external dump area-140Ha. and avenue & greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.
(xxiii)	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	An earthen bund was made for 3.0Km length all along the Vattivagu reservoir (dimensions: top width-10m, bottom width-16m & height-3m above the HFL) to withstand the peak water flow and to prevent mine inundation. A toe wall is constructed for a length of 2.0Km along the earthen bund. The slopes of the earthen bund will be stabilized with plantation during the monsoon of the year, 2015.
(xxiv)	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.	<p>OB is being dumped at earmarked external dump sites within ML area as envisaged in the approved EMP.</p> <p>All necessary measures such as preparation of drains around dumps, making of earthen bund around dumps, stabilization of final dump with plantation, etc. are being taken up to prevent overflow of OB into the Vattivagu reservoir and into the agricultural fields.</p> <p>An earthen bund was made for 3.0Km length all along the Vattivagu reservoir (dimensions: top width-10m, bottom width-16m & height-3m above the HFL) to withstand the peak water flow and to prevent mine inundation, and to prevent overflow of OB into the Vattivagu reservoir. A toe wall is constructed for a length of 2.0Km along the earthen bund. The slopes of the earthen bund will be stabilized with plantation during the monsoon of the year, 2015.</p> <p>Garland drain for a length of 3.6Km, deck drains of 2.6 Km length on first deck terrace and 1.9 Km length on</p>

cond. no.	condition	compliance status
		<p>second deck terrace were made for proper drainage system for dump-I.</p> <p>Garland drains were also made for a length 2.1Km around dump-II and 0.8Km length around dump-III.</p> <p>Eight siltation ponds of size 30 m x 30 m x 2 m followed by check dams were made for dumps to arrest silt and sediment flows from soil.</p> <p>A trench is also provided around the quarry.</p> <p>The garland drains, deck drains, settling ponds, check dams, etc., are being regularly de-silted and maintained properly.</p> <p>The details of soil erosion control measures are furnished in table-5 of part -II.</p> <p>Plantation is being taken up as per approved EMP plan with native species at 2500 no. of plants /Ha. So far plantation was done in an area of 252.41Ha. (external dump area : 140 Ha. and avenue & greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.</p>
(xxv)	<p>OB shall be stacked at four earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28 degrees. 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 & Climate Change and its concerned Regional office on yearly basis.</p>	<p>OB is being dumped at three earmarked external dump sites within ML area as envisaged in the approved EMP.</p> <p>The present maximum height of the external dump is 90m with 30m height decks each. The ultimate slope of the dump is being kept less than 28 degrees. Details of top soil & OB are given in table-2&3 of part-II respectively.</p> <p>Back filling operations commenced from January, 2013 and 174.00 LBCM of OB was backfilled in an area of 62.82Ha. up to 31.04.2015. The</p>

cond. no.	condition	compliance status
		<p>present RL of backfilled area is 30m below the surface RL.</p> <p>Plantation is being taken up on dumps after reaching final stage with native species at 2500 no. of plants /Ha. So far plantation was done in an area of 252.41Ha. (external dump area : 140.00Ha. and avenue& greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.</p> <p>Monitoring and management of existing reclaimed dump sites is being done and shall be continued until the vegetation becomes self-sustaining.</p> <p>The progress and compliance status of the reclamation is being submitted to Ministry of Environment, Forests & Climate Change on half yearly basis as a part of half yearly monitoring report.</p>
(xxvi)	<p>Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly de-silted and maintained properly. Garland drains (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 provide adequate retention period to allow proper settling of silt material.</p>	<p>Drains were made for a length of 3.6Km around external dump-I, 2.6 Km length on first deck terrace and 1.9 Km length on second deck terrace for proper drainage system for dump-I. Drains were also made for a length 2.1Km around dump-II and 0.8Km length around dump-III.</p> <p>Eight siltation ponds of size 30 m x 30 m x 2 m followed by check dams were made for dumps to arrest silt and sediment flows from soil. Trench is made around the quarry.</p> <p>The garland drains, deck drains, settling ponds, check dams, etc., are being regularly de-silted and maintained properly.</p> <p>A sump with adequate capacity is made and being maintained by keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the</p>

cond. no.	condition	compliance status
		<p>mine site. The sump capacity is adequate and the collected rain water is being retained for adequate period for settling of silt.</p> <p>The sump is being cleaned/de-silted every year before entering of monsoon.</p>
(xxvii)	<p>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.</p>	<p>An earthen bund has been provided as a retaining wall. Earthen bunds are designed with dimension of base width 5m, top width 3m and height 3m on the basis of rainfall data at the toe of dump-I for a length of 3.6 Km against 3.6 Km. The earthen bund has been provided in 1st and 2nd decks for dump-I.</p> <p>The earthen bund has been provided for 2.1 Km length around the dump-II and 0.8 Km length around dump-III.</p>
(xxviii)	<p>Crushers at the CHP of adequate capacity for the expansion project 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, transfer points, etc.</p>	<p>Instead of providing bag filters, effective sensor activated water spraying system has been provided at crusher house and transfer points at pit head coal handling plant for dust suppression as per condition no.(vi) and parameters (PM₁₀ , PM_{2.5}, SO₂ and NO_x) are within the prescribed limits.</p> <p>Permanent water sprinkling arrangement was provided around pre-weigh bin and it is working well. A sensor activated wetting point was provided to wet loaded dumpers before unloading into the crushers.</p> <p>A 10 KL capacity water sprinkler is being deployed in every shift for sprinkling water on the internal roads & in the premises of CHP, and along coal transport road from KHG OCP to IB Tandur via. Goleti I & IA, BPA OCP-II. etc.</p> <p>Three nos. of 28 KL & nine nos. of 10 KL capacity water sprinklers are being deployed for dust suppression on haul roads and approach roads, dumps, etc.</p> <p>The coal transport lorries are being</p>

cond. no.	condition	compliance status
		covered with tarpaulin before leaving the mine premises and over loading is being prevented.
(xxix)	Drills shall be wet operated. Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads.	<p>Wet drilling is being practiced. The complete coal transport road was black topped and CC roads were laid around pit head CHP. A sensor activated wetting point was provided for wetting coal dumpers before unloading into crushers and fixed point water sprinkling system was provided along permanent roads.</p> <p>Approval has been accorded by the competent authority of SCCL for deploying mechanical sweeper to clear the dust off the main approach and mineral transportation roads and it is under process.</p> <p>At present 48 nos. of project effected persons (PAFs) are being deployed daily for cleaning of coal transport road. A 10 KL capacity water sprinkler is being deployed in every shift for sprinkling water on the internal roads & in the premises of CHP, and along coal transport road from KHG OCP to IB Tandur via. Goleti I & IA, BPA OCP-II. etc.</p> <p>Three nos. of 28 KL & nine nos. of 10 KL capacity water sprinklers are being deployed for dust suppression on haul roads and approach roads, dumps, etc.</p> <p>The coal transport lorries are being covered with tarpaulin before leaving the mine premises and over loading is being prevented.</p>
(xxx)	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	<p>The complete coal transport road was black topped and regular repairing and tarring of coal transport is being done by our area civil dept. Green belt comprising of a mix of native species is taken up along the major approach roads.</p> <p>So far plantation was done in an area of 252.41Ha. (external dump area :</p>

cond. no.	condition	compliance status
		140.00 Ha. and avenue & greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.
(xxxii)	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Controlled blasting with NONEL (non-electric) technology is being practiced to reduce the ground vibrations and to arrest fly rock, and boulders. The blasting is being carried out only in day time and measures like optimum charge per delay, sequence of blasting, following designed blasting pattern, etc., are being taken to reduce the ground vibrations and to arrest fly rock, and boulders. Ground vibrations monitoring data is furnished in table no.6 of part -II.
(xxxiii)	A progressive afforestation plan shall be implemented covering an area of 882.29 ha. at the end of mining, which includes reclaimed External OB dump area (388.57 ha.), Internal OB dump area(261.93 ha.), and Green belt (231.79 ha.) in township located outside the lease by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.	A progressive afforestation plan is being implemented in project area (on final dumps, along haul roads, in premises of office, CHP, etc.), township area & other SCCL's lease area as per approved EMP by planting native species with a density of 2500 plants per Ha. by our forest dept. The progressive area of afforestation is 252.41Ha. (external dump area : 140.00 Ha. and avenue & greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II of the report.
(xxxiii)	An estimated total 578.49 Mm ³ of OB will be generated during the entire life of the mine. Out of which 184.58 Mm ³ of OB will be dumped in three external OB in an	OB is being dumped at earmarked external dump sites within ML area as envisaged in the approved EMP. The present maximum height of the external dump is 90m with each deck height 30m. The ultimate slope of the

cond. no.	condition	compliance status
	<p>earmarked area covering 331.75 Ha. of land. 393.91 Mm³ of OB will be dumped in one internal OB Dump in an earmarked area covering 280.98 ha. of land. The maximum height of external OB dump will not exceed 90 m. The 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 is being kept less than 28 degrees. Details of top soil & OB are furnished in table-2 & 3 of part-II respectively.</p> <p>Back filling operations were commenced from January, 2013 and 174.00 LBCM of OB was backfilled in an area of 62.82Ha. up to 31.03.2015. The present RL of backfilled area is 20m below the surface RL.</p> <p>Plantation is being taken up on dumps after reaching final stage by planting native species at 2500 no. of plants /Ha. So far plantation was done in an area of 252.41Ha. (external dump area-140.00Ha. and avenue& greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP.The plantation details are furnished in table-4 of part-II.</p> <p>Monitoring and management of existing reclaimed dump sites is being done and shall be continued until the vegetation becomes self-sustaining.</p> <p>The progress and compliance status of the reclamation is being submitted to Ministry of Environment, Forests & Climate Change on half yearly basis as a part of half yearly monitoring report.</p>
(xxxiv)	<p>The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.</p>	<p>The restoration and reclamation plan envisaged in the approved EMP is being implemented. Back filling operations were commenced from January, 2013 and 174.00 LBCM of OB was backfilled in an area of 62.82Ha. up to 31.03.2015. The present RL of backfilled area is 20m below the surface RL.</p> <p>Plantation is being taken up on dumps after reaching final stage by planting native species at 2500 no. of plants /Ha. So far plantation was done in an area of 252.41Ha. (external dump area : 140.00Ha. and avenue& greenbelt area:112.41Ha.) against 362.91Ha. as</p>

cond. no.	condition	compliance status
		planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.
(xxxv)	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	<p>Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land is being carried out as per approved EMP.</p> <p>Equivalent extent i.e.140.30Ha. of non-forest land was handed over to Forest Department in Dhanwada & Kistapur villages of Dhanwada (M), Mahaboobnagar District & SCCL has paid an amount of Rs.53,80,000/- to DFO, Mahaboobnagar vide cheque No.076559, dated 08.06.2002 towards Compensatory Afforestation while diversion of 140.30Ha. of forest land as per F.C. Lr.No. 8-102/2000-FC, dated. 10.09.2003.</p> <p>Equivalent extent i.e.29.85 Ha. of non-forest land was handed over to Forest Department, Bellampalli Division in Kistampet and Venkatpalli villages of Tandur Mandal on 16.02.1999 and SCCL deposited Rs.11.84 lakhs with DFO, Bellampalli on 30.03.1999 while diversion of 29.85Ha. of forest land as per F.C. Lr. No. 8-28/94-FC, dated. 28.09.2000.</p> <p>Equivalent extent i.e.126.71 Ha. of non-forest land identified in Sy. nos. 168, 327 & 376 of Jagatpalli village, Peddamandadi (M) of Mahaboobnagar District forms part of 344.72 Ha. handed over to forest department on 20.02.2007 and the said land had been mutated in favor of forest department on 23.02.2007. The SCCL deposited Rs.127.00 lakhs through RTGS mode to the CAMPA account No.3449010070179 of Union Bank of India, New Delhi on 24.05.2010 towards CA while diversion of 126.71Ha. of forest land as per F.C.</p>

cond. no.	condition	compliance status
		<p>Lr.No. 8-28/94-FC, dated. 01.07.2011.</p> <p>Plantation was also taken up by SCCL in 57.00Ha. of RF land in consultation with DFO., Bellampalli division.</p> <p>The restoration and reclamation plan envisaged in the approved EMP is being implemented. Back filling operations commenced from January, 2013 and 174.00 LBCM of OB was backfilled in an area of 62.82Ha. up to 31.03.2015. The present RL of backfilled area is 20m below the surface RL.</p> <p>A progressive afforestation plan is being implemented in project area (on final dumps, along haul roads, in premises of office, CHP, etc.), township area & other SCCL's lease area as per approved EMP by planting native species with a density of 2500 plants per Ha. by our forest dept., headed by the Advisor (Forestry) (Addl.PCCF, State Forest Dept. who is working in SCCL on deputation).</p> <p>So far plantation was done in an area of 252.41Ha. (external dump area : 140.00Ha. and avenue& greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.</p>
(xxxvi)	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	The mining is being done in phased & in sustainable manner and OB dumping is being done in three external dumps as envisaged in EC. Details of overburden management are furnished in table-4 of part-II. No extra over burden dumps are planned for the project.
(xxxvii)	No groundwater shall be used for mining operations.	Groundwater is not being used for mining operations. A small quantity of mine discharge water is being used for washing, drinking and dust suppression purpose. Water consumption details are furnished in table -6 of part-II.

cond. no.	condition	compliance status
(xxxviii)	<p>Of the total quarry area of 542.91 ha, the backfilled quarry area of 261.93ha. shall be reclaimed with plantation and a void of 280.98ha. at a depth of 40m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation /afforestation 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.</p>	<p>The restoration and reclamation plan envisaged in the approved EMP is being implemented. Back filling operations were commenced from January, 2013 and 174.00 LBCM of OB was backfilled in an area of 62.82Ha. up to 31.03.2015. The present RL of backfilled area is 20m below the surface RL.</p> <p>A progressive afforestation plan is being implemented in project area (on final dumps, along haul roads, in premises of office, CHP, etc.), township area & other SCCL's lease area as per approved EMP by planting native species with a density of 2500 plants per Ha. by our forest dept., headed by the Advisor (Forestry) (Addl.PCCF, State Forest Dept. who is working in SCCL on deputation).</p> <p>Plantation is being taken up on dumps after reaching final stage at 2500 no. of plants /Ha. So far plantation was done in an area of 252.41Ha. (external dump area : 140.00Ha. and avenue& greenbelt area:112.41Ha.) against 362.91Ha. as planned up to 2015 as per approved EMP. The plantation details are furnished in table-4 of part-II.</p>
(xxxix)	<p>Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (may), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of</p>	<p>Regular monitoring of ground water levels is being carried out around the project from May, 2004 on long term basis.</p> <p>A monitoring network is established with five piezometers constructed for the purpose and with existing open wells. The season wise monitoring is being done and monitoring results are enclosed as annexure-IV of part-II of the report.</p> <p>Surface water quality monitoring report is enclosed as annexure-V of part-II of the report.</p> <p>Ground water quality monitoring report</p>

cond. no.	condition	compliance status
	Environment, Forests & Climate. Change and the Central Pollution Control Board quarterly within one month of monitoring.	is enclosed as annexure-VI of part-II of the report. The piezometric monitoring data is being submitted to the Ministry of Environment, Forests & Climate Change and the Central Pollution Control Board along with half yearly monitoring reports.
(xl)	The company shall put up artificial ground water recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in 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.	So far no adverse impact on ground water table is observed due to mining operations. The piezometric monitoring report reveals that there is no adverse impact on ground water due to mining activity. There is a Vattivagu water reservoir near the project with large extent of area and water is available in the reservoir in all seasons. The water collected in mine sump is pumped out to diverted nallah after retention of water for adequate period and finally into Vattivagu and thus the ground water is being recharged again. Eight nos. of settling ponds and seven nos. of check dams constructed in the project area are also serving the purpose of augmentation of ground water recharging. There is no incidence of drying of wells in nearby villages. However, if village wells go dry due to de-watering of the mine, the project authorities will meet water requirement of nearby villages in future. The season wise piezometric monitoring results are enclosed as annexure-IV of part-II of the report.
(xli)	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	Sewage from the colony is being treated through septic tank followed by soak pits. A requisition was submitted for construction of Sewage Treatment Plant(STP) for Goleti township and it is approved by the competent authority.

cond. no.	condition	compliance status
		<p>The area civil dept. has taken up the following works for construction of a STP for Goleti Township;</p> <ul style="list-style-type: none"> • Identification of correct location, • Reorganization of all drains of township and • Estimation of total cost for construction of STP for Goleti Township. <p>A STP will be constructed for Goleti township soon.</p> <p>ETP (60KL capacity) was already provided for base workshop and a separate ETP (60KL capacity) for pit head CHP is under construction.</p>
(xlii)	<p>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 specialized agency/institution within the District/State and the results reported to this Ministry and to DGMS.</p>	<p>The SCCL has well-established health centers with qualified doctors as per NIOH, Ahamadabad in each area for monitoring and identification of occupational diseases where all facilities have been provided.</p> <p>An area hospital was provided at Bellampalli with qualified doctors, staff and facilities for Bellampalli area and periodical health check up of workmen is being done at regular intervals for occupational diseases and hearing impairment, if any.</p> <p>10% of the workers identified from workforce engaged in active mining operations are being checked up for occupational diseases and hearing impairment. 29 nos. of employees from different categories have been subjected to occupational health check up during last six months.</p> <p>Periodical medical examination details for last six months are enclosed as annexure-II.</p>
(xliii)	<p>Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever</p>	<p>This EC was granted for enhancement of annual production of the project from 3.0MTPA to 3.75MTPA only and no further land is involved. R&R details are enclosed as annexure-VII.</p>

cond. no.	condition	compliance status
	is higher.	
(xlv)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) 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&CC and its concerned regional office.	Digital processing of entire lease area using remote sensing techniques is being carried out once in three years for monitoring land use pattern. Land use land cover survey was conducted during the year, 2013-2014 and submitted to the MoEF&CC. The land use land cover report is enclosed as annexure-VIII.
(xlv)	A detailed Final Mine Closure Plan along with details of Corpus fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental clearance.	A mining plan along with the mine closure plan, and corpus fund details as approved by MoC is enclosed as annexure-XIX.
(xlvi)	The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.	The CSR activities are being taken up by area personnel dept. every year in consultation with local Panchayats of local villages and will be continued for the balance life of the project. The CSR details are enclosed as annexure-I.
(xlvii)	Corporate Environment Responsibility:	
	a) The company shall have a well laid down Environment Policy approved by the Board of Directors.	The SCCL has a well laid down Environment Policy approved by the Board of Directors. The environmental policy of SCCL is available in company's web site i.e. www. scclmines .com.

cond. no.	condition	compliance status
	<p>b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements /deviation/ violation of the environmental or forest norms/conditions.</p>	<p>Standard operating procedures to bring into focus any deviation/ violation of the environmental or forest norms/conditions are clearly defined and the status of compliance is being appraised to SCCL Board of Directors once in three months as per Companies Act,2013.</p>
	<p>c) The hierarchical system or administrative order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.</p>	<p>The unit level Environmental Management Committee has been constituted under the control of Project Officer and Area Level Environmental officer and Forest Officer who are reportable to the head of the Area. Unit level Environmental Management committee has been constituted with following members.</p> <ol style="list-style-type: none"> 1) Project Officer - Chairman. 2) Area Env. Officer - Secretary. 3) Mine Manager - Member 4) Mine Safety officer - Member. 5) Project Env. in officer - Member 6) Sr. Forest officer - Member. 7) Project Survey officer - Member. 8) Project Engineer(E&M)- Member. 9) Project civil Engineer- Member. 10) Hydro geologist - Member. <p>Apart from the above, a corporate environmental cell is established to monitor and guide in implementation of the environmental safeguards. The minutes of the EMC meeting are enclosed as annexure-IX of part-II of the report. A hierarchical system of reporting of non-compliances has been established and is being implemented in the company.</p>
	<p>d) To have proper checks and balance, the company shall have a well laid down system of</p>	<p>The company has a well laid down system of reporting of non-compliances /violations of environmental norms to the Board of Directors of the company</p>

cond. no.	condition	compliance status
	reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	and shareholders as well as status of compliance of other laws, rules, etc. once in three months under Companies Act, 2013.

4B: GENERAL CONDITIONS

cond. no.	condition	compliance status
(i)	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.	There is no change in the technology and shovel - dumper combination is the technology being adopted in the project.
(ii)	No Change in the calendar plan of production for quantum of mineral coal shall be made.	The year-wise coal and OB excavation details are furnished in table-1 of part-II.
(iii)	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} , SO ₂ and NO _x monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.	Four (4) nos. of ambient air quality monitoring stations have been identified in consultation with regional office, T.S. Pollution Control Board, Nizamabad and the monitoring work is being carried out regularly by the external agency i.e. "Environmental Protection Training and Research Institute" (EPTRI), Hyderabad which is CPCB recognized & a NABL accredited lab. The details of monitoring stations, micro-meteorological data & various air pollution control measures being taken are furnished in table-8 of part-II of the report. The parameters PM ₁₀ , PM _{2.5} , SO ₂ and NO _x are being monitored once in fortnight and heavy metals such as Hg, As, Ni, Cd, Cr, etc., are being monitored once in six months.
(iv)	Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly	Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data are being regularly submitted to the Ministry

cnd. no.	condition	compliance status
	submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	including its concerned Regional Office and to the State Pollution Control Board once in six months. The ambient air quality & heavy metals monitoring data are enclosed as annexure-X & XI of part-II respectively. SCCL entrusted the work of environmental monitoring in all the mining areas to EPTRI, a CPCB recognized and NABL accredited laboratory. EPTRI is periodically participating in the proficiency testing conducted by CPCB and their performance in such tests is being verified to ensure quality work.
(v)	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.	Adequate measures are being taken for control of noise levels below 85 dBA in the work environment. Sound proof cabins are provided in HEMM except dozers & graders where there is design constraint and these operators are being provided with ear-muffs. Planned preventive maintenance of the HEMM is being carried out to control the vehicular noise. The various measures being taken for control of noise levels below 85 dBA in the work environment are furnished in table-9 of part-II. The persons engaged in high noise work environment such as drilling and blasting operations are being provided with earplugs. 236 nos. of ear plugs are issued for last six months. Noise levels monitoring data is enclosed as annexure-VIII.
(vi)	Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as	ETP (60KL capacity) has been provided at workshop to treat the vehicular washing effluents. Construction of a separate ETP

cnd. no.	condition	compliance status
	to confirm to the standards prescribed under GSR 422(E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	(60KL capacity) for CHP is under progress. Periodical monitoring of effluents is being carried out to ensure compliance to prescribed standards before discharging into natural water course. The effluents are conforming to the prescribed standards and monitoring report is enclosed as annexure-XIII of part-II of the report.
(vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Vehicular emissions are being kept under control by periodic planned preventive maintenance of the vehicles and vehicular exhaust emissions are being monitored regularly. The vehicular emissions monitoring results are enclosed as annexure-XIV of part-II of the report. Vehicles used for coal transportation are being optimally loaded and covered with tarpaulin.
(viii)	Monitoring of Environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules, 1986.	Post project environmental monitoring work is being carried out by an external agency, i.e. "Environmental Protection Training and Research Institute" (EPTRI), Hyderabad which is a CPCB recognized & NABL accredited lab. A Regional Environmental Laboratory for Bellampalli region was commissioned with all facilities at Mandamarri for monitoring of critical parameters.
(ix)	Personal 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.	Protective wear like dust respirators or dust masks are being provided to workmen exposed to dusty environment periodically and the adequate training is being imparted at the Mine Vocational Training Center provided in the area. 341 nos. of dust respirators were issued during last six months.

cnd. no.	condition	compliance status
		<p>589 nos. of persons were given training on safety and health aspects at mine vocational training centre during last year.</p> <p>Details of dust respirators & ear plugs (issued) and Mine Vocational Training are enclosed as annexure-II of part-II.</p>
(x)	<p>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. The quality of Environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.</p>	<p>Occupational health surveillance programme of the workers (Periodically Medical Examination (PME)) is being carried out in the well established SCCL's hospitals to check over the health profile of the workmen and records are being maintained. 29 nos. of employees from different categories have been subjected to occupational health check up during last six months. PME details are enclosed as annexure-III.</p> <p>The quality of environment due to outsourcing and the health, and safety issues of the outsourced manpower is being addressed by the company while awarding the work to the contractor and compliance status of terms & conditions of the work order (including health & safety issues) is being monitored regularly by project safety officer and off-loading in charge officer.</p>
(xi)	<p>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.</p>	<p>The unit level Environmental Management Committee has been constituted under the control of Project Officer and Area Level Environmental officer and Forest Officer are also employed who are reportable to the head of the Area.</p> <p>Unit level Environmental Management committee has been constituted with following members.</p> <p>1) Project Officer - Chairman. 2) Area Env. Officer - Secretary.</p>

cnd. no.	condition	compliance status
		<p>3) Mine Manager - Member 4) Mine Safety officer - Member. 5) Project Env. in officer - Member 6) Sr. Forest officer - Member. 7) Project Survey officer - Member. 8) Project Engineer(E&M)- Member. 9) Project civil Engineer - Member. 10) Hydro geologist - Member.</p> <p>Apart from the above, a corporate environmental cell is established to monitor and guide in implementation of the environmental safeguards. The minutes of the EMC meeting are enclosed as annexure-IX of part-II of the report.</p>
(xii)	<p>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 concerned regional office.</p>	<p>The funds earmarked for the environmental safeguards are being kept in separate account and are being spent for environmental protection works only.</p> <p>The year wise environmental expenditure is being submitted along with half yearly reports.</p> <p>The details of environment expenditure are enclosed as annexure-XV of part-II of the report.</p>
(xiii)	<p>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 & Climate Change at http://envfor.nic.in.</p>	<p>Advertised in widely circulated two local daily news papers i.e. in "Andhrajyothi" (Telugu) & in "The Hindu" (English), dated: 06.03.2015.</p> <p>A copy of the Environmental Clearance letter has been marked to the Member Secretary, T.S.P.C.B., Hyderabad, vide lr.no.BPA/ENV/G-06/2015/ 30, dated: 21.02.2015.</p>
(xiv)	<p>A copy of the Environmental clearance letter shall be</p>	<p>This condition has been complied by marking a copy to the concerned vide</p>

cnd. no.	condition	compliance status
	<p>marked to concern Panchayat/Zilla Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.</p>	<p>lr.no.BPA/ENV/G-06/2015/30, dated: 21.02.2015.</p> <p>The Environmental Clearance letter has been displayed on company's website i.e.www.scclmines.com.</p>
(xv)	<p>A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's officer/ Tehasildar's Office for 30 days.</p>	<p>This condition has been complied vide lr.no.BPA/ENV/G-06/2015/30, dated: 21.02.2015.</p>
(xvi)	<p>The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM₁₀ , PM_{2.5}, SO₂ and NOx (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.</p>	<p>The Environmental Clearance letter has been displayed on company's website i.e.www.scclmines.com.</p> <p>The compliance status of the stipulated environmental clearance conditions is being updated once in every six months and updated half yearly monitoring report is being uploaded once every six months on company's website i.e. www.scclmines.com., so as to bring the same in public domain.</p> <p>The monitoring data of environmental quality parameter (air, water & noise) and critical pollutant such as PM₁₀ , PM_{2.5}, SO₂ and NOx (ambient) and critical sectoral parameters are being displayed at the entrance of the project premises and mine office and in corporate office and on company's website i.e. www.scclmines.com.</p>
(xvii)	<p>The project proponent shall submit six monthly compliance</p>	<p>The updated half yearly monitoring reports on status of compliance of</p>

cnd. no.	condition	compliance status
	reports on status of compliance of the stipulated Environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Officer's of CPCB and the SPCB.	the stipulated Environmental Clearance conditions is being submitted (both in hard copy and in e-mail) once in every six months to the respective Regional Office of the Ministry, respective Zonal Officer's of CPCB and the SPCB.
(xviii)	The Regional office of this Ministry located in the Region 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.	The project authority is extending full cooperation to the office (s) of the regional office by furnishing the requisite data / information / monitoring reports.
(xix)	The Environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.	The Environmental Statement for each financial year ending 31st March in Form-V is being submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently. The Environmental Statement in Form-V is being uploaded on the company's website i.e. www.scclmines.com., along with the status of compliance of EC conditions and is being submitted to the respective Regional Offices of the MoEF & CC by e-mail once in every six months.
5	The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.	All commitments and recommendations made in the EIA / EMP report are being complied by the project authorities.
6	The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.	This EC was granted for enhancement of annual production of the project from 3.0MTPA to 3.75MTPA only and there is no change in land requirement. So, public hearing is not required and not conducted.

cnd. no.	condition	compliance status																																
		The compliance status of previous public hearing is enclosed as annexure-XV.																																
7	The Proponent is required to obtain all necessary clearance/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	The project has started after obtaining all necessary clearance /approvals. If any further condition is stipulated by the Ministry or by any other competent authority for environmental protection, the project authority will obey & comply with the same.																																
8	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	If any further condition is stipulated by the Ministry or by any other competent authority for environmental protection, the project authority will obey & comply the same.																																
9	The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC conditions.	<p>A mine level environment audit cell is setup with the following members under the chairmanship of project officer with responsibility and accountability to ensure implementation of all the EC conditions.</p> <table border="1" data-bbox="846 1167 1442 1583"> <thead> <tr> <th colspan="4">Env.Audit Cell</th> </tr> <tr> <th>S l.</th> <th>Name</th> <th>Designation</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Sri.G.Mohan Reddy</td> <td>PO</td> <td>Chairman</td> </tr> <tr> <td>2</td> <td>Sri.M.Sriramesh</td> <td>S.O.M.</td> <td>Member</td> </tr> <tr> <td>3</td> <td>Sri.Madar Sahab</td> <td>Safety Officer</td> <td>Member</td> </tr> <tr> <td>4</td> <td>Sri.T.Madhusudan</td> <td>Project.environmental officer</td> <td>Member</td> </tr> <tr> <td>5</td> <td>Sri.B.Srinivasa rao</td> <td>Dy.S.E.(E &M)</td> <td>Member</td> </tr> <tr> <td>6</td> <td>Sri.P.Prabhakar</td> <td>Dy.S.S.O.</td> <td>Member</td> </tr> </tbody> </table> <p>The above audit cell will meet once in every year to audit the condition wise compliance status of all the EC conditions, and discuss and take further necessary action for compliance of any condition(s) of the EC.</p>	Env.Audit Cell				S l.	Name	Designation		1	Sri.G.Mohan Reddy	PO	Chairman	2	Sri.M.Sriramesh	S.O.M.	Member	3	Sri.Madar Sahab	Safety Officer	Member	4	Sri.T.Madhusudan	Project.environmental officer	Member	5	Sri.B.Srinivasa rao	Dy.S.E.(E &M)	Member	6	Sri.P.Prabhakar	Dy.S.S.O.	Member
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10	Concealing factual data or submission of false/fabricated	Agreed to the condition.																																

cnd. no.	condition	compliance status
	data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	
11	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 and any other orders passed by the Hon'ble Supreme Court of India/ High Courts and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of ground water and surface water, and occupational and other diseases due to the mining operations.	The project authority is taking all measures to avoid soil contamination, contamination of ground water and surface water, and occupational and other diseases due to the mining operations. If soil contamination, contamination of ground water and surface water, and occupational and other diseases occur due to the mining operations, SCCL undertakes to provide for the costs incurred for taking up remedial measures.
12	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Agreed to the condition.
13	This EC supersedes the earlier EC vide letter no. J-11015/36/2003-IA. II(M) dated 16.09.2004 for at a rated capacity of 0.72 MTPA in a lease area of 338.78 ha. and	Agreed to the condition.

cnd. no.	condition	compliance status
	environmental clearance vide MoEF letter No. J-11015/689/2007-IA-II(M), dated 22.10.2007 for expansion in rated capacity from 0.72 MTPA to 2.5 MTPA with a peak production of 3 MTPA and increase in lease area from 338.78 ha. to 1217.50 ha.	

A periodic progress report regarding environmental protection measures is enclosed as part - II.



**Project Officer,
Khairagura OC Expan. Project,
Bellampalli Area.**

PART – II

Post project environmental monitoring data & other reports of Khairagura opencast expansion coal mine project, Bellampalli area for the period October,2014 to March,2015.

1. Production details:

Sl. No	Year	Coal (in MT)		OB (in Mm ³)	
		As per EC	Actual	As per EMP	Actual
1	2007-08	3.00	1.40	10.42	0.53
2	2008-09		1.85	7.88	10.17
3	2009-10		2.50	14.61	14.58
4	2010-11		2.62	18.24	10.91
5	2011-12		2.65	17.27	13.79
6	2012-13		2.26	21.60	10.61
7	2013-14	3.75	2.97	44.06	19.49
8	2014-15		2.714	45.37	28.46

2. Topsoil management

1	Total Topsoil	:	10.86 M. m ³
2	Topsoil removed so far	:	5.443 M. m ³
3	Topsoil stored in temporary stockyard	:	2.242 M.m ³
4	Topsoil spread on dumps	:	3.201 M. m ³
5	Topsoil removed in last six months	:	0.470 M. m ³

3. Overburden management

1	Total hard Overburden	:	573.91 M.m ³ (excluding top soil)			
2	Total hard OB removed since inception	:	115.68 M.m ³ (excluding top soil)			
3	Total hard OB removed during last six months	:	15.78 M.m ³ (excluding top soil)			
4	Details of External OB dumps	:	Area (in Ha.)	Quantity in (LBCM)	Height (m)	Overall slope
	Dump-I	:	82.75	271.600	90	28°
	Dump-II	:	64.22	203.230	60	28°
	Dump-IIIA (Sushee)	:	83.69	223.826	60	28°
	Dump-IIIB (BGR)	:	51.80	178.360	60	28°
5	Details of Internal dump (Backfilling)	:	62.82	174.000	20 mtr. below ground level	-

4. Plantation:

1	No of plants planted during last six months	nil
2	Area covered in Ha. during last six months	nil
3	Expenditure incurred in Rs.lakhs during last six months	nil
4	Total area brought under plantation so far in Ha	252.41 Ha. (external dump area : 140.00 Ha. and avenue& greenbelt area:112.41Ha.) as against 362.91Ha. as planned up to 2015 as per approved EMP.
5	Total no of plants planted so far since inception	6,88,162 plants
6	Species of plants planted	Bamboo, Hardwickia binata, Albezia odoratissima, Dolichidron crispa, F.bengalensis, F.religiosa, F.carica, Aegle marmelos, Emblica officinalis, Feronia llimoni, Ceiba pentandra, Terminalia bellarica, T.chebula, Writia tinctoria, Pterocarpus marsupium, Eucalyptus clones
7	Seeds sown during last six months	nil
8	Seeds sown so far	4476 Kg
9	Small plants planted so far	60 Plants around Project Office
10	Total expenditure in Rs.	884298.69

Note: Plantation plan with year wise plantation details is enclosed.

5. Soil erosion control measures:

1	Toe Walls	10.5km/16.42km for protective bund.
2	Garland drains	10.5km/16.42km
3	Settling ponds	8 nos.
4	Check dams	Seven nos. check dams were constructed.

6. Ground vibrations monitoring data:

Ground vibrations monitoring data is as follows;

Date	Location/distance from blasting site	PPV in mm/sec.	Air pressure in dbf	Remarks
02.10.2014	800m	0.06	122	
04.11.2014	900m	1.40	115	
06.12.2014	800m	1.33	118	
08.01.2015	800m	1.08	126	
19.02.2015	800m	1.40	100	
17.03.2015	800m	1.33	118	

7. Water balance statement:

The average water utilization per day for different purposes at Khairagura OC expan. project is given below:

Sl	Description	Quantity in KLD
1	Average quantity of water pumped out of the mine	7370
2	Water used for Dust suppression	1158
3	Water used for drinking/bathing and other industrial requirement	132
4	Water used for washing of HEMM	46
5	Water used for plantation	102
6	Water used for fire fighting	75
7	Excess water let out	5857
8	Total water consumption	1513(as per CFO:1940)
9	Point of discharge (as per CFO)	1) Into ETP and the treated water to be re used for dust suppression and cleaning purpose (2550 KLD) 2) Septic tank followed by soak pit (22 KLD).
10	Discharge quantity as per Consent from APPCB	2572

8. Ambient air quality monitoring:

a. Micro-meteorological monitoring:

Micro-meteorological station was installed at GM's Office,Goleti, Bellampalli Area. The summary of the meteorological monitoring data during last six months is as follows:

Sl.	Parameter	Min.	Max.	Mean
1.	Temperature (⁰ C)	8.4	42.2	25.2
2.	Wind Speed (Km/hr)	Calm 31.14%	12.7	2.0
3.	Relative Humidity (%)	13.2	89.0	61.1
4	Predominant wind direction for the entire study period	NE		
5	Total rainfall (mm)	115.5		

b. Air quality monitoring:

The fortnightly ambient air quality monitoring data for last six months period is enclosed as annexure-X.

The summary of the ambient air quality monitoring data during last six months is as follows:

Location	Distance	PM ₁₀			
		Min.	Max.	98%tile	Standard
Khg OC Exp Project (CA4)	Core Zone	166	236	235	250
Pathibanda Village(BA10)	Buffer Zone 2.0Km)	79	92	92	100
Goverguda village (BA8)	Buffer Zone (450m)	67	94	94	100
Ullipitta dorli village(BA9)	Buffer Zone (1.7Km)	83	98	98	100
Chopidi village(BA7)	Buffer Zone	82	92	92	100
Location	Distance	PM _{2.5}			
		Min.	Max.	98%tile	Standard
Khg OC Exp Project(CA4)	Core Zone	62.2	87.6	86.9	-
Pathibanda Village(BA10).	Buffer Zone 2.0Km)	43.2	57.3	57.0	60
Goverguda village(BA8).	Buffer Zone (450m)	36.6	54.6	54.4	60
Ullipitta dorli village(BA9).	Buffer Zone (1.7Km)	46.7	59.7	59.5	60
Chopidi village(BA7)	Buffer Zone	47.3	60.5	60.2	60
Location	Distance	SO ₂			
		Min.	Max.	98%tile	Standard
Khg OC Exp Project(CA4)	Core Zone	11.5	16.7	16.7	120
Pathibanda Village(BA10).	Buffer Zone 2.0Km)	10.1	14.9	14.6	80
Goverguda village(BA8).	Buffer Zone (450m)	10.0	14.9	14.8	80
Ullipitta dorli village(BA9).	Buffer Zone (1.7Km)	10.6	16.2	15.9	80
Chopidi village(BA7)	Buffer Zone	10.6	16	15.5	80
Location	Distance	NO _x			
		Min.	Max.	98%tile	STD
Khg OC Exp Project(CA4)	Core Zone	18.3	31.6	31.5	120
Pathibanda Village(BA10).	Buffer Zone 2.0Km)	19.4	25.4	25.4	80
Goverguda village(BA8).	Buffer Zone (450m)	19.5	27.9	27.3	80
Ullipitta dorli village(BA9).	Buffer Zone (1.7Km)	20.5	27.9	27.7	80
Chopidi village(BA7)	Buffer Zone	21.3	25.3	25.0	80

- No standard for core zone.

c. Air pollution control measures:

As the opencast mining operations involve fugitive dust generation, the following measures are being taken up in the project to prevent/control dust generation and air pollution:

1. Three nos. of 28 KL capacity & 9 nos, of 10KL capacity water sprinklers have been deployed for dust suppression on haul roads, dump yards, etc. A 10 KL, capacity hired water sprinkler is being deployed for water sprinkling along coal transport road from KHG OCP to IB Tandur via. Goleti I & IA, BPA OCP-II.
2. The 12 Km long and 7m wide double road leading to Khairagura expansion project from Goleti Township was black topped. 2.125 Km road was widened from Chopidi Village to Khairagura OC Exp. Project's check post.
3. The permanent roads, like road to the pit head coal handling plant, permanent internal roads at site office, etc., were black topped.
4. Vehicular emissions are being monitored for HEMM at a frequency of once in six months and the vehicles not meeting the stipulated norms are being subjected to further

maintenance. Regular maintenance of the vehicles is being carried out to control fuel exhaust emissions.

5. Effective dust suppression measures are being taken at pit head coal handling plant. The crusher house, conveyors, transfer points, discharge hoppers, etc, are enclosed with G.I. sheets to the extent possible to control the dust generation.
6. Automatic water spraying arrangement was provided by using photo sensors at crushers. A sensor operated wetting point is provided to wet loaded coal transport dumpers.
7. Pre-weigh truck dispatch system is provided at this project, so that the handling of the coal is minimum during dispatch.
8. The wet drilling is being adopted.
9. Controlled blasting technique with NONELs is being practiced for effective blasting and to control the generation of dust during blasting operation. Post-project air quality monitoring is being carried out by an external agency i.e. M/s Environment Protection Training & Research Institute (EPTRI) which is CPCB recognized & NABL accredited lab as per the frequencies stipulated by MoEF for coal mining industry and all the necessary precautions are being taken to maintain the concentration of critical parameters well within the stipulated standards. A regional lab was established by EPTRI with all required facilities at Mandamarri area for Bellampalli region for monitoring of critical parameters in the field.
10. Four nos. of Ambient Air Quality (AAQ) monitoring stations, one at core zone and three at buffer zones were identified in consultation with Regional office, APPCB. The air quality monitoring results are enclosed as annexure-X. The Ambient Air Quality (AAQ) monitoring stations are given below;

Sl.	Station	Zone
1	KHG OC Exp. Project(CA4)	Core Zone
2	Pathibanda village(BA10).	Buffer Zone 2.0Km
3	Goverguda village(BA8).	Buffer Zone (450m)
4	Ullipitta dorli village(BA9).	Buffer Zone (1.7Km)

9. Noise levels monitoring:

a. Monitoring data: The summary of noise quality monitoring data for last six months is as follows;

Location	Core / Buffer zone	Day Time			
		Min.	Max.	98%tile	Standard
Khairagura OC site office (CN4).	Core	65.7	71.7	71.7	75
Rehabilitated Goverguda village (BN8)	Buffer	51.9	53.9	53.8	75
Chopri Village (BN7)	Buffer	53.3	54.8	54.8	55
Ulipitta village (BN9)	Buffer	52.5	54.8	54.8	55
Pathibanda village(BN10)	Buffer	51.3	53.7	53.7	55
Location		Night Time			
		Min.	Max.	98%tile	Standard
Khairagura OC site office (CN4).	Core	57.5	66.1	65.9	70
Rehabilitated Goverguda village(BN8)	Buffer	42.0	43.5	43.5	45

Chopri Village (BN7)	Buffer	43.5	44.8	44.7	45
Ulipitta village(BN9)	Buffer	42.8	44.9	44.9	45
Pathibanda village(BN10)	Buffer	41.8	43.9	43.8	45

The Post project Noise monitoring data for last six months is enclosed as annexure – XII.

b. Noise pollution control measures:

1. Noise levels recorded at different locations in and around the project are under the prescribed standards.
2. Sound proof cabins are provided in the HEMM for except dozer & grader.
3. Monitoring of noise level is being done regularly and record is being maintained.
4. Plantation is being carried out on dumps, in the vacant places, avenue and around boundary to reduce the noise levels.
5. Planned preventive maintenance of noise generating machinery including transport vehicles is being done.
6. Protective devices like acoustic wool, earplugs/ear muffs, etc. have been provided for the workers exposed to noise levels above 90 dB(A).
7. Workers are being subjected to occupational health surveillance periodically.
8. Speed limits have been fixed at 20 km/hr. for HEMM to control the excessive noise created by dumpers and other vehicles.
9. Regular fine tuning of engines is being done to reduce vehicular emissions and for reduction of noise.
10. In order to control impact of noise due to the operation of screen chutes, always some coal is being left available to reduce the height of fall and direct hitting to the sides of the chute.
11. The noise level arising due to blasting operation is for a very limited period. Design of optimum blast hole geometry by considering bench height, diameter of hole, type of explosive, nature of rock, level of fragmentation required, etc.
12. Total charge per blast is divided into several parts so as to keep minimum explosive per delay.
13. Plaster shooting is avoided to the extent possible to reduce air shock wave. NONELS are being used to control ground vibrations.

10. Surface water quality monitoring:

Monitoring data: The post project surface water quality monitoring data for last six months is enclosed as annexure-V.

11. Groundwater quality monitoring:

Monitoring data: The post project ground water quality monitoring data for last six months is enclosed as annexure-VI.

12. Effluents quality monitoring :

The summary of the effluents quality monitoring data during last six months is as follows:

Location	Latitude & Longitude	P ^H			
		Min.	Max.	98%tile	STD
Khairaguda expansion OCP mine discharge (EW4).	N19° 14' 5.6 E 79° 17' 5.8"	7.1	7.9	7.9	5.5 to 9.0
Khairaguda expansion OCP base workshop ETP outlet(EW5).	N19° 14' 7.1" E 79° 17' 2.2"	7.0	7.9	7.9	5.5 to 9.0
*Khairaguda expansion OB dump surface runoff-settling tank outlet(EW.6)	N19° 14' 15.7" E 79° 17' 20.9"	-	-	-	5.5 to 9.0
Location	Latitude & Longitude	TSS (mg/l)			
		Min.	Max.	98%tile	STD
Khairaguda expansion OCP mine discharge(EW4).	N19° 14' 5.6" E 79° 17' 5.8"	9.0	21.0	19.5	100
Khairaguda expansion OCP base workshop ETP outlet(EW5).	N19° 14' 7.1" E 79° 17' 2.2"	16.0	26.0	25.3	100
*Khairaguda expansion OB dump surface runoff-settling tank outlet(EW.6)	N19° 14' 15.7" E 79° 17' 20.9"	-	-	-	100
Location	Latitude & Longitude	COD (mg/l)			
		Min.	Max.	98%tile	STD
Khairaguda expansion OCP mine discharge(EW4).	N19° 14' 5.6" E 79° 17' 5.8"	8.0	20.0	20.0	250
Khairaguda expansion OCP base workshop ETP outlet(EW5).	N19° 14' 7.1" E 79° 17' 2.2"	40.0	59.0	57.0	250
*Khairaguda expansion OB dump surface runoff-settling tank outlet(EW.6)	N19° 14' 15.7" E 79° 17' 20.9"	-	-	-	250
Location	Latitude & Longitude	Oil & Grease (mg/l)			
		Min.	Max.	98%tile	STD
Khairaguda expansion OCP mine discharge(EW4).	N19° 14' 5.6" E 79° 17' 5.8"	<1	<1	<1	10
Khairaguda expansion OCP base workshop ETP outlet(EW5).	N19° 14' 7.1" E 79° 17' 2.2"	1.1	1.5	1.5	10
*Khairaguda expansion OB dump surface runoff-settling tank outlet (EW.6).	N19° 14' 15.7" E 79° 17' 20.9"	-	-	-	10

*Found dry.

Water pollution control measures:

1. The washing effluents generated from washing platform of the workshop are being treated in Effluent Treatment Plant provided for the purpose and let out water is being utilized for plantation and dust suppression. Second ETP for CHP is under construction.
2. Excess water after necessary treatment in sedimentation tank is being discharged into natural drains leading to Vattivagu.

3. Sewage from township is being collected and treated in septic tanks followed by soak pits. Requisition for sewage treatment plant for Goleti township was submitted and it is under consideration.
4. Construction of a separate ETP for coal handling plant is under construction.
5. Garland drains (dim: base width 3m, top width 10m, depth 3m) around the quarry and external dumps are provided with settling ponds followed by check dams to settle the run off soil during rains.
6. Seven nos. of check dams were constructed for dumps.
7. An earthen bund (base width 5m, top width 3m, height 3m) is provided around the external dump to check the run off into the natural drains.
8. Piezometric monitoring data is enclosed as annexure-IV of part-II of the report.
9. Post-project water quality monitoring is being carried out by an external agency i.e. Environment Protection & Research Institute/HYD (EPTRI) which is CPCB recognized & a NABL accredited lab as per the frequencies stipulated by MoEF&CC for coal mining industry and all the necessary precautions are being taken to maintain the concentration of critical parameters well within the stipulated standards. The monitoring results of surface & ground water quality at these locations are enclosed as annexure-V&VI of part-II respectively.

13. Phreatic surface monitoring: (range of water table)

The phreatic monitoring data is enclosed as annexure-IV.

14. Capital and revenue expenditure incurred on environment management and pollution control measures:

Expenditure towards environmental protection for last six months is enclosed as annexure- XV.

15. Socio-economic measures:

- a) R & R plan has already been implemented. They have been provided with roads, water, electricity, community hall , residential facility, etc.
- b) Rehabilitation of Borjam, New Borjam, Arjuguda, Lingiguda, S.C.Colony, Nambaiah colony, Chanduguda & Khairaguda villages is also completed as per the guidelines of the state government.
- c) A central colony over a non-coal bearing area has been provided. It has been provided with facilities like schools, transports, clubs, post office, market places, etc.
- d) Workmen are encouraged to undergo family planning operations by giving cash incentives, leave, etc.
- e) Regular vaccination for polio, DPT, Measles and BCG are being given at Area Hospital and dispensaries.
- f) The sports activity is being encouraged among workmen & at R&R centers by arranging playing courts for out-doors and In-door games. Inter area competitions are being conducted annually. Play article were provided to the children at R&R centers.
- g) Mobile medical van (SPANDANA) is provided daily with qualified doctor & staff for entire Tiryani mandal by providing X-Ray, E.C.G. Spiro analyzer, blood tests, etc.
- h) SCCL adopted Tiryani mandal to take up development activities like roads, education, medical & health facilities for which Rs. 32 crores is sanctioned by SCCL Management in 2011 and 7 crores were deposited in their account for CSR activities.

- i) Environmental awareness programmes like quiz, essay and elocution competitions are being conducted every year in all mines, departments for employees and officers, house wives in Colonies and school's children of Schools in the area, to bring awareness on environment protection (i.e. conservation of water, power, waste management, pollution and preventive measures from time to time and winners are being encouraged with prizes).
 - j) Environment slogans in English and Telugu are being distributed to mines and departments for display at their premises.
 - k) Posters with pictures on Bio-medical waste disposal are distributed to Hospitals for display at conspicuous places for awareness & for implementation.
 - l) Fruit bearing and shady plants are being issued to schools, Forest dept., villagers, etc., on free of cost from SCCL's Goleti nursery.
 - m) Free medical camps are being organized in surrounding villages of the projects and R&R centers by SCCL every year.
16. Civil expenditure for environmental protection works is enclosed as annexure-XV(b).
17. Plantation details of all projects & other areas of Bellampalli area are enclosed as annexure-XVII.
18. Plantation plan showing year wise plantation details is enclosed as annexure-XVIII.
19. A mining plan along with the mine closure plan, and corpus fund details as approved by MoC is enclosed as annexure-XIX.



**Project Officer,
Khairagura opencast expansion project,
Bellampalli Area.**