

F. No. J-11011/372/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

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Dated: 31st October, 2011

To,

M/s Emami Cement Limited
Neeraj Nikunj, Garden Chowk,
Civil lines, Opp. Sbi Baloda Bazar,
District Raipur, Chhattisgarh

Tele/fax: 07727-223023

Sub: Cement Plant (2.5 MTPA) & Captive Power Plant (40 MW) at Risda and Dhandhani villages along with Limestone Mine (3.17 MTPA, 395.05 ha.) at Risda and Kukurdih villages of Tehsil Baloda Bazar, District Raipur in Chhattisgarh by **M/s Emami Cement Limited - regarding environmental clearance**

Sir,

This has reference to your letter no. nil dated 22.11.2010 along with a copy of EIA/EMP and public hearing reports and subsequent communications dated 9.02.2011, 1.03.2011, 31.03.2011, 1.06.2011 and 6.08.2011 seeking environmental clearance under the provisions of EIA Notification, 2006 and communication no. CIF/NAKSHA/I(H)/VI/505 dated 6.08.2011 from the Chief Inspector of Factories, Government of Chhattisgarh, Raipur .

2. The Ministry of Environment and Forests has examined your application. It is noted that M/s Emami Cement Limited have proposed to set up an integrated Cement Plant to produce 2.5 Million TPA of cement and 40 MW Captive Thermal Power Plant at Risda & Dhandhani villages along with a limestone mine covering an area of 395.05 ha for limestone mining to produce 3.17 MTPA of Limestone at Villages Risda & Kukurdih of Tehsil Baloda Bazar, District Raipur in Chhattisgarh. Total project area for the cement plant and colony is 195.64 ha, out of which 115.78 ha is private land and 79.86 ha is government land. The company vide letter no. ECL/MOEF/2010-11/07 dated 1st June,2011 submitted the revised lay put plan excluding about 49 ha of open area in which the company has yet to acquire 1 ha of land. This area will be included after acquisition of 1 ha of area. The total plant area is now 146.64 ha of which 89 ha is for the cement plant, 57.6 ha for the colony and railway yard. Out of total area of 146.64 ha, about 50.10 ha of area has been earmarked for green belt. Total limestone mine area is 395.05 ha of which 359.65 ha is private land and 35.41 ha is government land. No National parks / wild life sanctuaries are located within 10 km of the project area. No forest land is involved. However, Dhabadih reserve forest, Sonbarsa reserve forest and latwa reserve forest are within 10km radius of the project area. Total cost of the proposed project is Rs. 836.75 Crores and Rs. 64.95 Crores towards pollution control measures in the plant.

3. The IBM has approved the mining plan on 9.07.2008. Mining lease has been granted by the Department of Mineral Resources, Govt. of Chhattisgarh on 12.11.2007. Limestone, Iron ore, Bauxite, Gypsum, fly ash slag and coal will be used as raw material for cement plant. Product mix will be OPC and PPC with maximum cement production of 2.5 MTPA. The raw material would be stored in covered area. Bag house for kiln & raw meal, ESP for cooler & bag houses and bag filters would be installed to control the particulate emissions. To control the fugitive emissions, covered sheds for storage of raw materials, covered conveyors, asphalted roads, dust suppression systems like water sprinkling will be provided

4. The water requirement of 1,822m³/day will be sourced from ground. Permission to draw 3150m³/day of ground water from the Central Ground water Authority vide letter no. 21-4(22)/NCCR/CGWA/2008-666 dated 9.06.2008 has been obtained. The treated waste water (1151 m³/day) will be totally recycled. Air cooled condensers will be used and zero discharge will be maintained. Rain water harvesting will be carried to recharge the aquifer. To meet the power requirement of the cement plant, it is proposed to install a coal based Captive Thermal Power Plant of 40 (2X20) MW capacity. The proposed power plant will be installed adjacent to the cement plant area. Fly ash generated in power plant will be consumed in the cement plant.

7. Total reserves of lime stone are 99.525 Million Tons. Method of mining will be opencast mechanized. Bench height will be maintained at 10 m. Hydraulic excavators will be deployed for progressing benches and for handling ore/waste material. Drilling and blasting techniques will be adopted for hard formations. Dumpers will be used for loading and dumping of waste material/ore. Dumpers will be deployed for hauling limestone to the crushing plant or mineral stock and waste material to dump yards. Crushed limestone will be transported to cement plant by closed conveyor. The waste generation from the mine would be about 17 million tonnes which will be stacked in about 22.84 ha of area. The life of the mine is 33 years with the proposed production of 3.17 MTPA. Limestone mine is adjacent to the cement plant. IBM approval was obtained for the Mining Plan.

8. The cement plants (> 1.0 MTPA) and Lime stone mines are listed at S.No. 3(b) and at S. No. 1 (a) under Category A and are appraised by the Expert Appraisal Committee-1 (Industry) in the Ministry.

9. The proposal was considered by the Expert Appraisal Committee-1 (industry) in its 18th meeting held during, 24th -25th January, 2011. The Committee sought additional information for reconsideration of project. On receipt of additional information, the Committee reconsidered the project in its 19th and 20th meetings held during 22nd - 23rd February, 2011 and 12th March, 2011. The Committee recommended the proposal for environmental clearance subject to stipulation of specific conditions along with other environmental conditions.

10. Based on the information submitted by you and presentation made by the Consultant M/s Bhagavathi Ana Labs Limited, Hyderabad, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September 2006 subject to strict compliance of the following Specific and General conditions:

A. SPECIFIC CONDITIONS:

- i. As per the lay out plan authenticated by the State Government of Chhattisgarh, 100 m access to the property of the owners of the land / farmers, beneath the overhead belt conveyor between the two sections of the Cement Plant shall be provided.
- ii. Continuous monitoring system to monitor gaseous emissions shall be provided and limit of particulate emissions shall be controlled within 50mg/Nm³ by installing adequate air pollution control system and energy efficient technology.
- iii. Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report should be prepared and submitted to the Ministry and its Regional Office at Bhopal within 3 months from the date of issue of the letter.

- iv. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
- v. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- vi. Asphaltting/concreting of roads and water spray all around the critical areas prone to air pollution and having high levels of SPM and RPM should be ensured.
- vii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions shall be regularly monitored.
- viii. Total water requirement for the proposed expansion shall not exceed 1,822 m³/day. Rainwater harvesting measures with a minimum storage capacity of 2 months shall be adopted for the augmentation of ground water at cement plant, colony and mine site. The company must also collect rain water in the mined out pits of captive lime stone mine and use the same water for the various activities of the project to conserve fresh water and reduce the water requirement pressure from the river. An action plan should be submitted to Ministry's Regional Office at Bhopal within 3 months from date of issue of this letter
- ix. The project proponent shall ensure that no natural water course shall be obstructed due to any mining operations.
- x. Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, inter burden and mineral dumps 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.
- xi. Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and inter burden dumps 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.
- xii. Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers at suitable locations by the project proponent in and around project area in consultation with Regional Director, Central Ground Water Board. The frequency of monitoring should be four times a year- pre-monsoon (April / May), monsoon (August), post-monsoon (November), and winter (January). Data thus collected shall be sent at regular intervals to Ministry of Environment and Forests and its Regional Office at Bhopal, Central Ground Water Authority and State Ground Water Board.
- xiii. Dimension of the retaining wall at the toe of inter burden dumps and inter burden benches within the mine to check run-off and siltation shall be based on the rain fall data.

- xiv. Suitable conservation measures to augment ground water resources in the area should be planned and implemented in consultation with Regional Director, Central Ground Water Board.
- xv. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding should be submitted to the Ministry's Regional Office at Bhopal.
- xvi. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing.
- xvii. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.
- xviii. Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.
- xix. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xx. Blasting operation shall 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.
- xxi. Wet drilling blasting method and provision for the control air emissions during blasting using dust collectors etc. shall be used.
- xxii. Bench height, width and slope for individual bench should be properly assessed and implemented. Adequate measures should be adopted to stabilize the slope before abandonment. The fencing around the reservoir shall be provided to prevent accidents.
- xxiii. Action plan for the mining, management of over burden (removal, storage, disposal etc.), reclamation of the mined out area and mine closure shall be submitted to the Ministry and its Regional Office at Bhopal.
- xxiv. The inter burden and other waste generated should be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of the dumps should not exceed 30 m in three terraces of 10 m each and the overall slope of the dump should be maintained to 28° . The inter burden dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. 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.
- xxv. The project proponent shall modify the mine plan of the project at the time of seeking approval for the next mining scheme from the Indian Bureau of Mines so as to reduce the area for external over burden dump by suitably increasing the height of the dumps with proper terracing. It should be ensured that the overall slope of the dump does not exceed 28° .

- xxvi. The void left unfilled in the mining area shall be converted into water body after carrying the hydro geological study. The higher benches of excavated void/mining pit should be terraced and plantation done to stabilize the slopes. The slope of higher benches should be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.
- xxvii. Top soil, if any, shall be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.
- xxviii. As proposed, green belt shall be developed in at least 33 % in cement plant and all the mined out area except used for reservoir.
- xxix. All the safety norms stipulated by the Director General, Mine & Safety (DGMS) should be implemented.
- xxx. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xxxi. The company shall comply with the commitments made during public hearing held on 26th February, 2010 and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xxxii. Rehabilitation and Resettlement Plan for the project affected population shall be implemented as per the policy of the State Govt. in consultation with the State Govt. of Chhattisgarh. Compensation paid in any case shall not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy, 2007.
- xxxiii. At least 5 % of the total cost of the project shall be earmarked towards the enterprise social commitment (ESC) based on Public Hearing & social responsibility and item-wise details along with year wise action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xxxiv. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/ procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

B. GENERAL CONDITIONS:

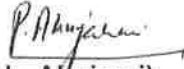
- i. The project authority shall adhere to the stipulations made by Chhattisgarh Environment Conservation Board (CECB) and State Government.
- ii. No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.
- iii. At least four ambient air quality monitoring stations shall be established in the down wind direction as well as where maximum ground level concentration of PM₁₀, SO₂ and NO_x are anticipated in consultation with the SPCB. Data on

ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office and SPCB / CPCB once in six months.

- iv. Industrial wastewater shall be properly collected and 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. The treated wastewater shall be utilized for plantation purpose.
- v. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vi. Proper housekeeping and adequate occupational health programmes shall be taken up. Occupational Health Surveillance programme shall be done on a regular basis and records maintained properly for at least 30-40 years. The programme shall include lung function and sputum analysis tests once in six months. Sufficient preventive measures shall be adopted to avoid direct exposure to dust etc.
- vii. The company shall undertake eco-development measures including community welfare measures in the project area.
- viii. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP.
- ix. A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of Senior Executive.
- x. Adequate fund shall be allocated to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. Time bound implementation schedule for implementing all the conditions stipulated herein shall be submitted. The funds so provided shall not be diverted for any other purpose.
- xi. The Regional Office of this Ministry / CPCB / KSPCB shall monitor the stipulated conditions. The project authorities shall extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.
- xii. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both on hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the CECB.
- xiii. The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.
- xiv. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests. No change in the calendar plan including excavation, quantum of limestone and waste shall be made.

- xv. Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc. shall be provided with ear pluggs/ muffs.
 - xvi. Industrial waste water (workshop and waste water from the mine) shall 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 shall be installed before discharge of workshop effluents.
 - xvii. Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
 - xviii. The project authorities shall inform to the Regional Office located regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
 - xix. A copy of clearance letter shall be marked to concerned Panchayat / local NGO, if any, from whom suggestion/representation, if any, was received while processing the proposal.
 - xx. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/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 put up on the website of the Company by the proponent.
 - xxi. The project authorities shall 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 Chhattisgarh Environment Conservation Board and also at web site 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 this Ministry.
 - xxii. The environmental statement for each financial year ending 31st March in Form-V as 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 alongwith the status of compliance of EC conditions and shall also be sent to the respective regional Office of the MoEF by e-mail.
11. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
12. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
13. The above conditions shall 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, Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.


(Dr. P.L. Ahujara)
Scientist-F

Copy to:

1. The Secretary, Department of Environment, Govt. of Chhattisgarh, Chhattisgarh.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. The Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh.
4. The Chief Conservator of Forests (Eastern), Regional Office (Western Zone), E-3/240, Arera Colony, Bhopal - 462 016, M.P.
5. Monitoring Cell, Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard file / Record file.


(Dr. P.L. Ahujara)
Scientist-F