



THE SINGARENI COLLIERIES COMPANY LIMITED

(A GOVERNMENT COMPANY)

Registered Office

Kothagudem Collieries (P.O) - 507 101, Khammam Dist, Telangana State

CIN: U10102TS1920SGC000571

Environment Dept., Srirampur Area

PO, Srirampur Colony-504 303, Dist Adilabad, Telangana State

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website: www.scolmines.com

Ref.No: SRP/ENV/D-403A /2016/ 12-1

Date: 20.05.2016.

"Regd. Post with ACK due"

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

Sir,

Sub: Half yearly Environmental monitoring report in respect of **Sand Mining Project** in Godavari river bed near Chennur village of S.C.Co.Ltd, for the period ending 31.03.2016 - Reg.
Ref. MoEF Lr.No: J-11015/519/2008-1A- II(M), dtd. 9th February, 2010

Reference to the MoEF Environmental clearance letters cited above, please find enclosed herewith the Half yearly Environmental Monitoring report for the period ending 31.03.2016 in respect of **Sand Mining Project** in Godavari river bed near Chennur village of S.C.Co.Ltd along with a soft copy.

The report consists of Part-I, which indicates the status of implementation of environmental clearance conditions and Part-II indicates the various Pollution control measures taken during the last six months period.

Thanking you,



Yours faithfully,

[Signature]
Agent,

RK-7&NT Group of mines.

[Stamp]
SRP Area

Encl: As above.

C.C.: The Environmental Engineer,
Telangana State Pollution Control Board,
Regional Office, H.No: 6-2-166/A, Subhash Nagar,
Nizamabad - 503 002.



THE SINGARENI COLLIERIES COMPANY LIMITED
(A Government Company)
SRIRAMPUR AREA

PART-1

**HALF YEARLY COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE
CONDITIONS UPTO 31ST MARCH, 2016**

A. SALIENT FEATURES OF THE PROJECT:

1	Name of the Project	:	Sand mining project in Godavari river bed near Chennur village.
2	Organization	:	Singareni Collieries Company Limited
3	Environmental Clearance	:	
	A Letter No & date	:	J-11015/519/2008-1A-II(M), dtd. 9 th February, 2010
	B Sanction capacity	:	3.0 Lakh Cu.M /Annum
	C Mining Lease Area	:	216.00 Ha in Godavari sand reach
	D Date of Public Hearing	:	24.11.2009
4	Location of the Project		
	A Village	:	Chennur
	B Tehasil	:	Chennur
	C District	:	Adilabad
	D State	:	Telangana State
	E Latitude	:	N 18° 50' 33" To 19° 52' 14"
	F Longitude	:	E 79° 49' 20" To 79° 50' 16"
	G Topo Sheet	:	Survey of India Topo sheet No:56N / 13 of Adilabad district .
	H Nearest railway station	:	Mancherial Railway Station of South Central Railway
	I Nearest Airport	:	Hyderabad
	J Nearest town	:	Mancherial
5	Address for Correspondence	:	
	A Name	:	John Anand
	B Designation	:	Agent
	C Address	:	O/o Agent, RK-7&NT Group of Mines, Srirampur Colony (Post), Mancherial (Mandal), Adilabad (District), Telangana State.
	D Pin Code	:	504 303
	F E-mail ID	:	Agt_rk7nt_srp@scclmines.com
	G Telephone No.	:	9491144433
	H Fax No.	:	08736-238222
6	Life of the Project	:	
	A Date of Opening	:	August, 2010.
	B Total Life of the project as per EMP	:	30 Years
	C Balance Life	:	25 Years
7	Reserves		
	A Total Extractable Sand Reserves	:	97.2 L Cu.M
	B Average thick ness of sand bed	:	4.5 m

8	Land Requirement	:	
	A Total Requirement	:	216.00 Ha. in Godavari river Sand reach
	B Forestland Involved	:	Nil
	C Non-forestland	:	216 Ha.
	D Land acquired so far	:	--
9	Statutory Clearances	:	
	A Ground Water Clearance		Order No. 250/T/2006-1, Dtd.22.09.2009.
	B Consent for Establishment	:	Order No: 56/PCB/CFE/RO-NZB/HO/2010-975, dtd.15.07.2010.
	C Consent for Operation	:	Consent Order No: APPCB/RCP/NZB/43/ HO/ CFO/ 2011- 3079, dtd.17.12.2011.
	D Forest Clearance	:	--
	E Sand Mining Lease	:	G.O. Ms. No: 253, dtd. 21 st September, 2007 of AP Govt., Industries and commerce (M-III) Department
	F Others (Specify)		--
10	R & R Involved	:	No R&R involved.

Status of implementation of Environmental Clearance conditions as on 31.03.2016.

E.C. Cond. No:	Condition	Status as on 31.03.2016
5) (A)	Specific Conditions:-	
(i)	Operations of the mine shall be confined in such a way that distance of the Pranahita Wildlife sanctuary is beyond 10km of the mine lease area.	It is being followed.
(ii)	Measures shall be undertaken for dust suppression during loading of sand and by water sprinkling on the internal roads. The trucks carrying material shall be covered with tarpaulin.	Approach roads and internal roads are being wetted by water spraying through water tankers mounted on tractors. The truck, which carries material are being covered with tarpaulin.
(iii)	Two monitoring stations i.e. one in the upstream and one in the down stream in the mining lease area shall be set up for monitoring the surface water quality.	Two stations have been identified upstream and down stream of river Godavari are being monitored for surface water quality. Water quality monitoring details are enclosed as Annexure – II.
(iv)	Measures for prevention and control of soil erosion and management of silt shall be undertaken.	Soil erosion control measures as suggested in EMP are being implemented.
(v)	Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records submitted to the Ministry.	Fugitive dust emissions are being monitored and records are being submitted to TSPCB in quarterly basis and on Six monthly bases to Regional Office, MoEF, Bangalore in half yearly EC compliance reports

E.C. Cond. No:	Condition	Status as on 31.03.2016
(vi)	Monitoring of ground and surface water quality shall be regularly conducted and records maintained and data submitted to the Ministry regularly. Further, monitoring points shall be located between the mine and drainage in the direction of flow of ground water and records maintained.	Monitoring of surface water quality is being conducted regularly and records maintained. The water quality monitoring data is furnished in the Point No. 2 of Part-II and Annexure-II
(vii)	Data on ambient air quality (PM10, SO ₂ , NO _x) should be regularly submitted to the Ministry including its Regional office located at Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months. The capital parameters such as PM10, NO _x in the ambient air within the impact zone, shall be monitored and displayed on a display board at the project site at a suitable location near the main gate of company in public domain. The circular no. J-20012/1/2006-IA.II(M) dated 2.05.2009 issued by the Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	The Ambient Air Quality is being periodically (Quarterly basis) submitted to TSPCB and on Six monthly basis to Regional Office, MoEF, Chennai in half yearly EC compliance repots
(viii)	Land use pattern of the nearby villages shall be studied, including common property resources available for conversion into productive land. Action plan for abatement and compensation for damage to agricultural land / common property land (if any) in the nearby villages, due to mining activity shall be submitted to the Ministry within six months.	Already Land use pattern obtained at the time of Environmental Clearance (E.C) and further land use pattern study will be taken up in due course.
(ix)	Need based assessment for the nearby villages shall be conducted to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.	Various developmental activities are being undertaken under SHAPE programme. The list of works is enclosed as Annexure - VI .

E.C. Cond. No:	Condition	Status as on 31.03.2016
(x)	Rain water harvesting shall be undertaken to recharge the ground water source.	It is being complied.
(xi)	Personnel exposure monitoring for respirable mineral dust shall be carried out for the workers and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal protective equipments etc., shall be carried out periodically. The workers shall not be allowed to work without dust masks and shall not be allowed to smoke as the combined impact of silica dust and cigarette smoking will have adverse impact on their health.	Being complied.
(xii)	Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by remedial action wherever required.	Occupational health surveillance is carried out periodically through Periodical Medical Examinations (PME) once in every 5 years.
(xiii)	Occupational health Cell shall be created at the company level under the charge of an officer of adequate seniority who is a qualified person in occupational health.	Company has got well established hospital set up at area level as well as company level.
(xiv)	Green belt development and selection of plant species shall be as per CPCB guidelines. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Ministry within six months.	Not applicable. However, avenue plantation will be taken up after completion of CC road in consultation with the local people and social forestry will be encouraged by distributing plants to the nearby villagers.
(xv)	Provision shall be made for housing the laborers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	The labour is from the nearby villages and hence no provision for housing within the site is required.

E.C. Cond. No:	Condition	Status as on 31.03.2016
B.	General conditions:	
(i)	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.	No change will be made without the prior approval from the Ministry.
(ii)	No change in the calendar plan including excavation, quantum of mineral and waste shall be made.	It is being complied.
(iii)	Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	Being complied. Approach roads and internal roads are being wetted by water spraying through water tankers mounted on tractors.
(iv)	Ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, SO ₂ , NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Four (4) No.s of Ambient Air Quality Monitoring stations had been identified for post project monitoring work keeping in view of meteorological data in consultation with Regional Office, TSPCB, Nizamabad. The results of monitoring of Ambient Air Quality including locations, frequency and parameters are furnished in Point No. 1 of Part-II.
(v)	Data on ambient air quality (PM10, SO ₂ , and NO _x) should be regularly submitted to the Ministry including its Regional office located at Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months. The monitored data of criteria pollutants mentioned above shall be regularly uploaded on the company's website and also displayed at project site.	The Ambient Air Quality is being periodically (Quarterly basis) submitted to TSPCB and on Six monthly basis to Regional Office, MoEF, Chennai in half yearly EC compliance reports.
(v)	Measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.	Being complied. The Noise levels monitoring data at near by villages are furnished in Point No.4 of Part-II.
(vi)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil	Not applicable.

E.C. Cond. No:	Condition	Status as on 31.03.2016
	and grease trap shall be installed before discharge of workshop effluents.	
(vii)	Personnel working in dusty areas shall be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.	The persons are being provided with protective devices wherever required. Training on safety and health aspects is being imparted in the Area vocational training center.
(viii)	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 Organization.	Area environmental cell is functioning at area level under the direct supervision of the head of the area. The details of EMC is given in Point No.8 of Part-II.
(ix)	The project authorities shall inform to the Regional Office of the Ministry located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Complied.
(x)	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 the Ministry and its Regional Office located at Bangalore.	The funds earmarked for the environmental protection measures are being kept in separate account and will not be diverted for any other purpose. Year wise expenditure is being reported to the Ministry and its Regional Office of MoEF. The environmental protection expenditure incurred in the Project is furnished in Point No.6 of Part-II.
(xi)	The Regional Office of the Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Project Authority will extend full cooperation to the office (s) of the regional office by furnishing the requisite data / information / monitoring reports.
(xii)	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bangalore, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the	Six monthly reports are being submitted to the Ministry as well as to the Regional Office of the State Pollution Control Board.

E.C. Cond. No:	Condition	Status as on 31.03.2016
	environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests, Bangalore.	
(xiii)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality, / office of Municipal Corporation / Gram Panchayat Concerned and on the company's website within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in .	Advertisement given in the following Daily News papers as informing that the Chennur Sand Mine of SCCL has been accorded the Environmental Clearance from Ministry of Environment and Forests, GOI, New Delhi. i) Deccan Chronicle (English), dtd. 25.02.2010 and ii) Andhrajyothi (Telugu), dtd. 25.02.2010
(xiv)	A copy of clearance letter will be marked to concerned Panchayaths / local NGO, if any, from whom suggestion / representation has been received while processing the proposal. The clearance letter shall also be put on the website of the company.	The copy of the Clearance letter was send to following Mandal and Panchayats vide Lr.No.SRP/ENV/ D-403A/2010/29, dtd.26.02.2010 i) Tehasildar, Chennur Mandal, ii) Chennur Grampanchayat
(xv)	State Pollution Control Board shall display a copy of the clearance letter at the Regional office, District industries Centre and Collector's office / Tahsildar's Office for 30 days.	This Condition has been already complied.
xvi)	The environmental Statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted to the State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and shall also be put on the website of the company along with the status of compliance of environmental clearance conditions. The same shall also be sent to the Regional Office of Ministry by e-mail.	Will be complied.
(6)	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. MoEF may impose additional environmental conditions or modify the existing ones, if necessary.	-Agreed-

E.C. Cond. No:	Condition	Status as on 31.03.2016
(7)	In case of any deviation or alteration in the project proposed submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	Any diversion or alteration will be informed to the Ministry.
(8)	Concealing actual data or submission of false/fabricated 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.	-Agreed-

A periodic progress report regarding environmental protection measures till 31.03.2016 is enclosed as **Part - II**.

PART – II

ENVIRONMENTAL PROTECTION MEASURES AS ON 31.03.2016

1. Ambient Air Quality Monitoring:

Parameters:

In accordance with MoEF Notification, GSR-742 (E), dt. 25.09.2000 and National Ambient Air Quality Standards, the concentration of Suspended Particulate Matter (PM₁₀ and PM_{2.5}), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x) is being monitored at nearby villages to assess the impact of mining operations on surrounding habitation.

Respirable Dust Sampler is used for monitoring of PM₁₀, SO₂ and NO_x and Ambient Fine Dust Sampler is being used for monitoring of PM_{2.5}. SCCL is carrying out post-project environmental monitoring through EPTRI, Hyderabad, a CPCB recognized and NABL accredited laboratory. EPTRI has also established laboratories in SCCL mining areas for analyzing critical parameters in the field.

Frequency of Monitoring:

Air quality monitoring is being carried out at a frequency of once in a fortnight (24 hourly sampling) at the identified locations near the dust generating sources.

Monitoring Locations:

S.No.	Station Code	Name of the Stations	Latitude	Longitude
1	A1	Chennur village	N 18°54' 31.3"	E 79° 45' 39.9"
2	A2	Subrampalli village	N 18°54' 29.5"	E 79° 45' 41.6"
3	A3	Parapalli Village	N 18°54' 35.7"	E 79° 45' 43.3"
4	A4	Kuntlam village	N 18°59' 35.6"	E 79° 28' 42.1"

Monitoring Data:

The summary of the monitoring from October, 2015 to March, 2016 as follows:

(All values in $\mu\text{g}/\text{m}^3$)

Location	Zone	PM ₁₀			
		Min.	Max.	98%tile	STD
Chennur village	Buffer	72	96	95.34	100
Subrampalli village	Buffer	59	89	87.46	100
Parapalli Village	Buffer	53	74	74.0	100
Kuntlam village	Buffer	49	85	81.7	100
Location	Zone	PM _{2.5}			
		Min.	Max.	98%tile	STD
Chennur village	Buffer	38.7	52.8	52.47	60
Subrampalli village	Buffer	28.8	42.4	42.202	60
Parapalli Village	Buffer	29.4	43.1	42.77	60
Kuntlam village	Buffer	22.4	48.7	46.566	60
Location	Zone	SO ₂			
		Min.	Max.	98%tile	STD
Chennur village	Buffer	8.0	14.2	14.112	80
Subrampalli village	Buffer	9.2	12.8	12.778	80
Parapalli Village	Buffer	8.9	14.3	14.19	80
Kuntlam village	Buffer	9.8	14.8	14.294	80
Location	Zone	NO ₂			
		Min.	Max.	98%tile	STD
Chennur village	Buffer	12.8	22.1	21.66	80
Subrampalli village	Buffer	14.4	19.2	19.112	80
Parapalli Village	Buffer	14.0	25.1	24.726	80
Kuntlam village	Buffer	13.3	25.7	24.952	80

The air quality data monitored at the work zone locations and surrounding residential areas indicate that PM₁₀ concentration is within the stipulated limits at all locations. The PM_{2.5} concentration is within the stipulated limits at all locations. The SO₂ and NO₂ levels are also well within the limits at all the locations. The fortnightly air quality data monitored during six months period ending 31st March, 2016 is enclosed as **Annexure-I**.

SCCL is taking following control measures in the Chennur Sand mining project for air pollution control including reduction of particulate emissions:

Air pollution control measures:

Air pollution is likely to be caused at various stages of sand mining operations such as excavation, loading, transportation and screening of material. Suspended Particulate Matter (SPM) and Respirable Particulate Matter (RPM) are the main pollutants during Sand Mining operations.

In order to mitigate fugitive dust emissions and other air emissions from the project activities, the following measures are being adopted:

- i. Wet mining is done at the time of excavation, loading and transportation. Portable sprinklers (3KL) are being used to wet the sand at excavation sites and for loading on to trucks.
- ii. Sand is transported to the coal mine sites by road through trucks. Wet sand loaded trucks are covered with tarpaulin sheets to avoid dust generation during transportation.
- iii. To minimize the vehicular pollution from the sand transporting vehicles, the following conditions are insisted to permit the vehicles of the transporters:
 - Pollution control certified vehicles shall be used for transportation of sand to coal mines.
 - Regular maintenance of transport vehicles and monitoring of vehicular emission levels at periodical intervals.
- iv. Temporary approach roads are being wetted regularly.
- v. Ambient Air quality Monitoring is being carried out at four stations on fortnightly basis to assess the air quality in and around the project for taking necessary control measures.
- vi. Green belt development along the access road at the project will be taken up.
- vii. Post-project air quality monitoring is being carried out by outside agency [M/s Environment Protection Training and Research Institute (EPTRI) Hyderabad] as per the frequency stipulated by MoEF vide GSR 742 (E) for coal mining industry and all the necessary precautions are being taken to maintain the concentration of critical parameters well within the stipulated standards.

2. Water Quality Monitoring:

The impact of the mining activities on the water environment was assessed by studying the quality of groundwater and surface water bodies in the study area. The sampling locations were selected considering their proximity to the project sites. A total of 6 water samples i.e., 2 samples from surface and 4 samples from groundwater were collected and analyzed for various Physico-chemical and bacteriological parameters.

Post project water quality monitoring stations:

(i) Surface Water Quality Monitoring Locations:

Sl. No	Location	Zone	Latitude	Longitude	Station Code
1.	Godavari river up stream of Chennur Sand mining	Buffer	N 18° 50' 42.6"	E 79° 42' 29.3"	SW1
2.	Godavari river Down stream of Chennur Sand mining	Buffer	N 18° 52' 10.6"	E 79° 48' 54.1"	SW2

(ii) Ground Water Quality Monitoring Locations:

Sl. No	Location	Zone	Latitude	Longitude	Station Code
1.	Borewell at Chennur village	Buffer	N 18° 51' 11.8"	E 79° 47' 07.8"	GW1
2.	Bore well at Subrampalli village	Buffer	N 18° 54' 29.5"	E 79° 45' 41.6"	GW2
3.	Bore well at Parapalli village	Buffer	N 18° 53' 10.7"	E 79° 51' 12.9"	GW3
4.	Bore well at Kuntlam village	Buffer	N 18° 59' 34.2"	E 79° 28' 43.1"	GW4

Parameters:

The ground water quality results are compared with IS: 10500 standards of groundwater quality and surface water quality with IS 2296, 1982 and CPCB Water Quality Criteria, Class- A (Drinking Water Source without conventional treatment but after Disinfection), Class – B (outdoor bathing (organized) and Class – C (Drinking Water Source with conventional treatment and after Disinfection, Class – C (Drinking Water Source with conventional treatment and after Disinfection, Class –D propagation of wild life fisheries and Class-E (Irrigation, Industrial cooling, controlled waste disposal).

Frequency of monitoring

Monitoring of ground water (all parameters), surface water (all parameters) are being analyzed once in every quarter.

Monitoring Data:

The surface water, ground water quality and effluent quality data monitored during October, 2015 to March, 2016 is enclosed as **Annexure-II**.

Water pollution control measures:

The following water pollution control measures are being taken:

- i. Mining is avoided during the monsoon season and at the time of floods. This will help in replenishment of sand in the river bed
- ii. Mining depth is being maintained as per the guidelines and rules of Andhra Pradesh Water, Land & Trees Act, 2002 and recommendations of AP State Ground Water Department for extraction of sand during the lease period.
- iii. Monitoring of water levels is being done and reports are being sent to AP Ground water department regularly.
- iv. Post-project Water quality monitoring is being carried out by outside agency [M/s Environment Protection Training and Research Institute (EPTRI) Hyderabad] at surrounding villages as per the frequency stipulated by MoEF for coal mining industry.

3. Phreatic surface and piezometric monitoring: (Range of Water Table)

Attitude of Phreatic surface in Chennur Area:

Sl. No	Name of village	Location/Owner's Name	Type of Well	Dimensions (M)	Total Depth (M)	Geology	Measuring point(M AGL)	Period	Depth to Water (M)				
									2012	2013	2014	2015	2016
1	Chennur	Brick factory/ side of SCCL qtrs compound	Domestic	1.30	12.00	Talchir Fm	0.60	Winter	5.90	NR	--	--	
								Pre-Monsoon	Dry	--	--	--	
								Monsoon	NR	--	--	--	
								Post- Monsoon	NR	--	--	--	
2	Chennur	Behind theatre/ Ashok Goud	Domestic	5.70	9.00	Barren Measur es Fm	0.60	Winter	7.85	NR	7.72	7.68	7.51
								Pre-Monsoon	9.89	9.80	9.31	Dry	
								Monsoon	NR	5.10	5.12	7.38	
								Post- Monsoon	NR	6.12	6.18	7.82	
3	Shivalian ga pur/ Near School	Govt. Well	Domestic	2.80	9.00	Barkar Fm	0.75	Winter	--	--	--	--	
								Pre-Monsoon	--	--	--	--	
								Monsoon	--	--	--	--	
								Post- Monsoon	--	--	--	--	
4	Shivalingapur	Ch.Rangaiah	Domestic	2.00	6.50	Barkar Fm	0.70	Winter	6.15	NR	5.58	6.12	6.04
								Pre-Monsoon	AB	6.58	6.31	5.66	
								Monsoon	NR	1.22	3.22	4.75	
								Post- Monsoon	NR	1.32	5.44	4.89	
5	Chennur	Kameshwar areddy/Krish jyothe Ashramam	Domestic	1.30	11.00	Barkar Fm	0.60	Winter	6.75	NR	--	--	
								Pre-Monsoon	AB	--	--		
								Monsoon	NR	--	--		
								Post- Monsoon	NR	--	--		
6	Chennur/ CHNR-1&1A Inc.	Near BMC BH (Old test well)	Domestic	2.80	7.00	Barkar Fm	0.70	Winter	6.20	NR	--	--	
								Pre-Monsoon	Dry	--	--		
								Monsoon	NR	--	--		
								Post- Monsoon	NR	--	--		
7	Chennur/ CHNR-1&1A Inc.	Near BMC BH (Old test well)	Agricultur e	3.00	6.70	Barkar Fm	GL	Winter	--	--	--	--	
								Pre-Monsoon	--	--	--		
								Monsoon	--	--	--		
								Post- Monsoon	--	--	--		
8	Chennur	Srinagar colony/ Devaiah	Domestic	1.20	8.50	Barkar Fm	0.50	Winter	7.28	NR	7.42	7.34	7.59
								Pre-Monsoon	Dry	8.11	7.55	7.55	
								Monsoon	NR	6.28	6.18	5.44	
								Post- Monsoon	NR	6.32	6.46	6.00	
9	Chennur	Adarsa nagar colony/ DPAP/ Near Tank	Domestic	4x4 / 2.0	11.00	Barkar Fm	1.00 / 0.50	Winter	5.10	NR	5.22	5.68	5.53
								Pre-Monsoon	8.32	8.38	5.31	7.82	
								Monsoon	NR	2.88	2.18	2.23	
								Post- Monsoon	NR	3.32	3.48	4.20	
10	Chennur	Padmanagar / Cotton Godown	Domestic	3.50	10.30	Barkar Fm	0.50	Winter	--	--	--	--	
								Pre-Monsoon	--	--	--		
								Monsoon	--	--	--		
								Post- Monsoon	--	--	--		
11	Chennur.	Chinthakandi Rajaiah/ Sunkari Lingaih	Domestic	1.2	10.00	Barkar Fm	GL	Winter	--	--	3.58	3.62	7.68
								Pre-Monsoon	--	6.09	5.27	8.35	
								Monsoon	--	3.32	5.38	7.72	
								Post- Monsoon	--	3.55	3.87	8.00	
12	Chennur	Jenda wada/ TSGWD Monitoring	Domestic	1.20	10.00	Barkar Fm	GL	Winter	--	--	3.16	3.22	3.38
								Pre-Monsoon	--	4.21	3.18	5.51	
								Monsoon	--	2.84	2.97	2.6	
								Post- Monsoon	--	3.12	3.56	3.82	
13	Chennur	Entrance of Chennur/ Adjacent to the Main road	Domestic	1.2	11.00	Barkar Fm	0.85	Winter	--	--	2.02	1.93	2.08
								Pre-Monsoon	--	5.28	2.22	5.44	
								Monsoon	--	1.01	1.14	1.21	
								Post- Monsoon	--	1.48	1.66	1.32	

Note: NA – Not approachable ; AB – Well abandoned.

Attitude of Piezometric surface in and around Chennur Sand Mining Lease Area for the period from October, 2015 to March, 2016.

Well no.	Location	Depth (m)	Dia (m)	Measuring point (m)	Depth to water (m)					
					Oct, 15	Nov.,15	Dec,15	Jan, 16	Feb, 16	Mar, 16
1.	First well from upstream side of Godavari river (SW edge of the sand lease)	30	0.1	0.3	4.37	4.43	4.48		4.55	4.69
2.	Second well from upstream side	30	0.1	0.3	3.74	4.04	4.13		4.38	4.71
3.	Third well from upstream side	30	0.1	0.3	4.98	5.07	5.24		5.69	6.91
4.	Fourth well from upstream and adjacent to the Road connecting the sand reach	30	0.1	0.3	9.31	9.49	Dry		Dry	Dry
5.	Fifth well from the upstream side and opp. to Kuntlam village	30	0.1	0.3	2.41	3.24	3.70		4.17	4.41
6.	Sixth well from the upstream and located between Peddavagu & River Godavari	30	0.1	0.3	0.86	1.49	1.91		2.17	2.68
7.	In Hanuman temple, on the way to Godavari River	11	0.1	0.3	10.31	10.44	Dry		Dry	Dry
FILTER WELLS CONSTRUCTED BY AUGER METHOD IN THE SAND BED.										
1.	Middle of the river between P2 and P3	8.00	0.076	0.4	Well damaged					
2.	Between P3 and P4	9.75	0.076	0.4	5.65	5.69	5.71		5.75	5.78
3.	Middle of the river opp. P4	9.75	0.076	0.7	Well damaged					
4.	Middle of the river opp. P5 and Chennur Road	7.60	0.076	0.6	5.85	6.13	6.28		6.56	6.66
5.	Middle of the river opp. to P6	8.20	0.076	0.5	Well damaged					
6.	Middle of the river NE of P7	9.45	0.076	0.4	Well damaged					

4. Noise Level Monitoring :

The summary of the monitoring from October, 2015 to March, 2016 as follows:

Location	Zone	Day Time			
		Min.	Max.	Avg.	STD
Chennur Sand mining site	Core	55.6	66.4	61.216	75dB(A)
Chennur village	Buffer	47.6	53.2	50.25	55dB(A)
Location	Zone	Night Time			
		Min.	Max.	Avg.	STD
Chennur Sand mining site	Core	42.9	59.4	50.25	70dB(A)
Chennur village	Buffer	38.6	43.5	41.347	45dB(A)

Note: The Noise level monitoring from October, 2015 to March, 2016 is enclosed as **Annexure-III**

Noise pollution control measures:

In order to mitigate noise generation from the project activities, the following mitigation measures are proposed:

- i. Since the noise generating is only through mechanical equipment and movement of vehicles, strict compliance to periodical maintenance of the vehicle conditions is being insisted.
- ii. Further, to protect the employees and workmen at the sites of loading and use of Backhoe, necessary safety wear like ear plugs are being provided, whenever required.
- iii. Noise monitoring at the work places is being carried out on fortnightly basis to ensure the compliance.
- iv. Post-project Noise quality monitoring is being carried out by outside agency (M/s Environment Protection Training and Research Institute (EPTRI) Hyderabad) at surrounding villages as per the frequency stipulated by MoEF for coal mining industry.

5. Soil erosion mitigation measures:

- i. Minimum number of access roads to river bed is being maintained. Access points to the river bed are being decided basing on least steepness of river bank and least human activity.
- ii. Haulage roads parallel to the river bank and roads connecting access to river bed are made 100 m. away from bank.
- iii. Care is being taken to ensure that ponds are not formed in the river bed.
- iv. Green belt will be developed along the access roads at mine premises and near the sand mining site. SCCL will also supply saplings to surrounding villagers for green belt development in their villages and encourage the plantation by means of social forestry.

6. Environmental protection expenditure:

Sl. No.	Expenditure Head	Capital Expenditure (in Rs.)			Revenue Expenditure (in Rs.)		
		Upto 2014-15	2015-16 (Apr-Sep)	Total	Upto 2014-15	2015-16 (Apr-Sep)	Total
I	Air pollution (Prevention & Control)	4000	0	4000	752750	119760	872510
II	Water pollution (Prevention & Control)	451432	0	451432	276290	74330	350620
III	Land development	0	0	0	0	0	0
IV	Plantation	0	0	0	0	0	0
V	Equipment for maintenance of environment protection	0	0	0	0	0	0
VI	Consultancy Payments	1140003	0	1140003	0	0	0
VII	OB Reclamation / Subsidence management	0	0	0	0	0	0
VIII	Environment awareness/ Environment Education	0	0	0	0	0	0
IX	Noise & Blast vibration	0	0	0	57780	14560	72340
X	Others	358176	0	358176	0	0	0
	Total	1953611	0	1953611	1086820	208650	1295470

7. Socio –Economic measures:

The surrounding villages are being benefited from the welfare amenities as listed below: -
The infrastructural facilities were extended in surrounding villages by providing fund under Surrounding Habitat Assistance Programme (SHAPE) to the Government and the execution of the works was carried out by Government agencies such as Roads & Buildings, Rural Water Supply (RWS) etc. The SHAPE works details are enclosed as **Annexure-VI**.

The Public hearing minutes compliance status also enclosed as **Annexure-VII**.

8. Environmental Management Committee:

Unit level Environmental Management committee has been constituted with following members.

1. Agent –RK-7 Group
2. Agent, SRP Group
3. Area Environmental Officer
4. Area Civil Engineer
5. Sr.Estates Officer
6. Sr. Forest officer

The Minutes of Environmental Management committee review meeting held on 26.03.2016 is enclosed as **Annexure -V**.

**AGENT,
RK- 7 &NT Group of Mines.**