

Bhavya Cements Limited, Tangeda  
Compliance statement of Environment Clearance  
F.No. J-11011/186/2007-IA-II(I) dated 22.09.2008 & F.No J-11011/1186/2007-IA II(I) dated  
3.03.2016 for setting up Cement plant(4 MTPA) and 15 MW Captive Power Plant.

Specific Conditions	Compliance
I. <i>The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the Andhra Pradesh Pollution Control Board. At no time, particulate emissions from the cement plant including kiln, coal mill, cement mill, cooler and captive power plant (CPP) 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.</i>	<ol style="list-style-type: none"> <li>1. All Pollution control equipment in Cement plant Phase I are installed, commissioned and are operating within the specified limit of 50 mg/Nm<sup>3</sup>. Monitoring is carried out by third party and recent reports are submitted.</li> <li>2. Cement Plant phase II &amp; the Captive power plant is yet to be implemented.</li> <li>3. Continuous online monitors are installed for 5 main stacks in phase I and the data being uploaded to APPCB website,</li> <li>4. Interlocking facility to pollution control equipment with process equipment is provided.</li> </ol>
II. <i>Secondary fugitive emissions shall be controlled within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should 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.</i>	<ol style="list-style-type: none"> <li>1. All transfer points are provided with hood connected to bag filters.</li> <li>2. Dust suppression in the Raw material yard and roads is being done by water sprinkling.</li> <li>3. Concreting of the roads is in progress. The main road connecting the packing plant, weigh bridge and main gate and main road are concreted. Internal roads in colony are in progress. Storage sheds are provided for Laterite, Gypsum and Coal.</li> </ol>
III. <i>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 APPCB and data for air emissions shall be submitted to the CPCB and APPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time.</i>	<p>Ambient air quality and Noise levels are being monitored regularly and reports are being submitted to the concerned authorities.</p> <p>The AAQ monitoring equipment will be calibrated from time to time by suppliers.</p>

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IV. <i>Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land.</i>	Limestone from the Crusher is being transported in closed conveyor belt.
V. <i>Fly ash shall be utilized as per the provisions of Fly Ash Notification, 1999, subsequently amended in 2003. Fly ash shall be stored in ash silo and 100% used in the cement manufacturing.</i>	The Captive power plant is yet to be implemented and there is no generation of fly ash. We are producing PPC using fly ash by procuring from nearby Thermal power plants.
VI. <i>The company shall make the efforts to utilize the high calorific hazardous waste in the cement kiln and necessary provisions shall be made accordingly. The company shall keep the record of the waste utilized and shall submit the details to ministry's Regional Office at Bangalore, CPCB and SPCB.</i>	The Kiln burner is installed with provision for utilizing high calorific hazardous waste in the cement kiln.
VII. <i>Total water requirement shall not exceed 2,500 m<sup>3</sup>/day from river Krishna and prior permission from the concerned State Authority shall be obtained. A copy of permission letter shall be submitted to Ministry's Regional Office at Bangalore. 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.</i>	<ol style="list-style-type: none"> <li>1. The water requirement is presently limited to Phase 1 and colony domestic requirement as the power plant is proposed in the second stage. The present requirement is 220 KLD</li> <li>2. Treated waste water from the STP is being used for on land irrigation for the development of green belt.</li> <li>3. No effluent, either treated or untreated is discharged outside the premises.</li> <li>4. The permission for drawing water from Krishna river - yet to get approval from Government of AP.</li> </ol>
VIII. <i>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 Bangalore within 3 months from date of issue of this letter.</i>	<ol style="list-style-type: none"> <li>1. 13 Rain water harvesting structures are established along the storm water drains and roof water from administrative office, quarters are routed to storm water drains</li> <li>2. Rain water collected in the lowest bench of the mine is being used for sprinkling of haulage roads.</li> <li>3. Water storage tanks constructed at ZP high School and Upper Primary School in Tangeda Village and SC Colony in Tangeda Village.</li> <li>4. 2 no. check dams constructed near the village and mine boundary, as suggested by the public representatives of the Tangeda Village.</li> </ol>

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<p><i>IX. 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°.</i></p>	<p>Waste in the form of soil which occurs as a constituent of the admixture with limestone up to about 2 mtr depth from the surface is being progressively used for making a bed 1.5 mtr thick for safety barrier zone to raise green belt. Thus we are not maintaining any separate overburden dump.</p>
<p><i>X. Topsoil, 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.</i></p>	<p>No part of the mine will be ready for reclamation by back filling during plan period. The soil generated is proposed to be progressively used for raising green belt..</p>
<p><i>XI. 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 Bangalore.</i></p>	<p>As there are no perennial water sources running on or through the site, the mine water discharge is limited to the monsoon season only. To keep water from entering the mine a garland drain developed along the mine top bench, to guide the water to the nearest natural surface drain. Any residual clay or limestone particles which are washed down is captured by a sump located at the lowest bench. The sump will be cleaned regularly.</p>
<p><i>XII. 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 overall slope of the dump shall 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 &amp; Forests and its Regional Office, Bangalore on six monthly bases.</i></p>	<p>1. Waste material in the form of soil is anticipated to be generated to the tune of 4.3 lakh M<sup>3</sup> in the plan period and 16.5 lakh M<sup>3</sup> in the conceptual period which will be used for raising green belt. 2. Compliance status will be submitted every 6 months.</p>

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<p><i>XIII. 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.</i></p>	<p>Will be adhered when mine is closed as per mine closure plan Bunds are formed along the borders of the benches. We are maintaining the Bench Height &amp; slope as per norms stipulated in Metalliferous Mines Regulations 1961.</p>
<p><i>XIV. Catch drains and siltation ponds of appropriate size should 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.</i></p>	<p>To keep out water from entering the mine a garland drain developed along the mine top bench which also guides the water to the nearest natural surface drain. Any residual clay or limestone particles which are washed down is captured in a sump located at the lowest bench. The sump will be cleaned regularly.</p>
<p><i>XV. 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.</i></p>	<p>A Sump was maintained with adequate capacity, located at lowest bench of the mine. To keep water from entering the mine a garland drain developed along the mine top bench.</p>
<p><i>XVI. 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 should be based on the rain fall data.</i></p>	<p>No inter burden dumps are being maintained.</p>

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<i>XVII.Regular monitoring of ground water level and quality should 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 Bangalore, Central Ground Water Authority and Central Ground Water Board.</i>	Will be collected and submitted.
<i>XVIII.Blasting operation should 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.</i>	We are practicing controlled blasting techniques with NON EL detonators for controlling the ground vibrations and arrest the fly rock and boulders.
<i>XIX The project proponent shall adopt wet drilling</i>	We have adopted wet drilling process to control the dust emission into atmosphere during drilling at mines.
<i>XX As proposed, green belt should be developed in 33 % in and around the plant as per the CPCB guidelines.</i>	Plantation of green belt is completed in 64 acres and further development is being implemented as per plan.
<i>XXI The company shall take care of water supply of the village Tangeda and submit an action plan in this respect to the Ministry and its Regional Office at Bangalore.</i>	Installed 2000LPH RO Plant in the village .
<i>XXII All the recommendations of the Corporate Responsibility or Environmental Protection (CREP) shall be strictly followed.</i>	Recommendations CREP is implemented. (Separate sheet on compliance of CREP guidelines attached)
<i>XXIII 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.</i>	Tarpaulin cover is provided for all transport vehicles for incoming raw materials and outgoing cement. Fly ash is transported in bulk tankers.



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XXIV 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, Bangalore.	Will be carried out and report will be submitted at the earliest.
XXV 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.	The company furnished financial assurance in the form of a bank guarantee in favour of the Regional Controller of Mines, Indian Bureau of Mines , Hyderabad
XXVI The company shall comply with all the Commitments made during public on 30 <sup>th</sup> April 2008.	<ol style="list-style-type: none"> <li>1. Local employment: Local employment provided to <ol style="list-style-type: none"> <li>i. Technical(Senior) - 34/72</li> <li>ii. Skilled/Unskilled – 31/41</li> <li>iii. Trainees(Technical) - 15/25</li> <li>iv. Trainees(Skilled &amp; Unskilled) – 14/18</li> </ol> </li> <li>2. Rural water supply scheme clearance from Govt is awaited.</li> <li>3. School development: A school in association with DAV society is under operation upto 9<sup>th</sup> class and 10<sup>th</sup> class will be added in the coming academic year</li> <li>4. Provision of plant hospital to villagers also: Hospital established and the same is accessed by the locals.</li> </ol> <p>So far company has spent capital expenditure of Rs 300 lakhs towards CSR activities in addition the capital expenditure, recurring expenditure of Rs 60 lakh is being spent by the company towards, school by way of salaries to the teachers, fee concession to the students and other community welfare measures to the nearby villages.</p>

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**General Conditions:**

i. <i>The project authority shall adhere to the stipulations made by State Pollution Control Board (SPCB) and State Government.</i>	Adhering to the stipulations made by APPCB
ii. <i>No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.</i>	Will be complied
iii. <i>At least four 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.</i>	Established and monitoring is being done by third party. The data is being submitted to APPCB regularly. (Attached recent report).
iv. <i>Industrial waste water shall be properly collected and treated so as to conform to the standard 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.</i>	There is no generation of industrial waste water. STP is installed for domestic sewage and the treated water is being utilized for plantation.
v. <i>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 shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dbA (day time) and 70 dbA (night time).</i>	Noise levels are within the limits and conforming to the stipulated standards.
vi. <i>Proper housekeeping and adequate occupational health programmes shall be taken up. Occupational Health Surveillance programme shall be done on regular basis and records maintained properly for atleast 30-40 years. The programme shall include lung functions and sputum analysis tests once in six months. Sufficient preventive measures shall be adopted to avoid direct exposure to dust etc.</i>	OHS are taken up periodically and records are being maintained.
vii. <i>The company shall undertake co-development measures including community welfare measures in the project area.</i>	Community welfare measures are taken up and the details are presented in XIX of special conditions.
viii. <i>The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP.</i>	Will be complied

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ix. <i>A separate environmental management cell with full fledged laboratory facilities to carry our various management and monitoring functions shall be set up under the control of Senior Executive.</i>	Separate Environment management cell is set up with laboratory facilities having portable AAQ monitoring station, portable CO analyser pitot tube, digital thermometer, digital draft meter under the supervision of Plant head
x. <i>Adequate fund shall be allocated to implement the conditions stipulated by the Ministry of Environment and Forest 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.</i>	Installation, commissioning of all the pollution control equipment of Phase I cement plant is completed, commissioned and in operation.  STP is completed and in operation.
xi. <i>The Regional Officer of this Ministry/CPCB/SPCB shall monitor the stipulated conditions. The project authorities shall extend full co-operation to the officer(s) of the Regional Officer 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.</i>	Being complied and full cooperation is being/will be extended to the authorities. Reports are being submitted.
xii. <i>The project Authorities shall inform the Regional Office as well as the Ministry, the date of commencing the land development work.</i>	Informed the same to RO of the ministry. Vide letter BCL/2008-09/113B DATED 27.09.2008.
xiii. <i>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment &amp; Forests. No change in the calendar plan including excavation quantum of limestone and waste soil be made.</i>	There is no change in the mining technology.
xiv. <i>Measures should be taken for control of noise levels below 85 dBA in work environment. Workers engaged in operations of HEMM etc should be provided with ear plugs.</i>	The noise levels are maintained below 85 dBA. The works exposed to noise levels are being provided with ear muffs.
xv. <i>(Industrial waste water (Workshop) and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.</i>	There is no industrial waste is generated from the plant.



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xvi.	<i>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 program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures if needed.</i>	Personal protective equipment is provided to all the employees and contract workers. OHS surveillance program as per IBM/DGMS and Factories act is being implemented. Training on safety and health aspects is being imparted to workmen.
xvii.	<i>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.</i>	The financial closure for phase 1 is 26.09.2008 and the same was informed to the regional office vide our letter BCL/2008-09/113B dated 27.09.2008. Copy enclosed
xviii.	<i>A copy of clearance letter will be marked to concerned Panchayat/ Local NGO, if any, from whom suggestion/representation, if any, was received while processing the proposal.</i>	Complied, submitted
xix.	<i>State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's office / Tahsildar's Officer for 30 days.</i>	Complied.
xx.	<i>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 under a copy of the clearance letter is available with the state Pollution Control Board and also at website 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.</i>	Complied, submitted