

# **BHILAI JAYPEE CEMENT LIMITED**

## **BABUPUR (SATNA) MP-485112**

### **Environmental Compliance Half yearly report for the period October to March -2012-13**

Compliance report for the period October-2012 to March - 2013 to the conditions stipulated in the Environmental Clearance granted by MoEF vide letter F. No. J- 11011/29/2008-IA-II (I) Dated 21<sup>st</sup> July, 2009 for setting up of cement plant [Clinker (1.09 MTPA), Cement grinding (0.6 MTPA) and Mining (2.1 MTPA)], at Village: Babupur, District: Satna (M.P).

#### **SPECIFIC CONDITIONS**

<b>Sr. No.</b>	<b>Details of Conditions</b>	<b>Status</b>
I.	The Company shall comply with the conditions stipulated in the mining plan approval letter no. 314(3)/2008-MCCM(C)/MP-46 dated 25 <sup>th</sup> March, 2009 and 314(3)/2008-MCCM(C)/MP-47 dated 26 <sup>th</sup> March, 2009 issued by the Indian Bureau of Mines and conditions of mining leases.	All conditions stipulated in the mining plan are being complied.
II	The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the M.P. Pollution Control Board. At no time, particulate emissions from the cement plant including kiln, coal mill, cement mill and cooler shall not exceed 50 mg/Nm <sup>3</sup> . Continuous on-line monitors for particulate emissions shall be installed. 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.	The gaseous and particulate matter stack emissions from various units are being monitored and found well below the limits of 50 mg/Nm <sup>3</sup> prescribed by the MPPCB. Continuous on-line monitors for particulate emissions are already installed in all major stacks. All major pollution control equipments are Interlocked with main process equipments. <a href="#">Data of stack emission are attached as Annexure – I</a>
III	Secondary fugitive emissions shall be controlled within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at material transfer points. Atomized water spray system with reclaimers shall be installed in silo used for the storage of ash. Storage of other raw materials shall be in closed roof sheds. Covered conveyer belts shall be used to reduce fugitive emissions. Concreting of all the roads, water sprinkling system at limestone and coal handling area shall be ensured to reduce fugitive emissions.	For controlling the secondary fugitive emission, dust collection and extraction system like Bag filters installed and working efficiently at material transfer points of limestone conveyor belt, coal conveyor belt, Raw material storage hoppers and blending silos, Limestone crusher, Limestone hoppers, clinker silos and coal crusher to control the dust emission during crushing and transportation of raw materials. Water spray system is installed and working efficiently at limestone crusher, belt conveyor and coal belts for controlling the dust emission. Covered conveyer belts are used for transportation of raw material as well as fine product to

		reduce fugitive emissions. Concreting of roads inside the plant premises has been completed. Raw coal is stored in Covered shed. Water spray arrangement is provided in belt and hopper for controlling the dust emission. Good housekeeping practices are being followed for controlling the dust emission.
IV	The proponent shall upload the status of compliance of the stipulated EC conditions, including monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPC. The criteria pollutant namely; SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (Ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at the convenient location near the main gate of the Company in the public domain.	Status of compliance of stipulated EC conditions, including monitored data are being uploaded in bjcl web site and submitted to Regional office of MoEF/ CPCB/SPCB on six monthly basis with monitoring data. The criteria pollutant namely; PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> (Ambient levels as well as stack emissions) are monitored and displayed near the main gate of the factory. Latest six monthly reports for the period October 2012 to March 2013 has been submitted vide our letter dtd. 02.04.2013.
V	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 and shall be carried out regularly in consultation with MPPCB and data for air emissions shall be submitted to the CPCB and MPPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time.	Ambient air quality including ambient noise levels are being monitored regularly as per guidance of MPPCB .The monitored data of AAQ and ambient noise level are being submitted to the RO, MoEF, CPCB and MPPCB regularly. The instruments used for ambient air quality monitoring are calibrated timely. We have installed two nos. continuous real times A.A.Q. monitoring station in plant premises and its data is linked with CPCB website. Ambient Air Quality Monitoring report is enclosed (Plant & Mines) as <a href="#">AAQM report plant Annexure-II</a> & <a href="#">AAQM report Mines Annexure-III</a> .
VI	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land.	Adequate measures such as water spray on the road, tarpaulin cover and avoiding overloading have been taken to reduce impact of transport of raw materials and end products on the surrounding environment. Coal and clinker transported through Railway.
VII	The company shall make the efforts to utilize the high calorific hazardous waste in the cement kiln and necessary provisions shall be made accordingly.	Proper arrangement to utilize the high calorific hazardous waste in the cement kiln will be examined for its technical

	The company shall keep the record of the waste utilized and shall submit the details to ministry's Regional Office at Bhopal, CPCB and SPCB.	viability. For the permission of co processing, application has been submitted to MPPCB and after getting permission for non hazardous waste material to be utilized in kiln. Once it's put into operation, record of the waste utilized will be maintained and sent to ministry's Regional Office at Bhopal, CPCB and SPCB.
VIII	Total ground water requirement shall not exceed 1400 m <sup>3</sup> /day for plant and mines. A copy of permission letter shall be submitted to Ministry's Regional Office at Bhopal. The treated wastewater from STP and utilities shall be reutilized for green belt development and other plant related activities i.e. cooling and dust suppression in raw material handling area etc. after necessary treatment. 'Zero' discharge shall be strictly adopted and no effluent from the process shall be discharged outside the premises.	Total ground water requirement is not exceeding to the limit of 1400 m <sup>3</sup> /day for plant and mines. Permission for use of ground water has already obtained vide letter no.21-4(50)/ CR/CGWA/2009/ 87.Dt. 2 <sup>nd</sup> July 2009.Treated waste water from STP is being used for green belt development and also in water sprinkling for dust suppression and maintaining zero discharge status.
IX	Rainwater harvesting measures shall be adopted for the augmentation of ground water at cement plant, colony and mine site. Besides, company must also harvest the rainwater from the rooftops and storm water drains to recharge the ground water. 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. The Company shall construct the rain water harvesting and groundwater recharge structures outside the plant premises also in consultation with local Gram Panchayat and Village Heads to augment the ground water level. An action plan shall be submitted to Ministry's Regional Office at Bhopal within 3 months from date of issue of this letter.	Rain water harvesting measure being adopted. Water recharge pit has been made to recharge the water. Water reservoir to be made in mined out area for rain water harvesting. The water thus collected shall be used for the various activities of the project to conserve fresh water. For the Roof top rain water harvesting six nos recharging structure has been made in Cement Plant and Township to recharge the ground water. We have also made a pond outside the plant for rain water harvesting with local Gram Panchayat and Village Heads.
X	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°.	In next modification of mining scheme from Indian Bureau of Mines the suggested measures to increase the height of the dump along with proper terracing, will be taken to reduce the area of the over burden. Temporary overburden dumps will be maintained at initial stage. The overall slope of the dump will not exceed 28°.

XI	Topsoil, if any, shall be stacked with proper slope at earmarked site(s) only with adequate measures and shall be used for reclamation and rehabilitation of mined out areas.	Topsoil being stored carefully at earmarked site and will be used for reclamation and rehabilitation of waste dump.
XII	The project proponent shall ensure that no natural water course shall be obstructed due to any mining and plant operations. The company shall make the plan for protection of the natural water course passing through the plant and mine area premises and submit to the ministry's Regional Office at Bhopal.	No natural water course was obstructed due to mining and plant operation as no natural water course passing through the mining lease.
XIII	The inter burden and other waste generated shall be stacked at earmarked dump site(s) only and shall 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 overall 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 shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office, Bhopal on six monthly bases.	The Overburden and other waste generated are being stacked at earmarked dump site(s) and shall not be kept active for long period. The waste dump site(s) total height of the dump is made in 3x10 m lift each an overall slope 28°. The interactive benches will be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas will continue until the vegetation becomes self-sustaining. Compliance report is submitted to the Ministry of Environment & Forests and its Regional Office, Bhopal on six monthly bases.
XIV	The void left unfilled shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation to be 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.	Noted and will be implemented at the end of the mining. The mining activities have been started since 1.1.2010.
XV	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.	All garland drains are well maintained and de silted before rainy season. The collected water in sump used for water spray on haul roads and loading points for dust suppression.
XVI	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	Garland drain of appropriate size, gradient and length is constructed all around the mine pit and sump of sufficient storage capacity made by

	above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall 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.	taking all safety measures.
XVII	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.	Dimension of the retaining wall at the toe of inter burden dumps and inter burden benches within the mine has been designed on the basis of the rain fall data.
XVIII	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 Bhopal, Central Ground Water Authority and Central Ground Water Board.	Regular monitoring of the Ground water level and quality monitoring work is being done and its latest report submitted to Regional Director, CGWB and Regional Director, MoEF and MPPCB Bhopal vide our letter dtd.28.03.2013.
XIX	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 shall be implemented.	Controlled blasting is in practiced. Blasting operation is being done only during daytime. Mitigation measures have been adopted to control ground vibrations and fly rocks.
XX	The project proponent shall adopt wet drilling.	All the drilling machines are fitted with wet drilling system.
XXI	As proposed, green belt shall be developed in 33 % in and around the plant as per the CPCB guidelines.	Green belt has been planned to be developed in 33 % area in and around the plant as per the CPCB guidelines. As a part of green belt development, we had planted more than 12,050 plants during the financial year 2012-13. we have planted 4000 saplings in mines and colony area during financial year (2012-13).
XXII	All the recommendations of the Corporate Responsibility or Environmental Protection (CREP) for cement plant shall be strictly followed.	Recommendations of Corporate Responsibility for Environmental Protection (CREP) for cement plant are followed and enclosed as <a href="#">CREP Annexure-V</a> .

XXIII	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	Noted. All the vehicles operating in mining area have valid PUC certificate. The vehicles are used for transportation of mineral are avoided overloading. The vehicles are maintained regularly.
XXIV	Digital processing of the entire lease area using remote sensing technique shall 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, Bhopal.	Bhagvathi Anna Labs, Hyderabad performed the work/ study for digital processing of entire lease area using remote Sensing technique and work is completed. The report of the study being prepared and submitted shortly.
XXV	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.	Noted and agreed.
XXVI	Necessary permission and recommendation of the State Forests department shall be obtained regarding impact of the proposed cement plant and mining on the surrounding reserve and protected forests and suggested conservation plan shall be implemented.	District forest officer, Satna vide letter No. DM/955 dtd. 11.02.2009 has certified that plant complex (Area 101.71 hect.) including two Mining lease (ML-I area 590.22 hect. and ML-II area 1033.99) does not have any National Park, Wild life Sanctuaries, Biospheres reserves, wild life corridors, Tiger/Elephant reserves and migratory paths /roots within 10 KM radius.
XXVII	The company shall comply with all the commitments made during public hearing on 21.12.2008	Commitments made during public hearing have been complied. We have provided compensation as per rules and jobs to 178 persons according to their qualifications as additional benefits to all related land losers.
XXVIII	Provision shall be made for the housing of construction labor 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	Provision was made for the housing of construction labour within the plant site with all necessary infrastructure and facilities such as fuel for cooking, toilets, Safe drinking water, medical health care facilities etc. Now, all temporary structure has removed.
<b>GENERAL CONDITIONS</b>		
	<b>Details of Conditions</b>	<b>Status</b>
I	The project authority shall adhere to the stipulations made by State Pollution Control Board	Noted and agreed.

	(SPCB) and State Government.	
II	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Noted and agreed.
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 SPM, SO <sub>2</sub> and NO <sub>x</sub> 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.	Four ambient air quality stations are established and AAQ monitoring is done regularly. Monitoring report has been submitted regularly on monthly and six monthly to all concerned authorities (Please refer Annexure-II & III).
IV	Industrial wastewater shall be properly collected and 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. The treated wastewater shall be utilized for plantation purpose.	The treated waste water is used for plantation purpose. However no industrial wastewater is generated from the cement plant.
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).	Noise level within the plant is maintained within the norms. Monitoring of noise level is carried out periodically as per MPPCB guidelines and reports being submitted regularly. Monitoring data of ambient noise in day and night hours are enclosed as Annexure –II & III.
VI	Proper housekeeping and adequate occupational health program shall be taken up. Occupational Health Surveillance program shall be done on a regular basis and records maintained properly for at least 30-40 years. The program 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.	Good housekeeping practice has been followed. Mechanized Road sweeping machine is used for cleaning of roads and pant area. Occupational Health Surveillance program are regularly carried out and record is maintained.
VII	The company shall undertake eco-development measures including community welfare measures in the project area.	The eco-development measures and community welfare measures to be taken by the company. The Group is committed towards the safety and health of employees and public. Our motto is Work For Safe, Healthy, and Clean & Green Environment.
VIII	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP.	Noted and Agreed
IX	A separate environmental management cell with full fledged laboratory facilities to carry out various	A separate Env. Management cell has been working with full fledged

	management and monitoring functions shall be set up under the control of Senior Executive.	laboratory facilities to carry out various Env. Management and monitoring functions.
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.	A separate fund has been created for the exclusive use for the Environmental protection and Pollution control activities.
XI	The Regional Office of this Ministry / CPCB / SPCB 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 along with statistical interpretation shall be submitted to them regularly.	Full cooperation is extended to the visiting officials. Six monthly compliance report and along with the monitored data is regularly submitted to the Regional Office of this Ministry / CPCB / SPCB.
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 SPCB.	Noted and Agreed.
XIII	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.	Noted and Agreed.
XIV	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.	Noise level is controlled within the stipulated norms by adopting adequate noise control measures. Personnel protective equipment has been provided to the workers engaged in operations of HEMM etc. Awareness/ training program are being organized regularly.
XV	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.	Zero discharge of water is maintained. Oil and grease trap is installed for workshop effluents.
XVI	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	Personnel working in mines/dusty areas have been provided personnel protective equipment/respiratory devices and providing adequate



	surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	training and information on safety and health aspects. Occupational health surveillance program of the employees are undertaken periodically.
XVII	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.	Noted and Agreed.
XVIII	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.	EC letter sent to concern authorities and receipt is taken
XIX	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 State Pollution Control Board and also at web site of the Ministry of Environment and Forests at " <a href="http://envfor.nic.in">http://envfor.nic.in</a> " and a copy of the same shall be forwarded to the Regional Office of this Ministry.	Advertised in the News paper "The Desh Bandhu ,The Nav Bharat & The Dainik Bhaskar" on Dt. 28.07.2009.
XX	The environmental statement for each financial year ending 31 <sup>st</sup> 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 along with the status of compliance of EC conditions and shall also be sent to the respective regional Office of the MoEF by e-mail.	Environmental statement of last year 2011-12 was submitted vide dated 10.09.2012
XXI	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.	Noted and agreed.
XXII	The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Noted and Agreed.

XXIII	Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a time bound manner.	Noted and Agreed
XXIV	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, Second Floor, Trikoot-I, Bhikaji Cama Place, New Delhi-110066, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.	Noted and Agreed.
XXV	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.	Noted and Agreed.