

JULY'13 TO DECEMBER'13

Half yearly Compliance Report on Environmental Stipulations for Expansion of Cement Plant (from 900 TPD-2600 TPD), along with 10 MW Captive Power Plant at Thangskai, Jantia Hills District by M/s Meghalaya Cements Ltd. – Environmental Clearance Letter No. SEIAA/PROJECT-2/2007/18; Dated 25th March 2009.

Sl. No. as per letter dated 25.03.2009 of State Environment Impact Assessment Authority	Action to be taken	Compliance
SPECIFIC CONDITIONS		
(i)	A stack of 100 m height shall be provided with continuous on-line monitoring system in respect of Thermal Power Plant [TPP] The data collected shall be analyzed and submitted regularly to the Meghalaya State Pollution Control Board.	Provision of on-line monitoring
The project has completed and commissioned. (CPP layout is Enclosed) We have ordered on line stack Monitoring equipment installed & stabilized. The Data are sending to MSPCB from May.	(ii)	High efficiency Electrostatic Precipitators [ESPs] of not less than 99.98% efficiency shall be installed in the TPP to limit particulate emission to 50 mg/Nm ³
ESPs being installed are to be certified by a third party for 99.98% efficiency and emission level to be max. 50 mg/Nm ³ .	Complied	(iii)
Such limestone will be fed along with coal as per the process of TPP operation.	Complied. we are using limestone for above purpose. as and when required for the process	Space provision shall be made for Flue Gas
At the project stage Flue Gas De-sulphurisation	Complied specific location identified&	



	De-sulphurisation [FGD] unit of requisite efficiency for removal of SO ₂ when required at a later stage.	provision to be made	displayed.
(v)	Dust extraction and suppression system along with water sprinklers shall be provided for controlling fugitive dust during transportation, in coal storage area and other vulnerable area of the TPP.	Mist type water sprinklers shall be provided.	Complied. Provisions made for water spray
(vi)	Water requirement for the Thermal Power Plant shall be met from the existing water source. No ground water shall be extracted for the power plant at any stage.	O.K.	No ground water is applicable in our case.
(vii)	Closed Cycle Cooling system with induced draft cooling towers shall be provided in the Thermal Power Plant.	To confirm in the project proposal.	Complied and working.
(viii)	Fire protection system shall be made in coal stock yard and other vulnerable areas of the TPP. Fire protection equipment and machinery should be tested periodically and shall always be kept in operational mode. Mock drills shall be conducted regularly.	Suitable water hydrant systems for fire protection shall be provided. ----- Mock drills shall be conducted regularly.	Complied and regular safety training is being provided. The next Mock drill is likely to be held in the month of March'2014



(ix)	The treated effluents shall be re-circulated and reused within the plant area. There shall be no waste water discharge outside the plant boundary.	Arrangements to be made at the project stage.	Complied we have RO plant supplied by ION EXCHANGE LTD. For recycling the water to boiler. Also a ground sump is made for recycle / Treatment.
(x)	Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/State Ground Water Board within six months of receipt of Environmental Clearance.	Rain water harvesting scheme preparation in consultation with Central Ground Water Authority/State Ground Water Board.	We have already a rain water harvesting pit and we are planning to develop the same with consultation with the State Public Health Dept/State Ground water Board. Presently we are using this water harvesting pit for our plant as well as for domestic purposes. We have written a letter to the Soil & Water Conservation department seeking their technical guidance on the matter on dated 8 th February, 2013 but no response is received from their part. A copy of this same letter is attached herewith as (Annexure -1).
(xi)	Permission for drawal of water of the required quantity from the streams in favour of the Cement – Thermal Power Plant complex shall be secured from the competent Authority within 6 (six) months of receipt of Environmental Clearance.	Permission for drawal of water.	Permission for drawing of water has been obtained from Executive Engineer (Irrigation), Jaintia Hills Dist, vide letter no.AID (J) 223/2007-2008, Dated Jowai 24/03/08.
(xii)	Leq of Noise level in the Thermal Power Plant premises shall be limited to 75 dBA and regular maintenance of	Provision in the equipments for reducing noise pollution to be made and in operation protective equipment shall be	Noise levels are under control Schedule maintenance is being carried out as per the Manufacturers' manuals and using



	<p>equipment should be undertaken. For personnel working in high noise areas, personal protection devices like earplugs /ear muffs, etc. should be provided. Workers engaged in noisy areas such as turbine area, air compressors, etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss apart from exercising option of shifting to non noisy/less noisy areas when necessary.</p>	<p>used.</p>	<p>necessary PPE's. (Half yearly report is enclosed)</p>
(xiii)	<p>Acoustic hoods shall be provided in respect of all equipment that have potential to contribute towards noise pollution and additionally technical improvement measure detailed in para 4.3.2 of the EIA/EMP report of the project proponent shall be adopted in the TPP towards noise attenuation.</p>	<p>While finalizing the machinery acoustic hoods shall also be planned.</p>	<p>Complied.</p>
(xiv)	<p>Dry ash collection system shall be provided in the Thermal Power Plant. 100% ash utilization shall be ensured from the very first day of commissioning of the Thermal Power Plant.</p>	<p>Dry ash collection and transportation system to be given in the project.</p>	<p>Complied.</p>



(xv)	The stack emission from various sources shall not exceed 50 mg/Nm ³	The regular monitoring to be done by Environment Department.	Complied. (Six month's report is enclosed)
(xvi)	The project proponent shall get the optimum functioning of the environmental protection equipment certified by a technical institution of repute.	The necessary certification of Pollution Equipment to be done.	We are in dialogue with such institution/Organization for their certification.
(xvii)	Bag House/ Filters shall be provided to control the fugitive emission during loading and unloading of raw materials/intermediate and finished products.	Fugitive emission while loading and unloading of raw materials etc.	Complied.
(xviii)	The project proponent shall store all the raw materials except limestone in covered sheds to control fugitive emission. The coal storage facility should have water sprinkling facility in order to arrest fire hazard, if any.	Suitable sheds if necessary further sheds are to be constructed at the project stage itself.	Complied.



(xix)	The ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the Meghalaya State Pollution Control Board (MSPCB) and additional stations shall be installed, in the downwind direction as well as where maximum Ground level concentrations are anticipated.	The ambient air quality monitoring has to be done and if necessary additional monitoring stations to be purchased.	Complied. (Six month's report is enclosed)
(xx)	Quarterly reports on emission levels, surface and ground water quality shall be submitted to Meghalaya State Pollution Control Board, Chromium (VI) level in nearby surface water bodies flowing in the eastern site of the Plant, and ground water shall be monitored and reported to the MSPCB. Water in the Common Effluent Pit of the TPP shall be monitored monthly for Chromium (VI) toxicity and ensured that its level dose not rise beyond 0.905 mg/t.	<p>Emission levels, surface and water quality shall be submitted to MSPCB</p> <hr/> <p>Quarterly reports on Testing for Chromium (VI) level in nearby surface water bodies monitoring.</p> <hr/> <p>Monthly monitoring of Chromium (VI).in effluent pit. Provision of effluent treatment plant.</p> <hr/>	Complied.



(xxi)	<p>Total water requirement shall not exceed 2000 cum/day [inclusive of the water requirement of the TPP]. The project proponent shall install sewage treatment plant of minimum 120 m³ /day capacity employing suitable and appropriate technology to treat domestic sewage and treated sewage shall be utilized for green belt development. No waste water shall be discharged outside the premises and zero discharge shall be ensured. No surface runoff from the factory premises shall either reach/contaminate Um-lunar River or any other stream flowing near the industrial location.</p>	<p>Total water requirement shall not exceed 2000 cum/day including TPP and zero discharge shall be ensured.</p>	<p>We are regularly intimating the water consumption reports to the Board. (Half yearly report is enclosed)</p>
(xxii)	<p>The project proponent shall make all out effort to use high calorific value hazardous waste in the kiln towards which necessary provision shall be made.</p>	<p>Utilization of high calorific value hazardous waste – refer MePCB letter dated 14.04.2009 on the subject.</p>	<p>Procurement of materials for use of high calorific value hazardous waste is not available around the plant within 50 kms. radius.</p>
(xxiii)	<p>The project proponent shall transport raw materials and industrial products</p>	<p>Transportation of raw materials by covered means.</p>	<p>Complied.</p>



	through covered means.		
(xxiv)	<p>Thirty three percent of the core project area i.e. 20.143 Ha of land shall be developed as green belt by the project proponent as per the guidelines of Central Pollution Control Board to mitigate the effect of fugitive emission, incurring the expenditure as stated by the project proponent. The program ought to be completed within 5 years from the date of issue of prior Environmental Clearance. Suitable species in respect of the same for the stated area shall be approved by the project proponent from the DFO (Territorial) of Jaintia Hills District.</p>	<p>Development of green belt upto 33% of the project area i.e. 20.143 Ha of land shall be developed as green belt.</p>	<p>Green belt development has been started since 2007 and the work is going on as per the guide lines. Inside the plant area we have 12.75 Ha natural green belts which we are maintaining from the very beginning. While, we have planted 2.0 Ha (approx) area till date. In totality we have covered 14.95 Ha.i.e.73% (approx) of the targeted area. We are trying to achieve the target within a year and for that we have already placed our requirement for the suitable species to DFO (T), Jowai. A copy of this letter is attached as (Annexure - II). Further, year wise development details of plantation are enclosed as (Annexure - III).</p>
(xxv)	<p>The project proponent shall provide a Health Care Center with all emergency medicines and ambulance along with regularly serving doctors complete with emergency unit that would function round</p>	<p>Provision of Health Care Centre.</p>	<p>The Health Care Centre is functioning under one qualified doctor with other supporting staff round the clock. Other infrastructures are Developed.</p>



	<p>the clock. Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained in compliance of provisions contained on Chapter III and V of the Factories Act, 1948.</p>		
(xxvi)	<p>The salaries of the Cleaners shall be raised by 30% from the present Rs.2500/- p.m. as assured by the project proponent at p.0.15 of the EIA/EMP report in response to concern raised during the Public Hearing.</p>	<p>The salaries of Cleaners shall be raised.</p>	<p>Annual review is completed increments given to employees and this has reflected in salaries.</p>
(xxvii)	<p>Measures shall be taken to prevent impact of particulate emission/fugitive emission, if any, from the proposed plant on the surrounding private forest areas depicted in their land use study.</p>	<p>To conduct studies for preventing impact of emission on the surrounding private forest areas.</p>	<p>Implemented.</p>
(xxviii)	<p>The project proponent shall take all such measures as are necessary in the matter of utilization of limestone towards ensuring that no unscientific extraction of limestone is</p>	<p>This is regarding purchase of lime stone.</p>	<p>In practice.</p>



	encouraged in the process.		
(xxix)	<p>Meghalaya has been recognized as a cradle for several endemic species and an important constituent of the biodiversity hotspots spread over North East India. Therefore, as a measure of protection of rich biodiversity of the region, the project proponent shall cover an area of not less than 2 ha where would be located green house, mist chamber etc. (within the green belt area already stipulated above), locate conservation plots in respect of at least two of the following species of endangered and endemic plants reported to have been occurring within the region:</p> <p>i) <i>Pteracanthus griffithianus</i>, Acanthaceae</p> <p>ii) <i>Nepenthes khasiana</i>, Nepenthaceae</p> <p>iii) <i>Argostemma khasianum</i>, Rubiaceae</p> <p>iv) <i>Fimbristylis nigrobrunnea</i>, Cyperaceae</p> <p>v) <i>Trivalvaria kanjilali</i>,</p>	<p>Protection of biodiversity of the region and provision of green house etc. a scheme with the help of Botanical Survey of India to be made and activity to be shown within one year.</p>	<p>We have submitted a letter to DFO (T), Jowai for providing us the requisite species for the purpose and also request him to guide us about the matter. A copy of the same is attached as (Annexure –II).</p>



	<p>Annonaceae vi) <i>Begonia rubrovenia</i>, Begoniaceae vii) <i>Ceologyne ovalis</i>, Orchidaceae</p> <p>A scheme /conceptual plan of raising such threatened species shall be prepared in consultation with a reputed institution such as Botanical Survey of India complete with cost and activity schedule within one year from date of issue of prior Environmental Clearance.</p>		
(xxx)	<p>The project proponent shall sponsor research and development for conservation of threatened category of species occurring locally such <i>Hedychium dekianum</i>, [Zingiberaceae], <i>Cymbidium eburneum</i> (Orchidaceae), or <i>Dendrobium denonianum</i> (Orchidaceae) which would be carried out by an appropriate research or academic institution located in Meghalaya within a year of issue of prior</p>	<p>Research and Development project for conservation of threatened category of species - with the help of Research or Academic Institution of Meghalaya to be done.</p>	<p>We have already written to award the project to the Head of the Dept. Environmental Sciences, NEHU, Shillong on dated 11th February, 2013 but no positive response has yet been received regarding the matter. A copy of this letter as attached as (Annexure-IV). Now we are in contact with the other Departments of NEHU as well as other universities of North East regarding the matter.</p>



	Environmental Clearance. The research project shall be instituted at an expenditure of a minimum of Rs.5 lakh per year spread over at least 3 years.		
(xxxii)	A Conservation Plan for conservation of wild fauna in consultation with a reputed institution such as Wildlife Institute of India, Dehradun shall be prepared and implemented. Such conservation plan drawn in respect of wild life shall be completed within a maximum of 1 year from the date of issue of prior Environmental Clearance and implemented thereafter by the project proponent.	Conservation of wild fauna – the plan to be made with the help of Wildlife Institute of India, Dehradun and submit.	Action has been taken and we are corresponding with Wildlife Institute of India, Dehradun for the same. However It is stated that We have no endangered wildlife animals in and around of the plant area as per the departmental Studies.
(xxxiii)	A sum of Rs.2109.52 lakh shall be spent towards capital expenditure as stated by the project proponent towards environment protection and a further sum of Rs.501.60 lakh as recurring cost annually shall be spent by the project proponent towards environmental protection.	Capital expenditure and revenue expenditure of the project and environment.	Complied Expenditure details are enclosed (Annexure-3).



(xxxiii)	<p>A sum of Rs.50 lakh shall be utilized annually by the project proponent till the project subsists towards socio-economic/eco-development activities in the area part of which shall be spent towards distribution of free medicines, malaria eradication program etc. in the nearby villages. A portion of the sum (5%) shall be set apart annually towards creation of employees' welfare fund. Details of expenditure incurred under this Para shall form part of the compliance report to be submitted to the SEIAA/SEAC. Further, a comprehensive long term eco-development plan shall be prepared by the project proponent within six months of receipt of prior Environment Clearance.</p>	<p>Socio-Economic development. An eco-development plan to be prepared and submitted.</p>	<p>Implemented an expenditure details are enclosed</p>
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A. GENERAL CONDITIONS

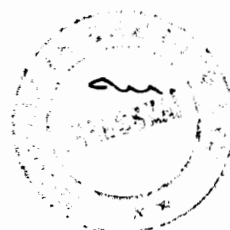
In respect of the Cement Plant – Thermal Power Plant project the following general conditions shall be adhered to by the project proponent:



(i)	The project proponent shall strictly adhere to the stipulations of the MSPCB/State Government or any other statutory body as framed/modified from time to time.	Following the stipulation of MSPCB.	Complied.
(ii)	At no point of time, either the clinker production or cement production of either PPC or OPC type shall exceed the limit of 2600 tons per day.	Limits of production capacity.	Complied.
(iii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment & Forests or their nominated authority as the case may be. In case of deviation or alteration in the project proposal from those submitted to the Committee for clearance, a fresh reference shall be made to the SEAC through SEIAA to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	No further expansion or modification without clearance.	Complied.



	<ul style="list-style-type: none"> • Reuse of by-products from the process as raw materials or as raw material substitutes in other process. • Use of closed pneumatic system for transport of fine material. • All venting systems shall be connected with dust or particulate arresting equipments. • Dust/particulate matter collected in pollution control equipments shall be reused. 		
(vii)	<p>Fugitive emissions in the work zone environment, product and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Boards/Central pollution Control Board.</p>	<p>Monitoring fugitive emissions.</p> <hr/>	<p>Complied.</p> <hr/>



(iv)	<p>The gaseous emissions (SO₂, NO_x) and particulate matter levels from various process units shall conform to the standards prescribed by the concerned authorities from to time. At no point of time, the emissions shall exceed the prescribed limits. Interlocking system of equipment shall be chosen such that in the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.</p>	<p>Interlocking system of machines to control SO₂, NO_x levels in case of failure.</p>	<p>Complied.</p>
(v)	<p>The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 as amended in August, 2003 with regard to fly ash utilization.</p>	<p>Adhering to the provision in the fly ash notification.</p>	<p>Complied.</p>
(vi)	<p>The industry shall undertake the following waste minimization measures:</p>	<p>Waste minimization measures.</p>	<p>It is an ongoing process and has been implemented.</p>



(viii)	Dust/particulate matter collected in pollution control equipments shall be reused. Spares would be maintained in respect of all pollution control equipment. Maintenance and optimum functioning of the pollution control equipment shall be ensured by the project proponent.	Use of dust collected in pollution control equipments.	Complied.
(ix)	The project proponent shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, as amended from time to time. Authorization from the MSPCB shall be obtained for collection, treatment, storage and disposal of hazardous wastes.	Authorization for Hazardous materials.	Authorization letter No. MPCB/TB-(HSM)/ATH-21-2007/2010-2011; dated 15 th December 2010 obtained from MSPCB. Valid up to Dec 2015.
(x)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Environmental	Formation of Environmental Management Cell with laboratory and Chromium testing kit.	Complied and dedicated environmental Management Cell functioning.



	Quality Monitoring functions. A state of the art Chromium testing kit shall be maintained in the laboratory.		
(xi)	All pollution control equipment in STP of the type specified by the project proponent shall be duly installed and manned full time by trained personnel appointed for the purpose.	Sewage Treatment Plant.	STP project has been completed and now, the commissioning work is likely to complete very shortly.
(xii)	A six monthly compliance status report shall be submitted to SEIAA/SEAC and Regional Office, Ministry of Environment & Forests, Govt. of India, Shillong apart from posting the same on the website of the Company.	Six monthly report to SEIAA/SEAC and posting in website.	Complied.
(xiii)	Implementation of the project vis-à-vis environmental action plans shall be monitored by the Regional Office, Ministry of Environment & Forests duly assisted by the SPCB. The Regulatory Authority may revoke or suspend the clearance on the		Concerned Authorities particularly MSPCB regularly visited the project area as per their requirements and we have been submitting all the reports accordingly from the very beginning.



<p>recommendation of the SEAC, if implementation of any of the above conditions is not satisfactory.</p> <p>The Regulatory Authority may on the recommendation of SEAC reserve the right to stipulate additional conditions, if found necessary. The company in a time bound manner shall implement these conditions too.</p> <p>The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management & Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.</p>	<p>Meghalaya State concerned Offices</p>	
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