

By Speed Post

F. No. J-11015/11/2007.IA-II (M)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division

3rd Floor, Vayu Wing,
Indira Paryavaran Bhawan,
Jorbagh Road, Aliganj,
New Delhi-110 003
Dated: 26th March, 2015

To,

The Executive Director
M/s Steel Authority of India Ltd.
Bhilai Steel Plant
Ispat Bhawan, District Durg
Chhattisgarh-490001
Phone No. 0788-2227863
Fax:0788-2222890

Subject: Mahamaya Dulki Mining (Bhilai Steel Plant) for enhancement of production capacity from 0.96 to 1.46 MTPA of iron ore of M/s Steel Authority of India Ltd. (SAIL) in Durg & Rajnandgoan District Chhattisgarh (1522.67 ha) -regarding.

Sir,

This has reference to your letter no. MHQ/ED(Mines)/EAC/Dulki/06/335 dated 12.12.2006 regarding subject mentioned above and subsequent letters dated 16.04.2012, 09.07.2012, 31.12.2012, 30.01.2013, 21.02.2014 and 04.06.2014. The terms of reference to the proposal for undertaking detailed EIA study were prescribed on 13.04.2007. The proponent submitted the EIA/EMP and public hearing documents which were considered by Expert Appraisal Committee in its meeting held during 25-27th July, 2012 and re-considered during 20-22 February, 2013, 31st October-01st November 2013 and 29-30 April, 2014 wherein the Committee recommended the proposal for Environmental Clearance.

2. The Proposal is for renewal of mine lease which fell due on 04.11.2001 and enhancement of production of Iron Ore from 0.96 MTPA to 1.46 MTPA. Mine lease area is 1522.67 ha, which is forest land. The Stage-II Forest Clearance for the 84 ha has been obtained vide letter no. 8-19/2002-FC dated 07.03.2003 and Stage-I Forest Clearance has been obtained for 60 ha. The Latitude and Longitude of the proposed mine site is 20°28'30" N to 20°29'45" N and 80°59' 30" E to 81°59' 30"E, respectively.

3. No National Park /Sanctuary / Wildlife Corridors are reported within 10 kms of the mine lease. Six Schedule -I species i.e. Monitor lizard, Python, Peafowl, Bear, Leopard and Honey badger are reported from the mine lease area for which conservation plan has prepared and submitted by PP. Mine working will be opencast semi-mechanised. Life of the mine is 9-10 years. Water requirement is 30 kld, which will be obtained from Boirdih Dam. It is estimated that 36,16,108 m3 of

waste will be generated at the conceptual stage. There will be no groundwater intersection. Mining Scheme is approved by IBM vide letter no. DRG/FE/MPLN-658/NGP dated 19.09.2006.

4. Baseline studies were carried out during April 2009 to March 2010, March 2011 & November 2012(Except Monsoon). Public Hearing was held on 17.2.2011 and 2.5.2011 as the Project area falls in two Districts i.e Durg and Rajnandgaon of Chhattisgarh. The Public hearing was presided over by ADM, Rajnandgaon and ADM, Durg. The issues raised during Public Hearing were considered and discussed during the meeting, which inter-alia included repair of roads, provision of medical facilities, education, water supply, sanitation etc.

5. Total cost of the project is Rs. Rs 12.75 Crores. Capital Cost of environmental protection measures is Rs. 858 lakhs & Recurring cost is Rs. 147 lakhs/annum. Amount of Rs. 180 Lakhs have been earmarked towards socio-economic activities in the area. It was reported that there is no court case pending against the Project.

6. The Ministry of Environment, Forest and Climate Change has examined the application in accordance with the EIA Notification, 2006 and hereby accords environmental clearance specific to this case only under the provisions thereof to the above mentioned proposal of Steel Authority of India Ltd. (SAIL) for enhancement of production capacity from 0.96 to 1.46 MTPA (ROM) of iron ore over mining lease area of 1522.67 ha [144 ha (forest area for which FC is available)] excluding 1378.67 ha of forest land subject to implementation of the following conditions and environmental safeguards.

A. SPECIFIC CONDITIONS:

- (i) No mining activities are allowed in forest area for which the FC is not available.
- (ii) The condition 3(iii)b of the guidelines issued by the Forest Conservation Division in this Ministry vide F. No. 11-362/2012-FC dated 1st February, 2013 is not being prescribed in view of Hon'ble Supreme Court order dated 27.01.2014 and the EC is subject to the final order of the Supreme Court in the matter.
- (iii) The project proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board and effectively implement all the conditions stipulated therein.
- (iv) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table.
- (v) The loose solids should be kept separately from flowing water and flow of effluents to nearby areas outside the leasehold shall be prevented. These paved drains along with arrangements for Over Burden Dumps and their drainage may be clearly depicted on a contoured map of the mining area.
- (vi) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the 1st and 2nd

order streams, emanating or passing through the mine lease during the course of mining operation.

- (vii) The top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.
- (viii) Appropriate safeguard measures shall be taken to ensure stability and drainage of dump so that no solid waste/debris flows into the nallah.
- (ix) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. Proper terracing of OB dump(s) shall be carried out so that the overall slope shall not exceed 28°. The over burden dump(s) shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dumps. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Nagpur on six monthly basis.
- (x) Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, temporary OB and mineral dumps to arrest flow of silt and sediment directly into the adjoining River and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after the monsoon and maintained properly.
- (xi) Dimension of the retaining wall at the toe of the OB dump(s) and the OB benches within the mine to check run-off and siltation should be based on the rain fall data.
- (xii) Plantation shall be raised in an area earmarked including a 7.5 m wide green belt in the safety zone around the mining lease, OB dump(s), along the roads, etc. by planting the native species in consultation with the local DFO/Agriculture Department. In addition, plantation shall also be raised in the backfilled and reclaimed area and around water body. The density of the trees should be around 2500 plants per ha.
- (xiii) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xiv) Regular monitoring of water quality upstream and downstream of perennial nallahs falling in the impact zone shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment, Forest and Climate Change, its Regional Office, Nagpur, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (xv) Appropriate measures shall be taken for treatment of the upper catchment of the mine lease area.

- (xvi) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (xvii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January)); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment, Forest and Climate Change and its Regional Office Nagpur, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
- (xviii) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water, required for the project.
- (xix) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xx) Appropriate mitigative measures should be taken to prevent pollution of nearby River in consultation with the State Pollution Control Board.
- (xxi) Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
- (xxii) Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxiii) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxiv) Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xxv) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.
- (xxvi) Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- (xxvii) Regular monitoring of free silica in the dust will be carried out and records maintained. It shall be ensured that the levels of silica do not exceed the prescribed limit. The workers will be provided with personal protective measures to guard against inhaling silica dust.

- (xxviii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxix) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered flora as well as endangered fauna spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office at Nagpur within 3 months.
- (xxx) The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM_{10}) and NO_x in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS))]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
- (xxxi) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.
- (xxxii) The project proponent shall undertake all the commitments made during the public hearing and effectively address the concerns raised by the locals in the public hearing as well as during consideration of the project, while implementing the project.

B. General conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.
- (ii) No change in the calendar plan including excavation, quantum of mineral and waste should be made.
- (iii) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM_{10}) and NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

- (iv) Data on ambient air quality RSPM (Particulate matter with size less than 10micron i.e., PM₁₀) & NOx should be regularly submitted to the Ministry of Environment, Forest and Climate Change including its Regional office located at Nagpur and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (v) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
- (vi) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
- (vii) 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 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- (viii) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (ix) A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- (x) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment, Forest and Climate Change and its Regional Office located at Nagpur.
- (xi) The project authorities should inform to the Regional Office located at Nagpur regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xii) The Regional Office of this Ministry located at Nagpur shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xiii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment, Forest and Climate Change, its Regional Office Nagpur, the respective Zonal Office of Central Pollution Control Board the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment, Forest and Climate Change, Nagpur, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board.

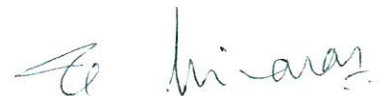
- (xiv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- (xv) The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.
- (xvi) The environmental statement for each financial year ending 31st March in Form-Vas is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment, Forest and Climate Change, Nagpur by e-mail.
- (xvii) The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of 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 web site of the Ministry of Environment, Forest and Climate Change at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Nagpur.

7. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

8. Concealing factual 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.

9. 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 made thereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Chhattisgarh and any other Court of Law relating to the subject matter.

10. 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.


(Dr. U. Sridharan)
Scientist 'F'

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhavan, New Delhi
- (ii) The Secretary, Department of Environment, Government of Chhattisgarh, Raipur.
- (iii) The Secretary, Department of Mines and Geology, Government of Chhattisgarh, Raipur.
- (iv) The Secretary, Department of Forests, Government of Chhattisgarh, Raipur.
- (v) The Additional Principal Chief Conservator of Forests, Ministry of Environment, Forest and Climate Change, Regional Office (WCZ), Nagpur.
- (vi) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum Office Complex, East Arjun Nagar, New Delhi - 110 032.
- (vii) The Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur - 421001, Chhattisgarh.
- (viii) The Member Secretary, Central Ground Water Authority, A2, W-3, Curzon Road Barracks, K.G.Marg, New Delhi - 110 001.
- (ix) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- (x) The District Collector, Durg & Rajnandgoan Districts, Chhattisgarh.
- (xi) Guard File.


(Dr. U. Sridharan)
Scientist 'F'