



F. No. J-11011/1173/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003

E-mail : pb.rastogi@nic.in
Telefax : 011: 2436 7668
Dated 15th July, 2009

To, ✓
M/s Shree Cement Ltd.
Bangur Nagar, Andheri – Deori
Beawar – 305901, District Ajmer
Rajasthan



E-mail : shreebwr@shreecementltd.com / environment@shreecementltd.com / jmenviron@hotmail.com ;
Fax No. : 01462-228117/ 228119, 011-23370499 ;

Subject : Integrated Cement Plant (Cement 3.00 MTPA; Clinker 2.00 MTPA), Captive Power Plant (Pet coke based 2x18 MW and WHRB 10 MW) and Limestone Mine (3.2 MTPA, 624 ha.) at Village Gothra, Tehsil Nawalgarh, District Jhunjhunu, Rajasthan by M/s Shree Cement Ltd. - Environment clearance reg.

Ref. : Your letter no. SCL/ENV<GOTHRA/2009-10 dated 27th April, 2009.

Sir,

Kindly refer your letter no. SCL/ENV<GOTHRA/2009-10 dated 27th April, 2009 alongwith project documents including Application in Form I, draft Terms of References, Pre-feasibility report and EIA/EMP Report alongwith Public hearing/consultation report seeking environmental clearance under the EIA Notification, 2006 and further communications dated 27th May, 2009 and 23rd June, 2009 regarding above mentioned cement project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that proposal is for the Integrated Cement Plant (Cement 3.00 MTPA; Clinker 2.00 MTPA), Captive Power Plant (Pet coke based 2x18 MW and WHRB 10 MW) and Limestone Mine (3.2 MTPA, 624 ha.) at Village Gothra, Tehsil Nawalgarh, District Jhunjhunu, Rajasthan by M/s Shree Cement Ltd. Total project area for cement plant & CPP is 150 ha. Total mine area is 624 ha. No National park/Wild life sanctuary/Reserve forest is located within 10 km radius of the project. 'Letter of Intent' has been issued by the Govt. of Rajasthan vide letter no. P.2(113)/KHAN/GROUP-2/2007 dated 23rd August, 2007 and draft mining plan has been submitted to the IBM vide letter dated 5th November, 2007 and has been resubmitted on 4th August, 2008 for approval. Govt. of Rajasthan has asked for the environment clearance approval first. Total cost of the project is Rs. 718.00 Crores.

3.0 Pre-calculator with cyclone pre-heater kilns will be used for clinker production. Clinker alongwith fly ash and gypsum will be ground to manufacture cement. In captive power plant (CPP), pet coke will be fed to the AFBC boilers to generate steam which will move STG to produce electrical energy. Air-cooled condensers will be used in proposed CPP.

4.0 Open cast fully mechanized method of mining involving wet drilling, controlled blasting, excavation with high capacity excavators and transport by dumpers upto crusher will be adopted. Overburden will be dumped at earmarked site and backfilled in the mined out areas.

The top soil will be stacked at non-mineralized areas and used for green belt development. A long term restoration plan will be prepared for the lease area to carry out plantation/afforestation/green belt. Worked out query area will be developed as water reservoir. Controlled blasting will be adopted. Life of the mine will be 52 years @ 3.2 MT Limestone/year.

5.0 Electrostatic precipitators (ESPs), bag house/filters, dust collectors, dust suppression system, atomized water spray systems will be provided to control emissions within the limit. Total ground water requirement will be 1,200 m³/day and permission for ground water withdrawal is obtained from CGWA vide letter dated 5th August, 2008. Treated wastewater will be used in the process for cooling, dust suppression and green belt development. No wastewater will be discharged outside the premises. All the solid waste from air pollution control equipments will be recycled back to cement manufacturing process. Fly ash generated from CPP will be used in cement plant.

6.0 Public hearing / Public consultation meeting was held on 27th February, 2009.

7.0 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 compliance to the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i. No construction work at the proposed project site shall be started without obtaining prior clearances / approvals for the linked mining component from the Indian Bureau of Mines (IBM) and State Govt. of Rajasthan. A copy of the mining lease approval from the Indian Bureau of Mines (IBM) and State Govt. of Rajasthan shall be submitted to the Ministry and its Regional Office at Lucknow, U.P. before initiating any construction work related to mining at site.
- ii. As proposed, Electrostatic precipitators (ESPs) shall be provided to clinker cooler of cement plant and captive power plant to control particulate matters from the cement plant and captive power plant within 50 and 100 mg/Nm³ respectively. Bag house/filters to raw mill/kiln and cement mill. Bag filters shall also be provided to cement mill hopper blending silo/kiln feed, raw mill hopper, crushing plant, coal/petcoke mill, cement silo, cement silo top, packing plant and at all other places including transfer points, venting auxiliaries etc. to reduce particulate matter. Limestone shall be used in pet coke based captive power plant to control SO₂ emissions.
- iii. Continuous monitoring system to monitor gaseous emissions shall be provided and limit of SPM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Data on ambient air quality, stack emissions and fugitive emissions shall be uploaded on the Company's website and also regularly submitted on-line to the Ministry's Regional Office at Lucknow, Rajasthan State Pollution Control Board (RSPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months.
- iv. 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 shall be prepared and submitted to the Ministry and its Regional Office at Lucknow within 3 months from the date of issue of the letter.
- v. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading,

conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. Crusher shall be operated with high efficiency bag filters. All conveyers shall be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.

- vi. Dust suppression by regular water sprinkling shall be carried out in cement plant, CPP, limestone mine lease critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading points, transfer points and other vulnerable areas to control fugitive emissions. Fugitive emissions shall also be controlled by dust suppression and atomized water spray systems during excavation, handling overburden and its transport and dumping in mine lease area. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vii. 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.
- viii. 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 shall be transported in the closed containers only and should not be overloaded. Vehicular emissions shall be regularly monitored.
- ix. Possibilities shall be explored for the transportation of pet coke and fly ash by rail and an action plan shall be submitted to the Ministry and its Regional Office at Lucknow.
- x. 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 shall be transported in the closed containers covered with a tarpaulin only and shall not be overloaded. 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.
- xi. Asphalting/concreting of roads and water spray all around the critical areas prone to air pollution and having high levels of SPM and RPM shall be ensured.
- xii. Total requirement of the ground water should not exceed 1,200 m³/day ground water as per the permission accorded by the CGWA vide letter no. 21-4 (258)/WR/CGWA/2008-567 dated 5th August, 2008. The water stored in the artificial reservoir made in the mine pit shall be used maximum to reduce ground water consumption. Water efficient technology like air-cooled condenser to captive power plant shall be provided to conserve water. The effluent from de-mineralization plant of captive power plant shall be neutralized in neutralization pit and recycled/reused in the process and other plant related activities i.e. cooling, dust suppression and green belt development etc. 'Zero' discharge shall be strictly adopted and no effluent from the process and mine shall be discharged from the cement plant and mine outside the premises to any nearby water body/river etc.
- xiii. Domestic effluent shall be treated in Sewage Treatment Plant (STP) in colony and in septic pits followed by soak pits in mine lease area. All the treated wastewater shall be used for gardening / agricultural purposes and dust suppression. Domestic waste from colony and STP shall be segregated into bio-degradable and non-

biodegradable. Bio-degradable waste shall be composted and non-biodegradable waste shall be disposed off in environment-friendly manner or filled at identified sites only after proper treatment. Effluent Treatment Plant (ETP) shall also be provided for workshop and mineral separation plant for the treatment of wastewater.

- xiv. Detailed hydrological study shall be carried out and implementation of recommendations of the detailed hydrological study shall be ensured.
- xv. The project proponent shall ensure that no natural water course shall be obstructed due to any mining operations.
- xvi. The project proponent shall take appropriate mitigative measures to prevent pollution of nearby River and other surface water body, if any.
- xvii. Suitable conservation measures to augment ground water resources in the area shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.
- xviii. 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. Domestic solid waste from colony shall be used as manure for green belt development within the premises. Waste oil shall be provided to the authorized recyclers/reprocessors.
- xix. All the fly ash shall be utilized as per Fly Ash Notification, 1999 subsequently amended in 2003. Efforts shall be made to use fly ash maximum in making Pozollona Portland Cement (PPC). Fly ash shall be stored in silos and other materials in covered sheds.
- xx. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.
- xxi. Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.
- xxii. Open cast fully mechanized method of mining shall be adopted and no change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.
- xxiii. Wet drilling blasting method and provision for the control air emissions during blasting using dust collectors etc. shall be used.
- xxiv. Deep hole wet drilling sequential blasting method shall be adopted to control ground vibration and noise and provision for the control air emissions during blasting using such as dust collectors/extractors etc. shall be made. Blasting operation shall be carried out only during the daytime and one bench at a time shall be blasted. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders shall be implemented. 'No objection certificate' from the Chief Controller of Explosives shall be obtained.
- xxv. Top soil, if any, shall be stacked with proper slope at earmarked non-mineralized site(s) only with adequate measures and shall be used for reclamation and rehabilitation of mined out areas.

- xxvi. The inter burden and other waste generated shall be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of the dumps shall not exceed 30 m in three terraces of 10 m each and the over all slope of the dump shall be maintained to 28°. The inter burden dumps shall 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 shall be submitted to the Ministry of Environment & Forests and its Regional Office, Lucknow on six monthly bases.
- xxvii. As proposed, green belt shall be developed in at least 6.5 acres (33 %), out of 16 acres area in the cement plant area and all the mined out area except used for reservoir.
- xxviii. The void left unfilled in the mining area 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.
- xxix. 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 shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted, particularly after monsoon, and maintained properly.
- xxx. Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and inter burden dumps and sump capacity shall 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.
- xxxi. 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 shall 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 Lucknow, Central Ground Water Authority and Central Ground Water Board.
- xxxii. Suitable conservation measures to augment groundwater resources in the area on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.
- xxxiii. Rain water collected from the roof top shall be injected into the ground through injection wells to recharge the ground water table.
- xxxiv. Bench height, width and slope for individual bench shall be properly assessed and implemented. Adequate measures shall be adopted to stabilize the slope before abandonment. The fencing around the reservoir shall be provided to prevent accidents.

- xxxv. 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.
- xxxvi. As proposed, green belt shall be developed in at least 50 ha (33 %) out of total 152.5 ha. in the cement plant area and in 332.82 ha (53%), out of total 624 ha. in the mine lease area as per the CPCB guidelines in consultation with local DFO to mitigate the impact of fugitive emissions. A 7.5 meter wide green belt shall also be developed all around the mine area. A long term action plan for the plantation / afforestation / green belt development etc. shall be prepared and submitted to the Ministry and its Regional Office at Lucknow and implemented. Further efforts shall be made to maintain the area properly already afforested.
- xxxvii. 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 Bangalore and implemented in a time bound manner.
- xxxviii. 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.
- xxxix. 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 shall be ensured that the overall slope of the dump does not exceed 28° .
- xl. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna. 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 within 3 months from the date of issue of this letter.
- xli. Rehabilitation and Resettlement Plan for the project affected population including tribals as per the policy of the State Govt. in consultation with the State Govt. shall be implemented. Compensation paid in any case shall not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy, 2007.
- xlii. 'Permission' and 'Recommendations' of the State Forest Department regarding impact of cement plant and mining activities on the surrounding reserve forests, if any, shall be obtained and implemented. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented.
- xliii. All the safety norms stipulated by the Director General, Mine & Safety (DGMS) shall be implemented.
- xliv. 'Consent to Operate' shall be obtained from Rajasthan State Pollution Control Board (RSPCB) before starting enhanced production from the mine.

- xliv. Acoustic enclosures shall be provided to control noise wherever necessary. Mine machine shall be provided with silencers. Noise shall also be controlled from cooler fans, compressor house, cement mill and raw mill, cement plant and drilling machines, excavator, blasting at mine site using appropriate noise control measures.
- xlvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel plants shall be implemented.
- xlvii. The company shall comply with the commitments made during public hearing / public consultation held on 27th February, 2009.
- xlviii. The company shall provide housing for 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.

B. GENERAL CONDITIONS :

- i. The project authority shall adhere to the stipulations made by Rajasthan State Pollution Control Board (RSPCB) and State Government.
- ii. No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.
- iii. The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the RSPCB. At no time, particulate emissions from the cement plant including kiln, coal mill, cement mill, cooler shall exceed beyond the permissible limit. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically.
- iv. 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 SPM, SO₂ and NO_x are anticipated in consultation with the RSPCB. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State Authorities. Monitoring of ambient air quality shall be carried out regularly in consultation with RSPCB and data on ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Lucknow, RSPCB and CPCB once in six months. The instruments used for ambient air quality monitoring shall be calibrated time to time.
- v. 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.
- vi. 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).
- vii. 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.

- viii. The company shall harvest the rainwater from the roof tops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- ix. The company shall undertake eco-development measures including community welfare measures in the project area.
- x. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP.
- xi. 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.
- xii. As proposed, Rs. 30.00 Crores and Rs. 1.00 Crores earmarked towards the capital cost and recurring cost/annum for environment pollution control measures and Rs. 50.00 Lakhs/annum for CSR activities shall be used judiciously 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 to the Ministry. The funds so provided shall not be diverted for any other purpose.
- 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. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Rajasthan State Pollution Control Board and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Lucknow.
- xv. 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 be put on the web site of the company by the proponent.
- xvi. The project proponent shall upload the status of compliance of the stipulated environment 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 MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- xvii. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow / CPCB / RSPCB shall monitor the stipulated conditions.
- xviii. 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 environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.

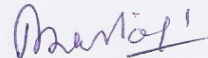
8.0 The Ministry or any other competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional Office of this Ministry located at Lucknow.

9.0 The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.

10.0 Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a time bound manner.

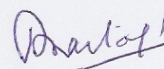
11.0. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

12.0 The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


(Dr. P. B. Rastogi)
Director

Copy to :

1. Secretary, Department of Environment and Forests, Government of Rajasthan, Jaipur, Rajasthan.
2. Chairman, Rajasthan State Pollution Control Board, 4, Institutional area, Jhalana, Doongri, Jaipur, Rajasthan.
3. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. Chief Conservator of Forests (Central), Ministry of Environment and Forests, Central Region, Kendriya Sadan, Sector H, Aliganj, Lucknow - 226 024, U.P.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
7. Guard File.
8. Monitoring File.
9. Record File.


(Dr. P. B. Rastogi)
Director