

28th November, 2016

To
The Additional Principal Chief Conservator of Forests (C)
Ministry of Environment Forests and Climate Change
4th Floor, E&F Wings, Kendriya Sadan,
Kormangala, Bangalore – 560 034


Subject: Submission of Six monthly compliance report towards Environment Clearance for 1st Half (period- April'16 to September'16) for A. Narrain Iron Ore Mine, M/s Vedanta Ltd (ML: 2677) situated in Chitradurga, Karnataka.

Ref: Environmental Clearance letter no: J-110151/1167/2007-IA.II (M) Dated 05.02.2009 of A. Narrain Iron Ore Mine (ML: 2677)

Respected Sir,

With reference to the above subject, We are herewith submitting six monthly compliance report along with CD version towards Environment Clearance for 1st Half (period-April'16 to September'16) for A. Narrain Iron Ore Mine (ML:2677) of M/s. Vedanta Ltd situated in Chitradurga District, Karnataka.

Thanking you,
Yours Faithfully
For Vedanta Limited


Vijayanand Chakrasali
Head- Operations

Enclosures: Six monthly Compliance Report with Annexures and CD version.

Cc:

1. The Senior Environmental Officer, KSPCB, Parisara Bhavana, Church Street, Bangalore.
2. The Regional Director (ENV) Ecology & Environment Department Dr.Saleem Building, Radio Park, Bellary
3. The Regional Environmental Officer, KSPCB, Chitradurga.

Vedanta Limited (Formerly known as Sesa Sterlite Limited/Sesa Goa Limited)
(A Narrain Mines), Meghalahalli Office Complex, Bheemasamudra Post, Chitradurga (Karnataka) - 577520
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Registered Office: Sesa Ghor, 20 EDC Complex, Patto, Panaji (Goa) - 403 001

Half Yearly Compliance Report to condition of Environment Clearance issued by		
Ministry of Environment, Forest and Climate Change, Government of India for		
A. Narrain Iron Ore Mine, M/s Vedanta Limited (Mining Lease: 2677)		
Letter No. J- 110151/1167/2007-IA.II (M) Dated 05/02/2009		
Production : 6.0 MTPA, as per Environment Clearance, however current production limit is 2.29 MTPA		
Period: April 2016- September 2016 (1st Half)		
S No.	Clearance Condition	Compliance Status
A.	Specific Conditions	Remarks
1	Environment Clearance is subject to final order of the Hon'ble Supreme court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) no. 460 of 2004 as may be applicable to this project.	Will be complied with.
2	Environmental clearance is subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the competent Authority	The provisions of Wildlife (protection) Act, 1972 is not applicable as A. Narrain Mines does not fall within 10 km of Eco sensitive Zone.
3	No two pits shall be simultaneously worked i.e. before the first pit is exhausted and reclamation work completed, no mineral bearing area shall be worked	The lease area is divided into two parts namely South and North Block bifurcated by M/s John Mines of Mr. Praveen Chandra. Exploration has revealed that, there is variation of Quality in two blocks. The south block has higher Fe% content (> 56%Fe) whereas north block having lower Fe% (<56%Fe) which is not feasible to mine by independent operation. From the Mineral Conservation Point, it is essential to work both the block simultaneously in order to optimize / maximize mineral utilization and achieve zero waste from mining. The same is approved by IBM in Mining Plan and by CEC in Reclamation and Rehabilitation Plan.
4	After exhausting the first mine pit and before starting mining operations in the next pit, reclamation and plantation works in the	As mentioned above it is not feasible to operate the North and South block independently. The exploitation of ore has been restricted to limited area. After exhausting the ore, the back
		The total plantation carried on the waste dumps for the period April 2016 to

<p>exhausted pit shall be completed so as to ensure that reclamation, forest cover and vegetation are visible during the first year of mining operations in the next pit. This process will follow till the last pit is exhausted. Adequate rehabilitation of mined pit shall be completed before any new ore bearing area is worked for expansion.</p>	<p>filling will be carried out and reclamation will be taken up. Exploitation of ore, back filling the pit & reclamation are in sequence until the life of the Mine. However the dumping of overburden waste is carried out in the designated non-mineralized areas within the lease and the finalized portions are taken up for reclamation immediately.</p>	<p>September 2016 is 27000 nos</p>																																		
<p>5</p> <p>Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.</p>	<p>The lease area is divided into two parts namely South and North Block bifurcated by M/s John Mines of Mr. Praveen Chandra. In the mineral conservation point of view we have obtained common boundary permission to exploit maximum mineral. Hence it is not applicable to have any buffer between the two mineral bearing deposits</p>																																			
<p>6</p> <p>Primary survey of flora and fauna shall be carried out and data shall be submitted to the Ministry within six months before start of expansion activity.</p>	<p>Primary survey of flora and fauna was carried out while preparing EIA document. The latest survey was conducted in 2011 through Forestry College Sirsi and submitted to your good office along with July 2011 to December 2011 compliance report.</p>																																			
<p>7</p> <p>Conservation plan for wildlife shall be prepared in consultation with the chief wild life warden for implementation</p>	<p>The detail plan was prepared and approved by Chief wild life warden. The works taken for the period are as follows:</p>																																			
	<table border="1"> <thead> <tr> <th rowspan="2">Particulars</th> <th colspan="2">Achieved from Apr'16 -Sep'16</th> <th colspan="2">Cumulative from 1999 to 2014</th> </tr> <tr> <th>Qty.</th> <th>Cost</th> <th>Qty.</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1 Construction of rubble check dams</td> <td>-</td> <td>-</td> <td>7</td> <td>68500</td> </tr> <tr> <td>Water holes & Maint.</td> <td>-</td> <td>-</td> <td>12</td> <td>194239</td> </tr> <tr> <td>2 Construction & maintenance of masonry check dams</td> <td>-</td> <td>-</td> <td>6</td> <td>291914</td> </tr> <tr> <td>3 Agave plantation in the valley</td> <td>-</td> <td>-</td> <td>1000</td> <td>7000</td> </tr> <tr> <td>4 Raising of fruit</td> <td>5000</td> <td>250000</td> <td>277600</td> <td>289970</td> </tr> </tbody> </table>	Particulars	Achieved from Apr'16 -Sep'16		Cumulative from 1999 to 2014		Qty.	Cost	Qty.	Cost	1 Construction of rubble check dams	-	-	7	68500	Water holes & Maint.	-	-	12	194239	2 Construction & maintenance of masonry check dams	-	-	6	291914	3 Agave plantation in the valley	-	-	1000	7000	4 Raising of fruit	5000	250000	277600	289970	
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		bearing and shed giving plantations				
		5	Erection of watch towers	-	3	27767
		6	Provision of salt lick blocks	-	1	5000
		7	Watch and ward (person/month)	3	2,82,982	30,76,779
		Total Cost in Rs.		5,32,982	1,30,34,755	
8	Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of 100% low grade ores / fines to prospective buyers.	The Iron ore having +50% Fe consider as Ore. Non saleable ore are blended with the high grade ore and being made saleable. The sub-grade ore 45 to 50 % Fe ore stacked separately for future use.				
9	Hydro-geological study of the area shall be reviewed annually.	Studies are being conducted through NGRJ (National Geo-Physical Research Institute) and final report is expected at the end of December. The report will be submitted in the next six monthly compliance report.				
10	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 generation is controlled by spraying the water on the main hauling road. Green belt has developed all along the lease boundary and tall growing saplings have planted all along the road side which acts as wind barrier. The ambient air quality monitoring is carried out twice a week in core zone as well as in buffer zone and results are regularly submitted to State Pollution control Board.				
11	A 50m barrier of no mining zone all along both the side(s) facing the nallah (if any) passing - through the lease area shall be demarcated and thick vegetation of native species raise. Status of implementation shall be submitted to the regional office of the Ministry on half yearly basis.	No nallah is present within the mining lease area.				
12	Need basis assessment for the nearby villages shall be conducted to study economic measures which can help in up liftment of poor section of society.	Various programs for improving the socio economic status of the villagers have taken under Corporate social responsibility (CSR) by the company.				
		Abstract of Air monitoring results are attached as Annexure-I.				
		The details of CSR activities carried out for the reporting period in surrounding villages and their expenditure is				

	attached as Annexure -III																													
13	<p>Land use pattern has been studied by UAS, Dharwad. The data is shown in the following table:</p> <table border="1" data-bbox="284 546 568 735"> <thead> <tr> <th>S No.</th> <th>Land Use Type</th> <th>Area (Ha)</th> <th>(%)age</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Irrigated</td> <td>2797</td> <td>8.9</td> </tr> <tr> <td>2</td> <td>Un Irrigated</td> <td>14561</td> <td>46.4</td> </tr> <tr> <td>3</td> <td>Cultivable Waste Land</td> <td>3738</td> <td>11.9</td> </tr> <tr> <td>4</td> <td>Area N/A for Cultivation</td> <td>2007</td> <td>6.4</td> </tr> <tr> <td>5</td> <td>Forest Area</td> <td>8298</td> <td>26.4</td> </tr> <tr> <td colspan="2">Total</td> <td>31400</td> <td>100</td> </tr> </tbody> </table> <p>Agriculture damages if any will be evaluated by appointing agriculture valuator and damages will be paid to the concerned farmers. Apart from this company carries out various agriculture development programmes in the villages in association with UAS, Dharwad and MYRADA NGO. The same has improved the crop production and thereby increasing the income of the farmers.</p>	S No.	Land Use Type	Area (Ha)	(%)age	1	Irrigated	2797	8.9	2	Un Irrigated	14561	46.4	3	Cultivable Waste Land	3738	11.9	4	Area N/A for Cultivation	2007	6.4	5	Forest Area	8298	26.4	Total		31400	100	<p>Land use pattern of the nearby villages shall be studied and action plan for abatement and compensation for damage to agricultural land / common property land (if any) in the nearby villages</p>
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14	<p>The road used for transportation of ore is regularly maintained by the company.</p>	<p>Maintenance of village roads through which transportation of ores are undertaken shall be carried out by the company regularly at its own expenses.</p>																												
15	<p>Company has carried out rain water harvesting in surrounding villages under water shed development programme under the guidance of UAS, Dharwad. Rain water harvesting system is also installed in the office complex and at laboratory site. Also a series of settling ponds and checkdams has been constructed along the mining lease which acts as rain water harvesting structures. Regular Desilting is also done prior to monsoon to increase their Retaining capacity.</p>	<p>Rain water harvesting shall be undertaken to recharge the ground water source.</p>																												
16	<p>As per the approved R&R plan by CEC, All the waste dumps are covered with Geo textile and plantation has carried on in active dump slope. All the Waste dumps are protected with Retaining wall and Garland drainage. Settling ponds and</p>	<p>Measures for prevention and control of soil erosion and management of silt shall be undertaken.</p>																												
	<p>Amount spend for village roads for last 7 yrs is enclosed as <i>Annexure-IV</i></p>																													

17	Trenches / garland drains shall be constructed at foot of dumps and coco filters installed at regular intervals to arrest silt from being carried to water bodies	check dams are also constructed to arrest silt. As per R&R plan approved by CEC Check dams, gully checks and retaining wall are constructed at foot of the dump. Coco filters are installed in the Garland drainages to control the silt being carried to water bodies.	
18	Ground water in the core zone shall be regularly monitored for contamination and depletion due to mining activity and records maintained. The monitoring data shall be submitted to the regional office of the ministry regularly. Further, monitoring points shall be located between the mine and drainage in the direction of flow of ground water shall be set up and records maintained.	The mining activity is ben carried out at top of the hill. The pit top& bottom is 940 mts and 846 mts from M.S.L. There is no contamination of ground water due to mining activity. However regular monitoring of ground water is carried out and same has been regularly submitted to regional office and Karnataka Pollution Control Board.	Abstract of Water monitoring results are attached as Annexure-II.
19	Cultivable waste land shall be identified and fodder farming or other suitable productive use of waste land shall be taken up in phased manner. Status of implementation shall be submitted to the regional office of the ministry	Company in association with UAS, Dharwad has taken a project called ALOP (Alternative Livelihood Opportunities Project) in surrounding villages from 2008 to 2012 for developing the farmers in cultivation and to increase their farm productivity.	
20	Monitoring of soil samples for assessment of transformation to acidic state or contamination due to mining activity shall be regularly conducted.	Soil analysis of samples from core zone and buffer zones is carried out and same has been regularly submitted to regional office and Karnataka Pollution Control Board.	Soil Analysis report is enclosed as Annexure-V.
21	Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place. Transportation shall be done only during day time.	All the transportation trucks carrying ore are covered with Tarpaulin and the same instructions in local language is displayed near security point for all the transportation truck drivers. Transportation of Ore is carried as per the E-auction in day time only.	
22	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 shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to	Company has got an in house Occupational health unit with a fulltime doctor and nurse. All the hazards related to our activities are identified and addressed. Various health's related training programmes are conducted for the workers. Company has also adopted a formal HIV- AIDS policy. Periodic health checkups are also been conducted for all the employees working in the company.	

	<p>respirable mineral dust on the workers shall be conducted 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 equipment's etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval shall be conducted followed by follow up action wherever required</p>		
23	<p>Top soil / solid waste shall be stacked properly with proper slope and adequate safeguards and shall be utilized for backfilling for reclamation and rehabilitation of mined out area.</p>	<p>No top soil is available within the mine lease as the entire area is broken up for mining and allied activities. The solid waste is properly stacked as per approved mining plan.</p>	
24	<p>Over burden (OB) shall be stacked at earmarked dump site and shall not be kept active for long period. The maximum height of the dump shall not exceed 30m, each stage shall preferably be of 10m and overall slope of the dump shall not exceed 28°. The OB dump shall be scientifically vegetated with suitable native species to prevent soil erosion and surface runoff. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the ministry of environment & forests on six monthly basis.</p>	<p>Solid waste is stacked by adopting step dumping method on designated non mineralized areas within the lease. Finalized portions of the dumps are covered with geotextiles and afforestation immediately.</p>	
25	<p>Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines</p>	<p>The ultimate pit limit and slope of the mining bench is maintained as per the IBM approved mining scheme.</p>	

26	<p>Adequate plantation shall be raised in the ML area, haul roads, OB dump sites etc. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/Agriculture department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. The density of the trees shall not be less than 2500 plants per ha. The company shall involve local people with the help of self-help group for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the regional office of the ministry area.</p>	<p>Plantation was carried in ML area, outside ML, haul roads, OB dumps under the guidance of RFO & Dy.RFO. The total plantation carried for 2016-17 is 27000 Nos. The total area covered for the year 2016-17 is 4.76 Ha.</p> <table border="1" data-bbox="332 520 747 1239"> <thead> <tr> <th>Location</th> <th>No. of saplings</th> <th>Area Covered (Ha)</th> </tr> </thead> <tbody> <tr> <td>Backside of Sample shed</td> <td>2580</td> <td>0.33</td> </tr> <tr> <td>BP3/BP14 - Green Belt</td> <td>4920</td> <td>0.52</td> </tr> <tr> <td>Gate - 1 Green belt</td> <td>750</td> <td>0.08</td> </tr> <tr> <td>Dump-3 - 2nd Step</td> <td>3750</td> <td>0.72</td> </tr> <tr> <td>Dump-1 - 1st Step</td> <td>2000</td> <td>0.29</td> </tr> <tr> <td>Dump-1 - 2nd Step</td> <td>1000</td> <td>0.11</td> </tr> <tr> <td>Dump-1 - 3rd Step</td> <td>7000</td> <td>0.71</td> </tr> <tr> <td>Forest area near to BP-3</td> <td>5000</td> <td>2.0</td> </tr> <tr> <td>Total</td> <td>27000</td> <td>4.76</td> </tr> </tbody> </table>	Location	No. of saplings	Area Covered (Ha)	Backside of Sample shed	2580	0.33	BP3/BP14 - Green Belt	4920	0.52	Gate - 1 Green belt	750	0.08	Dump-3 - 2 nd Step	3750	0.72	Dump-1 - 1 st Step	2000	0.29	Dump-1 - 2 nd Step	1000	0.11	Dump-1 - 3 rd Step	7000	0.71	Forest area near to BP-3	5000	2.0	Total	27000	4.76	
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27	<p>Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year - pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter(January) and the data thus collected shall be regularly sent to MoEF, Central ground water Authority and Regional Director, Central Ground water Board</p>	<p>The existing tube wells are far away from the mining activity as such there is no influence on these bore wells due to mining activity. Collected water samples are checked for the quality of the water every month.</p>	<p>Abstract of Water monitoring results are attached as Annexure-II.</p>																														
28	<p>Adequate air monitoring stations shall be installed in areas of human habitations near the mine and the results of ambient air quality shall be maintained and regularly submitted to regional office of the ministry</p>	<p>The ambient air quality monitoring is carried out in Core Zone as well as buffer zone. There are 6 monitoring stations in Core Zone and 4 monitoring stations in Buffer zone which is monitored twice in a week for every month. The results of ambient air quality are maintained and same are regularly submitted to regional Office of ministry and Karnataka State Pollution Control Board.</p>	<p>Abstract of Air monitoring results are attached as Annexure-I.</p>																														

29	<p>The waste water from the mines shall be treated to conform to the prescribe standards before discharging in to the natural stream. The discharged water shall be regularly monitored and report submitted to the ministry of Environment & Forests, Central Pollution Control Board and the state Pollution control board</p>	<p>There is no waste water discharge from the Mine. During monsoon the runoff water is collected in the settling pond. Only the overflow water will be allowed into the natural stream. The natural stream water is collected in the village tank for public usage which is monitored and regularly submitted to regional office of ministry and Karnataka Pollution Control Board.</p>	
30	<p>Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of ores and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. Transportation of ore shall be done only during day time. The vehicles transporting ores shall be covered with a tarpaulin or other suitable enclosures so that no dust particles/ fine matters escape during the course of transportation. No over loading of ores for transportation shall be committed. The trucks transporting ore shall not pass through wild life sanctuary.</p>	<p>Vehicles used for transporting ore are having the vehicle emission certificates. The copy of test certificate is enclosed with previous compliance report. Over loading of the trucks is not allowed. The trucks transporting the ore are not passing through wild life sanctuary.</p>	
31	<p>Prior permission from the Competent Authority shall be obtained for extraction of ground water, if any</p>	<p>Complied.</p>	
32	<p>Action plan with respect to suggestions/improvements made during public consultation/hearing shall be submitted to the ministry and the state Govt. within six months</p>	<p>Is Complied with</p>	
33	<p>A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.</p>	<p>Will be complied</p>	

B. General Conditions	
1	No change in mining technology and scope of working shall be made without prior approval of the MoEF.
2	No change in the calendar plan including excavation, quantum of mineral and waste shall be made
3	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
4	Four ambient air quality - monitoring stations shall be established in the core zone as well as in the buffer zone for RSPM, SPM, SO _x , NO _x monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the state pollution control Board.
5	Data on ambient air quality should be regularly submitted to the Ministry, including its Regional Office Bangalore, SPCB / CPCB once in six months
6	Measures shall be taken for control of noise levels below 85dBA in the work environment. Workers engaged in operations of HEMM, etc., shall be provided with ear plugs/muffs.
7	Industrial waste water (work shop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated
	If any changes were made in mining technology and scope of the working, it will be informed to the MOEF.
	Will be complied
	Fugitive dust emissions from all the sources are controlled regularly by water spraying, covering the waste dumps with Coir matt. Water spraying on haul roads, loading and unloading points and at transfer points are carried out regularly for proper maintenance.
	Air quality monitoring is carried out in two zones such as Core Zone and Buffer Zone. 6 nos of Ambient air quality monitoring stations in Core Zone are Plant-I, Haulage Road, Loading point, unloading point, BBH Siding and Ore stock yard. 5 nos of Ambient air quality monitoring stations in Buffer Zone are Megalahalli Village, Tanigehalli Village, Medikeripura, Sirigere and Sasulu Rail siding. Monitoring is carried out twice a week for every month as per the Consent to Operate. Monitoring reports are submitted to pollution board once in quarter.
	Ambient air quality data is submitted regularly to the ministry, its Regional office Bangalore, SPCB once in six months.
	Control measures like providing acoustic enclosures to DG sets are done. Staff working in the noise area is provided with ear plugs & ear muffs. All the mining machineries have air conditioned cabins which provides noise and dust free environment to the operator.
	Oil & grease traps are provided at workshop where the oil is separated from water and is reused.

	<p>19th may, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.</p>	<p>Personal working in the dusty areas shall be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.</p>	<p>Regular trainings are provided in safety and health aspects. Dust mask, Ear plugs and safety goggles are provided for the persons working in dusty areas.</p>
8	<p>Provision shall be made for the 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.</p>	<p>All the laborers are from adjacent villages and are residing there. Hence, no provision of housing is provided in the mines area. The Reverse osmosis water purifier has been installed in the mines and office area for drinking purpose.</p>	
10	<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 organization</p>	<p>Separate Environmental Management cell has been established with qualified people who are reporting directly to head of the organization. Below are the contact details of the responsible persons-</p> <p>(1) Mr. Krishna Reddy (Head- IOK) <u>MK.Reddy@vedanta.co.in</u> +91-9483211966 (M)</p> <p>(2) Mr. Krishna Kulkarni (Head- HSE) <u>krishna.kulkarni@vedanta.co.in</u> +91-9765392259 (M)</p>	<p>Chief Operating Officer (COO) ↓ Krishna Kulkarni (Head HSE- IOB) ↓ Parthiban Madesh (Head HSE-Karnataka) ↓ Aditya Anchiya (Engineer- Environment)</p>

11	<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 the Ministry.</p>	<p>Year wise expenditure records are maintained separately for Environmental Protection Measures and the same is submitted regularly to regional office and Karnataka pollution control board.</p> <table border="1" data-bbox="337 562 711 1192"> <thead> <tr> <th colspan="3">Environment Expenditure for Apr'16 to Sep'16</th> </tr> <tr> <th>Description of the cost centers</th> <th>Total (in Rs.)</th> <th></th> </tr> </thead> <tbody> <tr> <td>1 General and Statutory Requirement</td> <td>24,72,430</td> <td></td> </tr> <tr> <td>2 Dust Suppression</td> <td>92,37,608</td> <td></td> </tr> <tr> <td>3 Wildlife Protection Scheme</td> <td>2,82,982</td> <td></td> </tr> <tr> <td>4 Afforestation and Mine Reclamation</td> <td>22,73,131</td> <td></td> </tr> <tr> <td>5 Soil Erosion Control Measures</td> <td>11,11,386</td> <td></td> </tr> <tr> <td>6 Environment Monitoring</td> <td>18,90,418</td> <td></td> </tr> <tr> <td>Total</td> <td>1,72,67,958</td> <td></td> </tr> </tbody> </table>	Environment Expenditure for Apr'16 to Sep'16			Description of the cost centers	Total (in Rs.)		1 General and Statutory Requirement	24,72,430		2 Dust Suppression	92,37,608		3 Wildlife Protection Scheme	2,82,982		4 Afforestation and Mine Reclamation	22,73,131		5 Soil Erosion Control Measures	11,11,386		6 Environment Monitoring	18,90,418		Total	1,72,67,958	
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3 Wildlife Protection Scheme	2,82,982																												
4 Afforestation and Mine Reclamation	22,73,131																												
5 Soil Erosion Control Measures	11,11,386																												
6 Environment Monitoring	18,90,418																												
Total	1,72,67,958																												
12	<p>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 and development work</p>	<p>Will be complied with</p>																											
13	<p>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 officers of the regional office by furnishing the requisite data/information/monitoring reports.</p>	<p>The data/ information are being sent to the regional office in the form of compliance reports.</p>																											
14	<p>A copy of clearance letter will be marked to concerned panchayat/ local NGO, if any from whom suggestion/ representation has been received while processing the proposal</p>	<p>Will be complied with</p>																											
15	<p>State Pollution Control board shall display a copy of the clearance letter at the Regional office, District industry and collector's office/ tehsildars office for 30 days.</p>	<p>Complied</p>																											

16	<p>The project authorities shall advertise at least in two local news papers widely circulated one which shall be in the vernacular language of the locality concerned within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the state Pollution Control Board and also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same shall be forwarded to the Regional office of the ministry located in Bangalore</p>	Compiled	
----	---	----------	--

Contact Details	
1	<p>A. Narrain Iron Ore Mine, M/s Vedanta Limited, Meghalahalli Office Complex, Bheemasamudra Post, Chitradurga (Karnataka)- 577520</p>
2	<p>(T) +91-8194238100 (F) +91-8194238170</p>
3	<p>(1) Mr. Krishna Reddy (Head- IOK) MK.Reddy@vedanta.co.in +91-9483211966 (M)</p> <p>(2) Mr. Krishna Kulkarni (Head- HSE) krishna.Kulkarni@vedanta.co.in +91-9765392259 (M)</p>
4	<p>Latitude: N 14 13'34.61" Longitude: E 76 12'41.73"</p>
5	<p>www.sesagoa.co.in or www.vedantalimited.com</p>

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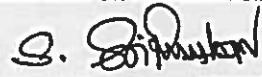
(Air Quality Monitoring Wing)

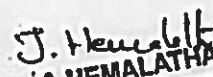
ABSTRACT OF AMBIENT AIR QUALITY MONITORING DATA

Project : Chitradurga Mine Report No : I
Client : M/s.Vedanta Limited Season : Summer
Month : April - 2016

S.NO	MONTH & YEAR	ZONE	LOCATION	PARAMETERS			
				SO ₂	NO ₂	PM ₁₀	PM _{2.5}
1.	April -2016	Core	Plant-I area (Crushing)	10.9	29.2	90.0	55.7
			Loading point (Mining Working)	9.8	27.7	87.9	54.1
			Unloading Point (Dumping)	10.7	28.5	93.9	58.4
			Haulage Road	11.4	22.9	78.2	44.8
			BBH Siding	8.9	25.2	81.1	46.3
		Ore Stock Yard	10.5	26.9	88.1	51.3	
		Buffer	Megalahalli Village	5.5	13.7	50.9	23.0
			Tengigehalli Village	6.0	15.3	52.2	24.5
			Medikeripura Village	6.4	16.0	57.9	22.2
			Sirigere Village	5.8	17.1	56.5	25.7
Sasalu Village	8.3		18.6	59.0	27.6		

ANALYZED AND VERIFIED BY:

1. 
S. SRI RENGANATHAN
Technical Manager

2. 
J. HEMALATHA
Dy. Quality Manager
Govt. Analyst

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Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

(Air Quality Monitoring Wing)

ABSTRACT OF AMBIENT AIR QUALITY MONITORING DATA

Project : Chitradurga Mine Report No : I
Client : M/s.Vedanta Limited Season : Summer
Month : May - 2016

S.NO	MONTH & YEAR	ZONE	LOCATION	PARAMETERS			
				SO ₂	NO ₂	PM ₁₀	PM _{2.5}
I.	May -2016	Core	Plant-I area (Crushing)	11.5	30.3	58.0	24.4
			Loading point (Mining Working)	10.1	28.9	56.6	23.9
			Unloading Point (Dumping)	11.2	31.4	63.5	28.1
			Haulage Road	9.6	24.0	60.7	26.4
			BBH Siding	9.8	27.0	55.6	25.9
		Ore Stock Yard	11.0	28.3	52.6	24.7	
		Buffer	Megalahalli Village	5.9	14.0	48.6	18.9
			Tengigehalli Village	7.5	16.6	50.1	21.4
			Medikeripura Village	7.9	19.0	53.3	23.1
			Sirigere Village	6.2	17.6	47.7	20.4
Sasalu Village	8.6		20.2	54.7	25.0		

ANALYZED AND VERIFIED BY:

1.

S. SRI RENGANATHAN
Technical Manager



2.

P. KAVITHA
Technical Manager

Govt. Analyst

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(Air Quality Monitoring Wing)

ABSTRACT OF AMBIENT AIR QUALITY MONITORING DATA

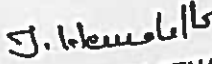
Project : Chitradurga Mine Report No : I
Client : M/s.Vedanta Limited Season : Summer
Month : June - 2016

S.NO	MONTH & YEAR	ZONE	LOCATION	PARAMETERS			
				SO ₂	NO ₂	PM ₁₀	PM _{2.5}
I.	June -2016	Core	Plant-I area (Crushing)	9.5	23.9	51.1	23.1
			Loading point (Mining Working)	9.1	24.3	53.4	24.2
			Unloading Point (Dumping)	8.9	26.2	52.9	24.7
			Haulage Road	10.1	22.8	45.7	21.1
			Ore Stock Yard	8.5	21.4	43.2	20.3
		Buffer	Megalahalli Village	6.2	13.8	38.5	17.0
			Tengigehalli Village	6.0	14.7	36.4	18.3
			Medikeripura Village	7.3	16.3	40.3	18.7
			Konanur Village	5.9	18.1	41.8	19.3

ANALYZED AND VERIFIED BY:

1.


P. KAVITHA
Technical Manager

2. 
J. HEMALATHA
Dy. Quality Manager
Govt. Analyst

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(Air Quality Monitoring Wing)


ABSTRACT OF AMBIENT AIR QUALITY MONITORING DATA

Project : Chitradurga Mine Report No : I
Client : M/s.Vedanta Limited Season : Monsoon
Month : July - 2016

S.NO	MONTH & YEAR	ZONE	LOCATION	PARAMETERS			
				SO ₂	NO ₂	PM ₁₀	PM _{2.5}
I.	July -2016	Core	Plant-I area (Crushing)	8.3	23.0	55.0	26.2
			Loading point (Mining Working)	9.0	25.8	58.4	27.1
			Unloading Point (Dumping)	9.4	24.9	53.8	24.3
			Haulage Road	9.7	27.1	48.6	21.9
			BBH Siding	8.1	21.0	54.6	23.9
			Ore Stock Yard	8.7	19.6	51.2	22.6
		Buffer	Megalahalli Village	5.8	12.6	35.7	15.8
			Tengigehalli Village	6.1	14.3	38.6	17.1
			Medikeripura Village	6.7	15.2	40.2	17.7
			Konanur	6.5	16.1	42.3	19.4

ANALYZED AND VERIFIED BY:

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S. SRI RENGANATHAN
Technical Manager

2. 
P. KAVITHA
Technical Manager
Govt. Analyst

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(Air Quality Monitoring Wing)

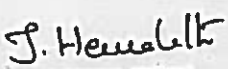
ABSTRACT OF AMBIENT AIR QUALITY MONITORING DATA

Project : Chitradurga Mine Report No : I
Client : M/s.Vedanta Limited Season : Monsoon
Month : August - 2016

S.NO	MONTH & YEAR	ZONE	LOCATION	PARAMETERS			
				SO ₂	NO ₂	PM ₁₀	PM _{2.5}
1.	August -2016	Core	Plant-I area (Crushing)	9.2	25.2	59.4	27.0
			Loading point (Mining Working)	10.1	27.0	64.9	29.4
			Unloading Point (Dumping)	9.7	28.9	63.6	28.1
			Haulage Road	10.7	22.3	54.4	24.3
			BBH Siding	9.1	24.1	52.6	23.6
			Ore Stock Yard	10.5	19.8	61.5	26.5
		Buffer	Megalahalli Village	5.3	13.4	42.1	18.1
			Tengigehalli Village	6.6	15.1	45.0	19.3
			Medikeripura Village	6.3	14.4	37.9	16.8
			Konarur	5.8	16.2	45.9	20.5

ANALYZED AND VERIFIED BY:

1. 
S. SRI RENGANATHAN
Technical Manager

2. 
J. HEMALATHA
Dy. Quality Manager
Govt. Analyst

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(Air Quality Monitoring Wing)

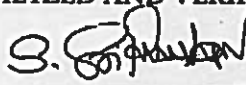
ABSTRACT OF AMBIENT AIR QUALITY MONITORING DATA

Project : Chitradurga Mine Report No : I
Client : M/s.Vedanta Limited Season : Monsoon
Month : September - 2016

S.NO	MONTH & YEAR	ZONE	LOCATION	PARAMETERS			
				SO ₂	NO ₂	PM ₁₀	PM _{2.5}
I.	September -2016	Core	Plant-I area (Crushing)	10.4	29.7	60.0	27.1
			Loading point (Mining Working)	8.7	24.4	57.2	25.9
			Unloading Point (Dumping)	10.0	31.2	63.9	28.6
			Haulage Road	8.5	24.3	56.7	25.5
			BBH Siding	9.0	23.8	55.0	24.7
			Ore Stock Yard	10.5	24.7	64.2	28.9
		Buffer	Megalahalli Village	6.1	14.6	41.4	18.3
			Tengigehalli Village	6.8	16.4	46.5	21.1
			Medikeripura Village	6.6	15.8	45.6	20.7
			Konanur	7.3	14.9	44.1	19.3

ANALYZED AND VERIFIED BY:

1.


S. SRI RENGANATHAN
Technical Manager

2.


P. KAVITHA
Technical Manager
Govt. Analyst

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CHENNAI METTEX LAB PRIVATE LIMITED

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

Analysis Report for Ground Water Samples

Client: M/s.Vedanta Limited

Report: II A

Project: Chitradurga Mine

Season: Summer-2016

Date of Collection: 13.04.2016

S.No	Parameters	Sample Code	GWQ -1	GWQ -2	GWQ -3	GWQ -4	GWQ -5	GWQ -6	GWQ-7	Standard: IS : 10500
		Time of Sampling	09:55 Hrs	13:10 Hrs	11:05 Hrs	12:40 Hrs	14:20 Hrs	15:10 Hrs	15:20 Hrs	
		Units ↓								
1	pH	-	6.94	7.19	7.47	6.85	7.14	7.04	7.02	6.5 to 8.5
2	Turbidity	NTU	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	5
3	Total Dissolved Solids	mg/l	272	541	381	328	813	598	578	2000
4	Total Hardness as CaCO ₃	mg/l	139	240	175	122	356	255	297	600
5	Calcium as Ca	mg/l	41.8	64.3	45	37.0	106	77	82	200
6	Magnesium as Mg	mg/l	10.6	22.8	18	9.2	28	19.4	27.2	100
7	Total Alkalinity as CaCO ₃	mg/l	151	299	224	135	374	269	309	600
8	Fluoride as F	mg/l	BDL	0.55	0.70	BDL	0.29	0.54	0.51	1.50
9	Chloride as Cl	mg/l	48	173	60	53	204	207	199	1000
10	Sulphate as SO ₄	mg/l	16.2	11.4	10.2	8.2	28.7	10	17.2	400
11	Total Iron as Fe	mg/l	0.05	0.14	0.09	0.66	0.11	0.07	0.09	0.30
12	Total Suspended Solids	mg/l	BDL	BDL	BDL	BDL	10	BDL	BDL	-

BDL : Below Detection Limit

Note: Standard IS: 10500 Permissible limits in the absence of alternative Sources

Sample Codes with Location:

GWQ-1: Meghalahalli Village (Tube Well); GWQ-2: Tanigehalli Village (Tube Well)


GWQ-3: Medikeripura Village (Tube Well); GWQ-4: Alaghatta Village (Tube Well)

GWQ-5: Bommanagathihalli Village (Tube Well) GWQ-6: Near Office Canteen (Tube Well);

GWQ-7: Near Mines Canteen (Tube Well)

Analyzed and Verified By:

1. 
S. SRI RENGANATHAN
Technical Manager

2. 
J. HEMALATHA
Dy. Quality Manager

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CHENNAI METTEX LAB PRIVATE LIMITED

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

Analysis Report for Ground Water Samples

Client: M/s.Vedanta Limited

Report: II A

Project: Chitradurga Mine

Season: Summer-2016

Date of Collection: 27.06.2016

S.No	Parameters	Sample Code	GWQ -1	GWQ -2	GWQ -3	GWQ -4	GWQ -5	GWQ -6	GWQ-7	Standard: IS : 10500
		Time of Sampling	09:55 Hrs	13:10 Hrs	11:05 Hrs	12:40 Hrs	14:20 Hrs	15:10 Hrs	15:20 Hrs	
		Units ↓								
1	pH	-	7.06	7.13	6.88	6.91	7.09	7.12	7.18	6.5 to 8.5
2	Turbidity	NTU	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5
3	Total Dissolved Solids	mg/l	333	847	962	1656	1422	813	482	2000
4	Total Hardness as CaCO ₃	mg/l	280	380	556	574	586	500	340	600
5	Calcium as Ca	mg/l	51	88	104	119	159	112	35	200
6	Magnesium as Mg	mg/l	37	38	72	67	46	52	61	100
7	Total Alkalinity as CaCO ₃	mg/l	185	382	386	504	335	343	193	600
8	Fluoride as F	mg/l	0.13	0.18	0.14	0.19	0.41	0.13	0.14	1.50
9	Chloride as Cl	mg/l	37	126	155	353	318	161	93	1000
10	Sulphate as SO ₄	mg/l	21	32	61	111	73	14	21	400
11	Total Iron as Fe	mg/l	0.04	0.06	0.09	0.06	0.08	0.07	0.07	0.30
12	Total Suspended Solids	mg/l	BDL	BDL	BDL	BDL	3	BDL	BDL	-

BDL : Below Detection Limit

Note: Standard IS: 10500 Permissible limits in the absence of alternative Sources

Sample Codes with Location:

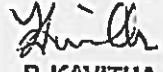
GWQ-1: Meghalahalli Village (Tube Well); GWQ-2: Tanigchalli Village (Tube Well)

GWQ-3: Medikeripura Village (Tube Well); GWQ-4: Alaghatta Village (Tube Well)

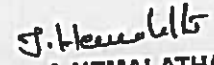
GWQ-5: Bommanagathihalli Village (Tube Well) GWQ-6: Near Office Canteen (Tube Well);

GWQ-7: Near Mines Canteen (Tube Well)

Analyzed and Verified By:

1. 
 P. KAVITHA
 Technical Manager



2. 
 J. HEMALATHA
 Dy. Quality Manager

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CHENNAI METTEX LAB PRIVATE LIMITED

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

Analysis Report for Ground Water Samples

Client: M/s.Vedanta Limited

Report: II A

Project: Chitradurga Mine

Season: Monsoon-2016

Date of Collection: 20.07.2016

S.No	Parameters	Sample Code	GWQ -1	GWQ -2	GWQ -3	GWQ -4	GWQ -5	GWQ -6	GWQ -7	Standard: IS : 10500
		Time of Sampling	09:55 Hrs	13:10 Hrs	11:05 Hrs	12:40 Hrs	14:20 Hrs	15:10 Hrs	15:20 Hrs	
		Units ↓								
1	pH	-	7.58	7.07	7.06	6.99	7.26	7.06	7.47	6.5 to 8.5
2	Turbidity	NTU	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5
3	Total Dissolved Solids	mg/l	419	871	880	869	746	834	630	2000
4	Total Hardness as CaCO ₃	mg/l	217	520	496	494	404	264	360	600
5	Calcium as Ca	mg/l	45	106	141	120	87	76	70	200
6	Magnesium as Mg	mg/l	25	60	35	47	45	18	45	100
7	Total Alkalinity as CaCO ₃	mg/l	192	335	350	345	423	224	145	600
8	Fluoride as F	mg/l	0.4	0.45	0.35	0.34	0.47	0.43	0.22	1.50
9	Chloride as Cl	mg/l	22	168	145	163	59	77	93	1000
10	Sulphate as SO ₄	mg/l	53	32	52	42	35	35	6	400
11	Total Iron as Fe	mg/l	0.07	0.04	0.03	0.06	0.07	0.08	0.09	0.30
12	Total Suspended Solids	mg/l	BDL	BDL	BDL	BDL	2.0	BDL	BDL	-

BDL : Below Detection Limit

Note: Standard IS: 10500 Permissible limits in the absence of alternative Sources

Sample Codes with Location:

GWQ-1: Meghalahalli Village (Tube Well); GWQ-2: Tanigehalli Village (Tube Well)

GWQ-3: Medikeripura Village (Tube Well); GWQ-4: Alaghatta Village (Tube Well)

GWQ-5: Bommanagathihalli Village (Tube Well) GWQ-6: Near Office Canteen (Tube Well);

GWQ-7: Near Mines Canteen (Tube Well)

Analyzed and Verified By:

1. 
 G.S. RADHA
 Technical Manager



2. 
 P. KAVITHA
 Technical Manager

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CHENNAI METTEX LAB PRIVATE LIMITED

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

Analysis Report for Ground Water Samples

Client: M/s.Vedanta Limited

Report: II A

Project: Chitradurga Mine

Season: Monsoon-2016

Date of Collection: 18.08.2016

S.No	Parameters	Sample Code	GWQ -1	GWQ -2	GWQ -3	GWQ -4	GWQ -5	GWQ -6	GWQ -7	Standard: IS : 10500
		Time of Sampling	09:55 Hrs	13:10 Hrs	11:05 Hrs	12:40 Hrs	14:20 Hrs	15:10 Hrs	15:20 Hrs	
		Units ↓	-	-	-	-	-	-	-	
1	pH	-	7.63	7.14	7.12	6.90	7.32	7.14	7.35	6.5 to 8.5
2	Turbidity	NTU	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5
3	Total Dissolved Solids	mg/l	394	895	968	835	785	855	605	2000
4	Total Hardness as CaCO ₃	mg/l	224	546	547	480	420	251	374	600
5	Calcium as Ca	mg/l	48	115	153	114	91	70	76	200
6	Magnesium as Mg	mg/l	25	63	40	48	47	19	45	100
7	Total Alkalinity as CaCO ₃	mg/l	197	364	376	321	436	239	132	600
8	Fluoride as F	mg/l	0.46	0.52	0.42	0.39	0.53	0.52	0.29	1.50
9	Chloride as Cl	mg/l	24	178	158	175	65	70	99	1000
10	Sulphate as SO ₄	mg/l	48	39	61	49	30	43	5.2	400
11	Total Iron as Fe	mg/l	0.05	0.07	0.05	0.05	0.05	0.09	0.06	0.30
12	Total Suspended Solids	mg/l	BDL	BDL	BDL	BDL	3.0	BDL	BDL	-

BDL : Below Detection Limit

Note: Standard IS: 10500 Permissible limits in the absence of alternative Sources

Sample Codes with Location:

GWQ-1: Meghalahalli Village (Tube Well); GWQ-2: Tanigehalli Village (Tube Well)

GWQ-3: Medikeripura Village (Tube Well); GWQ-4: Alaghatta Village (Tube Well)

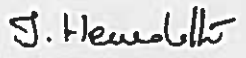
GWQ-5: Bommanagathihalli Village (Tube Well) GWQ-6: Near Office Canteen (Tube Well);

GWQ-7: Near Mines Canteen (Tube Well)

Analyzed and Verified By:

1. 
S. SRI RENGANATHAN
Technical Manager



2. 
J. HEMALATHA
Dy. Quality Manager

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CHENNAI METTEX LAB PRIVATE LIMITED

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

Analysis Report for Ground Water Samples

Client: M/s.Vedanta Limited

Report: II A

Project: Chitradurga Mine

Season: Monsoon-2016

Date of Collection: 14.09.2016

S.No	Parameters	Sample Code	GWQ -1	GWQ -2	GWQ -3	GWQ -4	GWQ -5	GWQ -6	GWQ -7	Standard: IS : 10500
		Time of Sampling	09:55 Hrs	13:10 Hrs	11:05 Hrs	12:40 Hrs	14:20 Hrs	15:10 Hrs	15:20 Hrs	
		Units ↓								
1	pH	-	7.11	7.06	6.86	6.82	7.11	7.36	7.11	6.5 to 8.5
2	Turbidity	NTU	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5
3	Total Dissolved Solids	mg/l	382	860	975	790	762	830	553	2000
4	Total Hardness as CaCO ₃	mg/l	214	440	440	394	390	280	302	600
5	Calcium as Ca	mg/l	45	106	121	106	84	65	75	200
6	Magnesium as Mg	mg/l	25	43	34	32	44	29	29	100
7	Total Alkalinity as CaCO ₃	mg/l	180	305	340	309	360	210	140	600
8	Fluoride as F	mg/l	0.51	0.61	0.53	0.42	0.61	0.41	0.32	1.50
9	Chloride as Cl	mg/l	31	164	142	160	71	75	87	1000
10	Sulphate as SO ₄	mg/l	54	44	52	53	23	38	6.6	400
11	Total Iron as Fe	mg/l	0.06	0.06	0.06	0.04	0.06	0.06	0.05	0.30
12	Total Suspended Solids	mg/l	BDL	BDL	BDL	BDL	5.0	BDL	BDL	-

BDL : Below Detection Limit

Note: Standard IS: 10500 Permissible limits in the absence of alternative Sources

Sample Codes with Location:

GWQ-1: Meghalahalli Village (Tube Well); GWQ-2: Tanigehalli Village (Tube Well)

GWQ-3: Medikeripura Village (Tube Well); GWQ-4: Alaghatta Village (Tube Well)

GWQ-5: Bommanagathihalli Village (Tube Well) GWQ-6: Near Office Canteen (Tube Well);

GWQ-7: Near Mines Canteen (Tube Well)

Analyzed and Verified By:

1.

S. Sri Renganathan

S. SRI RENGANATHAN
 Technical Manager



2.

P. Kavitha
P. KAVITHA
 Technical Manager

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Total Expenditure for Community Development Activities

A. Narrain Iron Ore Mine, M/s Vedanta Limited

April 2016 to October 2016

S No.	Thrust Area	Name of the Project/ Activity	Beneficiaries	Expenditure (in Rs.)
1	Education	Evening Study Centre	450 Students	121030
2	Women Empowerment	Self Help Groups	896 Women	143700
3	Health and Sanitation	Community Medical Centre and Medical Checkup Camps	1583 Villagers	244520
4	Agriculture and Livelihood	Artificial Insemination Centre	680 Farmers	99002
5	Sports and Culture	Sports and Cultural Activities	-	86000
Total Expenditure (in Rs.)				694252

Overall CSR Expenditure 2008-2016

S No.	Focus Areas	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014 -15	2015-16
1	Health & Hygiene	1.84	17.79	14.88	57.86	188.35	385.66	184.86	3.45
2	Education	19.98	0.11	30.97	27.32	6.79	5.11	4.58	3.31
3	Infrastructure Development	140.8	129.83	283.38	238.52	51.2	0	10.04	21.00
4	Livelihood	43.92	25.55	56.85	86.1	19.91	9.01	10.64	6.05
5	Stake Holder Engagement	2.62	0.09	11.99	1.71	3.27	7.36	5.38	3.00
6	Administrative Cost	-	-	-	-	4.17	0.02	0.08	0
Total Expenditure (in Lac. Rs.)		209.16	173.37	398.07	411.51	235.68	407.17	215.59	36.81

MAJOR INFRASTRUCTURE DEVELOPMENT ACTIVITES

S.No	Year	Village wise activities	Spent Amount
1	2008	Road development from bheemasamudra to chitradurga	11,653,560
2	2008	Formation of approach road at Bheemasmudra	550,808
3	2008	Road constructed from Bheemasamudra to siddapura	70,000,000
4	2009	Road constructed from Medikeripura to Sasaluhalla	71,000,000
5	2008	Formation of approach road at Bheemasmudra	550,808
6	2010	Road development up to KumtaKadamadagi road	5,376,000
7	2010	Construction of Tar road from Thanigehalli cross to Medikeripura village	24,000,000
8	2010	Construction of CC road	6,000,000
9	2010	Preparation of Tar road	2,363,516
10	2010	Construction of CC road (internal)	3,443,000
11	2010	Construction of CC road Medikeripura to Sasalu	100,000
12	2010	Road widening and internal road & approach road	3,513,000
13	2011	Kumtakadamadagi road development up to Malappanahatti	31,300,000

E-mail : test@mettexlab.com
Web : www.mettexlab.com

Phone : 044-22323163, 42179490, 91
Fax : 044-22311034



CHENNAI METTEX LAB PRIVATE LIMITED

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032.

ANALYSIS REPORT OF SOIL SAMPLES Soil Quality Monitoring Wing

Project: Chitradurga Mine
Client : M/s. Vedanta Limited.

Report No : VIII
Season : Summer-2016
Sample Collected On : 27.06.2016

S.No.	Parameter	VGS1	VGS2	VGS3	VGS4	VGS5	VGS6
1.	pH (1:2 aqueous solution)	7.2	6.67	6.56	6.96	7.42	6.49
2.	Electrical Conductivity (μ mhos/cm)	1878	1389	977	1890	1978	830
3.	Organic Carbon %	0.14	0.16	0.18	0.29	0.46	0.27
4.	Phosphours as P, Kg/1 hec	23	32	35	28	21	27
5.	Potassium as K, Kg/1 hec	2.9	1.7	2.8	1.9	2.2	2.9
6.	Chloride as Cl, mg/100 gm	1.8	1.7	2.1	1.9	1.2	1.6
7.	Iron (Hcl Solubles), %	2.8	4.1	6.5	3.9	4.3	5.8
8.	Water Holding Capacity %	42	37	38	29	38	40
9.	Sand %	91	91	89	82	92	90
10.	Silt %	2	2	3	3	3	4
11.	Clay %	7	7	8	15	5	6
12.	Texture	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy

Sample Collected & analyzed by : CHENNAI METTEX LAB PVT LTD

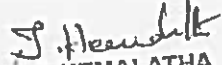
Location of sampling stations:

VGS1 - Megalahalli Village (Agri land)
VGS2 - Kadlegudu Village (Agri land)
VGS3 - Hirekandewali Village (Agri land)
VGS4 - Teneghalli Village (Agri Land)
VGS5 - Alagatta Village (Agri Land)
VGS6 - Waste dump (With in the lease area)

ANALYZED & VERIFIED BY :

1. 
P. KAVITHA
Technical Manager



2. 
J. HEMALATHA
Dy. Govt. Analyst

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