

No. J-11015/449/2012-IA.II (M)  
Government of India  
**Ministry of Environment, Forest and Climate Change**  
Impact Assessment Division

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Indira Paryavaran Bhavan,  
Aliganj, Jor Bagh Road  
New Delhi-110 003

Dated: 2<sup>nd</sup> September, 2015

To,

**M/s Steel Authority of India Limited**

Raw Material Division,  
Post-Barhi, District-Katni  
Madhya Pradesh-483 770

Tel. 07626-273251, Fax No. 07626-373201

**Sub.: Enhancement of production capacity of limestone from 0.9 million TPA to 2.32 million TPA (ROM) of Kuteshwar Limestone mine (Right Bank Lease) along with Crushing and Screening Plant (200 TPH to 650 TPH) by M/s Steel Authority of India Limited, located at village(s)-Gairtalai, Marwa and Jararoda, District-Katni, Madhya Pradesh (944.89ha)-Environmental Clearance regarding.**

Sir,

This has reference to your application for the above mentioned proposal for Enhancement of production capacity of limestone from 0.9 million TPA to 2.32 million TPA (ROM) of Kuteshwar Limestone mine (Right Bank Lease) along with Crushing and Screening Plant (200 TPH to 650 TPH). The mine lease area is located at village(s)-Gairtalai, Marwa and Jararoda, District-Katni, Madhya Pradesh village-Kuteshwar, Tehsil-Vijayraghavgarh, District-Katni, Madhya Pradesh in MLA of 944.89ha. The Latitudes and Longitudes of the mine lease area are 23°58'25.73" N & 24°00'07.56" N and 80°49'34.12" E & 80°52'01.14" E respectively on toposheet no. 63 D/16, 64 A/13.

2. The Ministry had prescribed TOR on 30.04.2013. The Proponent after conducting Public Hearing on 30.01.2014 submitted the EIA/EMP report for seeking environmental clearance. The proposal of EC was earlier appraised by the EAC in its meeting held during November 24-25, 2014 wherein the EAC sought information/clarification. Further, based on the information submitted by Proponent, the proposal was reconsidered in the EAC meeting held during June 24-26, 2015 wherein the EAC recommended the Proposal for environmental clearance.

3. The total mining lease area is 944.89 ha. Out of this, 232.70 ha is Govt. land and 712.19 ha is private land. No forest land is involved. The Scheme of Mining along with progressive mine closure plan has been approved by Indian Bureau of Mines, Central Zone, vide letter no. 314(3)2011 MCCM (CZ)-S-10/1164 dated 9th September, 2011. Project proponent (PP) reported that 64.50 ha area is presently being used for excavation. The mineable reserves are 95.313 million tonnes and Life of mine is 41 years.



4. Mining will be fully mechanized opencast method. The mining process involves drilling & blasting, loading and transportation of the excavated material. The proposed working will be by putting DT holes by Wagon Drill Machine & blasting by Slurry explosive along with plain, delayed and Nonel detonators. Overall pit slope will be 45°. The blasted material will be loaded by hydraulic excavators in dumpers & transported to crushing plant for sizing, a 450 TPH Capacity Crushing & Screening Plant will be installed in addition to the existing 200 TPH Plant. The proposed Crushing & Screening Plant will comprise of receiving hopper, primary sizer, secondary sizer, screens and a set of conveyor belts, dust suppression system.

5. Project Proponent informed that presently, limestone is transported from mine to Railway Siding at Khannabanjari by tipper trucks (located on Katni-Singrauli section of West Central Railways). In the proposed expansion of the mine, it has been envisaged to extend the Railway Siding from Khannabajari to Kuteshware Mine. The Project Proponent informed that till construction and commissioning of the Railway Siding at the mine, the existing dispatch route will continued. At the end of the life of mine, out of total mining lease area, excavated area will be 189.2ha that will be converted into water reservoir and 410.537ha will be reclaimed by plantation. As per approved scheme of mining, total waste generation will be 1048547 cubic meter at the end of the life of the mine. The total water requirement for the project will be 600 KLD, industrial water requirement to the tune of 300 KLD shall be met through mine pit water discharge. Balance 300 KLD required for domestic consumption shall be met through ground water. The Project Proponent informed that Vijayraghavgarh Block of Katni District in which Kuteshwar Limestone Mine falls is a Non-notified area as per CGWB. Project Proponent has obtained NOC from Central Ground Water Authority for ground water withdrawal- vide No. 21-4 (167)/NCR/CGWA/2014-689, dated 30.04.2015.

6. Project Proponent reported that there is no Wildlife Sanctuary, National Park, Habitat for Migratory Birds, Tiger Reserve and Critically Polluted Area etc. located within 10 km radius of the mine lease area. The Bandhavgarh National Park is located 11.2Km SE and Bandhavgarh Tiger Reserve is located 11.2 Km S from the MLA. There is no forest in the mine lease area. There are four forests in the study area i.e. Hardua reserve forest (7 Km NW), Karreha Reserve forest (6.9 Km N) Bara reserved forest (5.5 Km NE) and open mixed jungle (4.9 Km NE).

7. The baseline data was generated for the period during March to May 2013. All the parameters for water and air quality were within permissible limits. The Committee deliberated the issues and was of the opinion that as the base line data was in accordance with the prescribed ToR and the basic parameters are well within the permissible limits, the base line data could be accepted.

8. The Ministry has earlier accorded the environmental clearance to the project vide MoEF letter no. J-11015/34/93-IA II (I), dated 16<sup>th</sup> June 1995. The certified compliance Report of the conditions stipulated in the earlier EC was submitted by the Regional Office of MoEF, Bhopal vide letter dated 08.09.2014. The Committee deliberated the compliance status at length.

9. The Public Hearing was held on 30.01.2014 which is presided over by Shri Dinesh Shrivastava, Addl. District Magistrate, Katni, Madhya Pradesh. The representative of Regional Office from the Madhya Pradesh Pollution Control Board was present. Major issues raised during Public Hearing were related to



employment, water availability, Environmental Protection Measures and construction of alternate road for villagers. The issues raised during the Public Hearing were discussed during the meeting. A revised action plan and its implementation schedule with budgetary provisions on the issues raised during Public Hearing were also submitted with respect to greenbelt development. Project Proponent committed for development of greenbelts covering 5.1 km length all along the protection bund and creation of a greenbelt between mines and Gairtalai village of about 1 km length by planting local plant species during the expansion of the mines. A plan for utilization of mine pit water has also been submitted involving supply of mine pit water to the village ponds and meeting entire industrial water requirement at the mines.

10. The total cost of the project is Rs. 226 Crores. The Project Proponent has earmarked Rs. 365 Lakhs towards Environmental Protection Measures and Rs. 68.36 Lakhs per annum towards recurring expenses. Proponent reported that there is no court case/litigation pending against the project.

11. The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby accords the environmental clearance under the provisions thereof to the above mentioned proposal of **M/s Steel Authority of India Limited for Enhancement of production capacity of limestone from 0.9 million TPA to 2.32 million TPA (ROM) of Kuteshwar Limestone mine (Right Bank Lease) along with Crushing and Screening Plant (200 TPH to 650 TPH) in the mine lease area of 944.89ha, located at village(s)-Gairtalai, Marwa and Jararoda, District-Katni, Madhya Pradesh** subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:-

**A. Specific conditions**

- (i) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Madhya Pradesh and any other Court of Law, if any, as may be applicable to this project.
- (ii) Environmental clearance is subject to obtaining clearance, if any, under the Wildlife (Protection) Act, 1972 from the Competent Authority as applicable to this project.
- (iii) No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
- (iv) The Project Proponent shall obtain Consent to Operate from the State Pollution Control Board, Madhya Pradesh and effectively implement all the conditions stipulated therein.
- (v) Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical checkup once in six months and necessary medical care/preventive measures undertaken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers should also be adopted.



- (vi) Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The PP shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing.
- (vii) The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centres.
- (viii) There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
- (ix) Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured; and Washing of all transport vehicle should be done inside the mining lease.
- (x) Project Proponent shall ensure that there should not be cross traffic from Left Bank Lease to Right Bank Lease or vice versa.
- (xi) The Proponent shall implement the Wildlife Conservation Plan along with the funds so allocated with consultation of Chief Wild Life Warden of the State Govt. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Bhopal and the Chief Wild Life Warden of the State Govt. The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area.
- (xii) Advanced technologies for environmental protection shall be used for controlled blasting specially in the areas in the vicinity of the villages/habitations. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented. Drills shall either be operated with dust extractors or equipped with water injection system. Secondary blasting for reducing the boulder size will be avoided by using rock breaker. All measures will be adopted to control fugitive dust emission during mining operation and to ensure no impact on nearby habitats. Green belt (15 m width) and plantation will be developed towards habitation, water bodies and all along the pit boundary.
- (xiii) Project Proponent shall carry out vibration studies well before approaching any such habitats or other buildings, to evaluate the zone of influence and impact of blasting on the neighbourhood. Within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction, such as ripper/dozer combination/rock breakers/ surface miners etc. should be seriously considered and practiced wherever practicable. A provision for monitoring of

each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained.

- (xiv) Mining shall be carried out as per the provisions outlined in mining plan approved by Indian Bureau of Mines (IBM) as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).
- (xv) Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. Crusher and material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust.
- (xvi) The Project Proponent shall ensure that the productivity of agricultural crops is not affected due to mining operations. Crop Liability Insurance Policy has to be taken by the Project Proponent as a precaution to compensate for any crop loss. The impact zone shall be 5km from the boundary of mine lease area for such insurance policy.
- (xvii) The illumination and sound at night at project site, disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponent must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
- (xviii) Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.
- (xix) CSR activities by Companies including the Mining Establishments has become mandatory up to 2% of their financial Turn-over, Socio Economic Development of the neighborhood Habitats could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office located at Bhopal on six monthly basis.
- (xx) 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxi) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest & Climate Change 5 years in advance of final mine closure for approval.



## **B. General conditions**

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest & Climate Change.
- (ii) No change in the calendar plan including excavation, quantum of limestone and waste should be made.
- (iii) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project.
- (iv) Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new piezometers.
- (v) Monitoring of Ambient Air Quality to be carried out based on the 2009 Notification, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
- (vi) The upliftment of scheduled caste/scheduled tribe population, specific programmes have been taken in to consideration specially with respect to education, health care, livelihood generation, infrastructure development & promotion of sports & culture for SC/ST population and that these will be intensified in future.
- (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. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should 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 dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest & Climate Change and its Regional Office located at Bhopal on six monthly basis.
- (viii) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water



bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.

- (ix) Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
- (x) Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.
- (xi) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM<sub>10</sub> and PM<sub>2.5</sub> such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest & Climate Change, its Regional Office, Bhopal, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (xiii) 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 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 may be sent regularly to Ministry of Environment, Forest & Climate Change and its Regional Office, Bhopal, Central Ground Water Authority and Regional Director, Central Ground Water Board.
- (xiv) The critical parameters such as PM<sub>10</sub> (size less than 10 micro meter), PM<sub>2.5</sub> (size less than 2.5 micro meter), NO<sub>x</sub> 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 & Climate Change, which is



available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.

- (xv) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> & NO<sub>x</sub> 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. Data on ambient air quality should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- (xix) 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.
- (xx) 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.
- (xxi) 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.
- (xxii) 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 and its Regional Office located at Bhopal.
- (xxiii) The project authorities should inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xxiv) The Regional Office of this Ministry located at Bhopal 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.



- (xxv) The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Bhopal, Central Pollution Control Board and State Pollution Control Board.
- (xxvi) 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.
- (xxvii) State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
- (xxviii) The project authorities should advertise at least in two local newspapers 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 & Climate Change at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhopal.

12. The Ministry or any other Competent Authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

13. 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 the Environment (Protection) Act, 1986.

14. 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 there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Madhya Pradesh and any other Court of Law relating to the subject matter.

15. 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.

Yours faithfully,

  
(Dr. U. Sridharan)  
Director (S)

**Copy to:**

- 1). **The Secretary**, Ministry of Mines, Government of India, Shastri Bhavan, New Delhi.



- 2). **The Secretary**, Department of Mines & Geology, Government of Madhya Pradesh, Secretariat, Bhopal.
- 3). **The Secretary**, Department of Environment, Government of Madhya Pradesh, Secretariat, Bhopal.
- 4). **The Secretary**, Department of Forests, Government of Madhya Pradesh, Secretariat, Bhopal.
- 5). **The Chief Wildlife Warden**, Government of Madhya Pradesh, Van Bhavan, 1st Floor, Tulsi Nagar, Bhopal - 462 003.
- 6). **The Additional Principal Chief Conservator of Forests**, Regional Office (WZ), Regional Office (WZ), Kendriya Paryavaran Bhawan, Link Road No.3, Ravi Shankar Nagar, Bhopal -462 016.
- 7). **The Member Secretary**, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 8). **The Chairman**, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal - 462016.
- 9). **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 10). **The District Collector**, District-Katni, State of Madhya Pradesh.
- 11). **Guard File**
- 12). **MoEFCC website**

  
(Dr. U. Sridharan)  
Director (S)