

No.J-11015/271/2006-IA.II (M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
C.G.O. Complex, Lodi Road,  
New Delhi - 110 003

Dated the 27<sup>th</sup> December, 2007

To,

M/s Birla Corporation Limited  
Satna Cement Works,  
P.O. Birla Vikas,  
District -Satna-485 005,  
Madhya Pradesh  
E-mail: admin@satnacemntcom, typool@satnacemnt.com

**Subject: Expansion of Sagmania Limestone Mining Project of M/s Birla Corporation Limited located in Village Sagmania, Tehsil Raghurajnagar, District Satna, Madhya Pradesh- environmental clearance reg.**

Sir,

This has reference to your letter No. 'Nil' dated 07.08.2006 and subsequent letters dated 28.12.2006, 08.05.2007, 18.05.2007, 17.07.2007 and 25.10.2007 on the subject mentioned above. The proposal is for enhancement of limestone production from 3.3million tonnes per annum (million TPA) to 4.9million TPA. The total mine lease area of the project is 939.78ha, out of which 176.91ha is an agricultural land, 115ha is wasteland, 40ha is surface water bodies and 607.87ha is others. No forestland is involved. Area proposed for mining is 731.78ha, an area of 2.03ha is kept for roads, 21ha for green belt and 184.97ha is undisturbed area. Sirmawal River and Tamas River are located at a distance of 8.5km and 6.5km respectively from the mine lease boundary. No ecologically sensitive area such as National park/wildlife sanctuary/biosphere reserve etc. is reported to be located in the core and buffer zone of the mine and that the area does not form corridor for Schedule-I fauna. Working is opencast by mechanized method involving blasting. The targetted production capacity of the mine is 4.9million TPA production of limestone and life of mine will be 16years. Approximately 14625TPD of mineral will be transported through conveyor. The topography of the area is flat at an elevation ranging from 310m-320m AMSL. The ultimate working depth of mine will be 18m bgl (292m RL). The water table in the core zone varies between 25m-30m bgl (285m-280m RL) during pre monsoon and 20m-25m bgl (290m- 285m RL) during post monsoon. The mine working will not intersect ground water table. There is no population in the core zone, therefore, displacement of population and R&R is not involved. Peak water requirement of the project is estimated as 494 m<sup>3</sup>per day, out of which 290m<sup>3</sup> per day will be met from groundwater and remaining 204 m<sup>3</sup> per day from

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mine sump water. It is estimated that 31.6 million m<sup>3</sup> of waste will be generated during the mine life, which will be concurrently backfilled in the mined out area and the topsoil will be spread over the backfilled area for concurrent plantation. There will be no external over burden dumps. Plantation will be raised in an area of 251ha at the end of the mine life and an area of 565.78ha will be converted into water body at the post mining stage. NOC from the Madhya Pradesh Pollution Control Board obtained on 24.05.2006 for production enhancement from 3.3million TPA to 4.9million TPA of limestone. Public hearing of the project was held on 25.03.2006 for production enhancement from 3.3million TPA to 4.9million TPA of limestone involving lease area of 939.78ha. The Indian Bureau of Mines had approved scheme of mining and PMCP of the project on 05.07.2006 for lease area of 939.78ha. The capital cost of the project is Rs.5700lakhs.

2. The Ministry of Environment and Forests has examined the application in accordance with Section 12 of the EIA Notification 2006 read with para 2.1.1(i) of the Circular No.J-11013/41/2006-IA.II(I) dated 13.10.2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned Sagmania Limestone Mining Project of M/s Birla Corporation Limited for an annual production capacity of 4.9million tonnes production of limestone by opencast mechanised method involving total lease area of 939.78ha subject to implementation of the following conditions and environmental safeguards.

**A. Specific conditions**

- (i) The environmental clearance is subject to approval of the State Landuse Department, Government of Madhya Pradesh for diversion of agricultural land for non-agricultural use.
- (ii) All the conditions stipulated by the State Pollution Control Board in their NOC should be effectively implemented.
- (iii) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table.
- (iv) The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations.
- (v) Top soil should be temporarily stacked with proper slope at earmarked site(s) only with adequate measures and should not be kept unutilized for a period more than 3years. The topsoil should be used for land reclamation and plantation.



- (vi) The entire waste generated shall be concurrently backfilled and there shall be no external over burden dumps. The entire backfilled area of 166ha shall be reclaimed by plantation. The back filling should be carried out in such a manner that it is restored to the normal ground level. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office, Bhopal on six monthly basis.
- (vii) The void left unfilled in an area of 565.78ha shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.
- (viii) Catch drains and siltation ponds of appropriate size shall be constructed for the working pit to arrest flow of silt and sediment. 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 monsoon, and maintained properly.

Garland drain of appropriate size, gradient and length shall be constructed for mine pit 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 should be constructed at the corners of the garland drains and desilted at regular intervals.

- (ix) Plantation shall be raised in an area of 251ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, reclaimed and backfilled area, around water body, roads etc. in consultation with the local DFO/Agriculture Department. Atleast 1500 trees per year shall be planted and the density of the trees should be around 2500 plants per ha.
- (x) Regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading, unloading and transfer points and other vulnerable areas. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xi) 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.



- (xii) Regular monitoring of ground water level and quality should 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 should 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 and Forests, its Regional Office located at Bhopal, Central Ground Water Authority and Regional Director, Central Ground Water Board.
- (xiii) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.
- (xiv) The project authorities shall obtain prior approval of the competent authority for drawal of groundwater, required for the project.
- (xv) The mineral handling plant should be provided with 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.
- (xvi) Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xvii) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xviii) The project proponent shall ensure monitoring of vibrations (peak particle velocity likely to be generated) with each blast.
- (xix) Consent to operate shall be obtained from the State Pollution Control Board before starting enhanced production from the mine.
- (xx) Vehicular emissions should 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 vehicles should be covered with a tarpaulin and shall not be overloaded.
- (xxi) Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office.

(xxii) Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and mine wastewater.

(xxiii) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 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 and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral limestone and waste should be made.
- (iii) Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department.
- (iv) Atleast four ambient air quality monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>, and CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>, and CO) should be regularly submitted to the Ministry including its Regional Office at Bhopal and to 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 monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dumps, loading & unloading points should be provided and properly maintained.
- (vi) Adequate measures should be taken for control of noise levels within prescribed standards. Workers engaged in blasting and drilling operations, operations of HEMM, etc., should be provided with ear plugs/muffs.
- (vii) Industrial wastewater (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 effluents from workshop.



- (viii) Acid mine water, if any has to be treated and disposed of after conforming to the standard prescribed the competent authority.
- (ix) 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 programme of the workers should be undertaken periodically to observe any contractions due to exposure to radioactive mineral dust and take corrective measures, if needed. The same programme may be extended to adjoining villages also.

- (x) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (xi) 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.
- (xii) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year-wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office, Bhopal.
- (xiii) 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 requisite data/information/monitoring reports.
- (xiv) The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhopal, Central Pollution Control Board and State Pollution Control Board.
- (xv) A copy of the clearance letter will be marked to the concerned Panchayat /local NGO, if any, from whom any suggestions/representation has been received while processing the proposal.
- (xvi) 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.
- (xvii) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's/Tehsildar's Office for 30 days.

(xviii) 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 may also be seen at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhopal.

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

4. 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.

5. 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 any Court of Law relating to the subject matter.

  
(SATISH.C.GARKOTI)  
Additional Director(S)

**Copy to:**

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhavan, New Delhi.
- (ii) The Secretary, Department of Mines & Geology, Government of Madhya Pradesh, Secretariat, Bhopal.
- (iii) The Secretary, Department of Environment, Government of Madhya Pradesh, Secretariat, Bhopal.
- (iv) The Chief Conservator of Forests, Regional Office (WZ), E-3/240, Arera Colony, Bhopal-462 016
- (v) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.

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- (vi) The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (vii) The Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal - 462016
- (viii) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- (ix) The District Collector, Satna, Madhya Pradesh.
- (x) EI Division, Ministry of Environment and Forests, Paryavaran Bhavan, C. G. O. Complex, Lodi Road, New Delhi-110 003 .
- (xi) Monitoring File.
- (xii) Guard File.
- (xiii) Record File.

(SATISH C. GARKOTI)  
Additional Director

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- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhavan, New Delhi.
- (ii) The Secretary, Department of Mines & Geology, Government of Madhya Pradesh, Secretariat, Bhopal.
- (iii) The Secretary, Department of Environment, Government of Madhya Pradesh, Secretariat, Bhopal.
- (iv) The Chief Conservator of Forests, Regional Office (V), E-3/240, Arera Colony, Bhopal-462 016
- (v) The Chairman, Central Pollution Control Board, Paryavaran Bhavan, CBD cum Office complex, East Arjun Nagar, New Delhi-110003.