

## Six Monthly Compliance Status of Environment Clearance for Clinkerization Unit (5300 TPD Clinker) at Village Lumshnong, Meghalaya – January to June 2014

**Ref.: Environmental Clearance no. J-11011/754/2007-IA II (I) Dtd. 28.10.09.**

Dear Sir,

Kindly find below the point wise Six Monthly compliance status of the Specific and General Conditions stipulated in the Environmental Clearance issued in respect of Star Cement Meghalaya Ltd's project are as under:

| SL No.                        | Conditions   | Compliance Status  |
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| <b>A. SPECIFIC CONDITIONS</b> |  |  |
| i)                            | Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After Expansion, limit of SPM shall be controlled within 50 mg/Nm <sup>3</sup> by installing adequate air pollution control system. Electrostatic precipitators (ESPs) shall be provided to clinker cooler and captive power plant (CPP). Bag house / filters shall be provided to raw mill / kiln, cement mill and coal mill. Adequate chimney height as per CPCB guidelines shall be provided to AFBC boiler to control emission. Interlocking facility shall be provided in pollution control equipment so that in the event of pollution control equipment not working, the respective unit is shut down automatically. | <ul style="list-style-type: none"> <li>• Continuous stack monitor (opacity meters) were purchased from M/s. Forbes Marshall Codel Pvt. Ltd., Pune for RABH, Cooler ESP &amp; Coal Mill stacks and the company has already installed the same &amp; the same is functioning now.</li> <li>• Star Cement Meghalaya Ltd. (SCML) has installed high efficiency Electrostatic Precipitators (ESPs) for cooler and other pollution control equipments were already installed in the plant to reduce the stack emission from various source so that it does not exceed 50 mg/Nm<sup>3</sup>.</li> <li>• Bag house/Bag filters were already installed in raw mill/kiln, Coal mill, Clinker Stock Pile (CSP) and every transfer points.</li> <li>• The entire chimneys have been installed with height as per CPCB guidelines.</li> <li>• Latest State –of- the- art technology Pollution Control Equipment has been installed at all sections to control emission levels to the prescribed limits.</li> <li>• Interlocking facility has been provided, so that in the event of failure of any pollution control equipment adopted by the unit, the unit shall be immediately put out of operation and the respective unit is shut down automatically.</li> </ul> |
| ii)                           | An action plan shall be prepared and submitted to the ministry's regional office at Shillong for the control of SO <sub>2</sub> emissions from the captive power plant.  | <p>(a) Currently only clinker production plant with a capacity of 1.75 MTPA has been commissioned.</p> <p>(b) Captive Power Plant will be</p>  |

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|      |  | established later. Currently power will be drawn from Meghalaya Power Ltd./MeSEB.  |
| iii) | The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points. Bag filters shall be installed at all material transfer points, material conveying points, cement silo, limestone and corrective crushing areas and packing area to control fugitive emissions. Dust suppression system with water sprinklers shall be provided in raw material unloading / storage areas to control fugitive dust emissions. Roads shall be asphalted. The material shall be transported in covered chutes or trucks. On-line dust monitor shall be provided. | <ul style="list-style-type: none"> <li>• SCML has provided dust extraction and suppression systems along with water sprinklers for controlling fugitive dust emission during transportation, in coal storage area and other vulnerable areas of the Plant and regular inspection is done.</li> <li>• Bag Filters have been provided at all the material transfer points, material conveying points, clinker silo, limestone crushing and additive crushing area and packing area to control the fugitive emission during loading and unloading of raw materials / intermediate and finished products.</li> <li>• The all approach roads within the factory premises and colony areas are made cemented &amp; bitumen and maintained properly to avoid dust deposition.</li> <li>• SCML ensures that transportation of raw materials and industrial products are done through covered means.</li> <li>• Procurement of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) is under process.</li> </ul> |
| iv)  | 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 Shillong, Meghalaya Pollution Control Board (MPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO <sub>2</sub> and NO <sub>x</sub> shall also be displayed prominently outside the premises at the appropriate place for the information of general public.  | <ul style="list-style-type: none"> <li>• Data on ambient air quality, stack emissions and fugitive emissions is uploaded on the Company's website and also regularly submitted on-line to the Ministry's Regional Office at Shillong, MSPCB &amp; CPCB. The hard copy of monitoring reports is submitted in every six months.</li> <li>• Latest monitoring data are displayed at the main entrance to the plant for the information of general public.</li> </ul>  |
| v)   | Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.   | Secondary fugitive emissions are controlled and monitored regularly.   |
| 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. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored.  | <ul style="list-style-type: none"> <li>• SCML ensures the transportation of raw materials &amp; clinker is done through covered means.</li> <li>• For fly ash transportation: Currently only clinker production plant with a capacity of 1.75 MTPA has been commissioned.</li> <li>• Vehicular emission is under control</li> </ul>  |

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|       |   | <p>and regularly monitored by authorized agency and also our automobiles department.</p> <ul style="list-style-type: none"> <li>All vehicles used in transportation are loaded as per the capacity.</li> </ul>   |
| vii)  | <p>Total water requirement for cement plant from Umtyrgnai, Ummutha streams and bore wells shall not exceed 4,900 m<sup>3</sup> / day as per the permission accorded by the Department of Irrigation, Government of Meghalaya vide letter no. AID (J) 223 / 2008-09 dtd. 16<sup>th</sup> June, 2009. No ground water shall be used. Rejects of water treatment plant shall be neutralized and boiler blow down shall be stored in common drain pit to cool naturally. Industrial effluent from captive power plant (CPP) shall be treated in effluent treatment plant (ETP). All the treated waste water shall be recycled and reused in the process and / or cooling, dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises into any stream / river and 'Zero' discharge shall be adopted. Domestic treated water shall be treated in sewage treatment plant (STP) and used for the green belt development.</p> | <ul style="list-style-type: none"> <li>Total water consumption does not exceed 4,900 m<sup>3</sup> / day. Monthly water consumption report is being to the authority on regular basis. The industrial liquid effluent is treated in water treatment plant and re-circulated. Industrial and town ship residential sewage is treated in sewage treatment plant and treated water is utilized for dust suppression &amp; irrigation of green belt. No water is discharged outside the plant premises and zero discharge is maintained.</li> <li>Currently only clinker production plant with a capacity of 1.75 MTPA has been commissioned and Captive Power Plant will be established later.</li> </ul> |
| viii) | <p>Effluent treatment plant (ETP) shall be provided for workshop. Sewage treatment plant (STP) shall be installed for the treatment of sewage from the colony and treated domestic effluent shall be used for green belt development within the plant premises. 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 land filled at identified sites.</p>   | <p>The company has already installed Sewage Treatment Plant (STP) and after treating this domestic waste, the water is used in green belt development and for dust suppression.</p>  |
| ix)   | <p>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. Fly ash from CPP shall be collected through dense phase fly ash handling system to store fly ash in fly ash silo. Bottom ash shall be pneumatically stored in bed ash storage silos. Municipal Solid waste from plant and colony shall be segregated and separated as combustible and non-combustible wastes. Combustible wastes along with spent oil shall be used as fuel in the kiln. Non-combustible wastes shall be land filled for composting and non-compostable waste used batteries shall be sold to authorized recyclers / re-processors only. STP sludge shall be used as manure for greenbelt development.</p>   | <ul style="list-style-type: none"> <li>Currently only clinker production plant with a capacity of 1.75 MTPA has been commissioned.</li> <li>All the bag filter dust, raw meal dust and coal dust is being recycled and reused in the process and used for clinker manufacturing.</li> <li>STP sludge is being used as manure in greenbelt development.</li> <li>Municipal solid waste segregation is under process and currently the company has no spent oil and the company has already applied hazardous waste authorization to MSPCB.</li> <li>Currently the company has no used batteries. When available, then the company will sale to authorized recyclers.</li> </ul>                         |
| x)    | <p>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).</p>   | <p>Currently only clinker production plant with a capacity of 1.75 MTPA has been commissioned.</p>   |
| xi)   | <p>Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.</p>   | <p>Efforts shall be made by SCML to use low-grade limestone and solid waste in the clinker manufacturing.</p>  |

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| xii)  | An effort shall be made to use high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.   | Provision shall be made to use high calorific hazardous waste in the kiln. It is under process.  |
| xiii) | As proposed, green belt shall be developed in at least 25 ha (33%) out of total 75 ha. in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.   | <ul style="list-style-type: none"> <li>• Thirty three percent of the 75 Ha core project area is being developed as green belt by SCML as per the guidelines of Central Pollution Control Board.</li> <li>• Development of GREEN BELTS in &amp; around the plant &amp; Colony.</li> </ul>   |
| xiv)  | Recommendation and permission of the State Forest Department regarding impact of proposed plant on surrounding Narpuh Reserve Forest 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. | A letter regarding Permission and recommendation for conservation of flora & fauna was received from office of the Principal Chief Conservator of Forests & HOEF, Meghalaya, vide letter no. MFG. 16/50/CMCL/Vol.I/11, 031, dated: Shillong, the 28 <sup>th</sup> of November, 2013. The implementation work is under process.   |
| xv)   | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement Plants shall be implemented.   | <ul style="list-style-type: none"> <li>• Noted and respective pollution control equipments have been installed to mitigate and control pollution in the industry.</li> <li>• The company has always done monitoring nearby villages and colony to see scenario of environment and found below the permissible limits as given by competent authority.</li> <li>• The automatic packing of clinker through bulk loading system (make: EEL). The suction of bag filters is provided in packing section to avoid dust emission during clinker loading.</li> <li>• Awareness promotion through various environmental training, environmental display board, competitions, presentations etc. on world environment day, energy conservation day etc.</li> <li>• SCML has already adopting the normal precautionary measures to curb malaria in its Health Care Centre, as exists in the corresponding set up of the State Programme through the Primary Health Centres, Community Health Centres or Sub-Divisional Health Care, within the factory premises with all essential medicines, etc. as per the requirement under relevant Acts / Rules.</li> </ul> |

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| xvi)                        | 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.  | SCML has provided housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, toilets, safe drinking water, medical health care, crèche etc.   |
| xvii)                       | All the commitments made to the public during the public hearing / public consultation meeting held on 8 <sup>th</sup> May, 2009 shall be satisfactorily implemented.   | All the commitments made to the public during the public hearing / public consultation meeting held on 8 <sup>th</sup> May, 2009 are being satisfactorily implemented.  |
| <b>B. GENERAL CONDITION</b> |   |   |
| i)                          | The project authority must adhere to the stipulations made by Meghalaya State Pollution Control Board (MPCB) and State Government.  | SCML adheres strictly to the stipulations of the Meghalaya State Pollution Control Board (MPCB) / State Government and other statutory bodies as framed/modified from time to time.   |
| ii)                         | No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.   | Noted & the stipulation will be complied with in case of any proposal for change in status.   |
| iii)                        | At least four ambient air quality monitoring stations shall be established in the downward 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 Meghalaya State Pollution Control Board. Data on ambient air quality and stack emissions shall regularly submitted to this Ministry including its Regional Office at Shillong and Meghalaya Pollution Control Board once in six months. | The ambient air quality monitoring stations have been set up as per statutory requirement in consultation with the Meghalaya State Pollution Control Board (MSPCB), in the downwind direction as well as where maximum ground level concentrations are anticipated in consultation with MSPCB. The regular monitoring is done and monitoring report is sent to MSPCB on monthly basis and six monthly monitoring data will be sent to MoEF & MSPCB. |
| iv)                         | Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dtd. 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.   | Is being treated, recycled and utilized in greenbelt development.   |
| 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).   | <ul style="list-style-type: none"> <li>• The industry has made enclosures to all possible noise creating machineries to comply with the permissible standards.</li> <li>• Ear Plugs are provided to the employees working near these machines.</li> <li>• Reports of monitoring of noise are submitted to the concerned department at prescribed interval.</li> </ul>   |
| vi)                         | Proper house keeping and adequate occupational health programmes must be taken up. Occupational Health Surveillance programme shall be done on a regular basis and records maintained. The programme must include lung function and sputum analysis test once in six months.  | Proper housekeeping is maintained and adequate occupational health programmes are taken up. Occupational Health Surveillance programme are being done on a regular basis and record is being maintained.  |

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| vii)  | The company shall harvest the rainwater from the roof tops and storm water drains to recharge the ground water.   | The rainwater falling in the open areas and roof tops of plant & township buildings is regulated through drains to raw water reservoirs.   |
| viii) | The company shall undertake eco-development measures including community welfare measures in the project area.  | SCML has been incurred towards eco-development activities in the area like arranging free medical camps & distribution of free medicines for the benefit of surrounding villagers and on several Corporate Social Responsibility (CSR) activities.   |
| ix)   | The project shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP.   | Noted & is complied  |
| x)    | 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.  | SCML has been set up a separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions under the control of Senior Executive.  |
| xi)   | As proposed, Rs.25.95 Crores and Rs. 1.50 Crores shall be earmarked towards total capital cost and recurring cost / annum for environmental pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government and submit implementation schedule for all the conditions stipulated herein to the Regional Office of this Ministry at Shillong / Central Pollution Control Board / Meghalaya State Pollution Control Board. The funds so provided shall not be diverted for any other purposes.   | The earmarked amounts have been spent towards procurement of Pollution Control equipments & erection and towards recurring maintenance cost of EPE & cost on third party monitoring environmental parameters, greenbelt development, awareness & training programs as per CPCB guidelines etc.   |
| xii)  | A copy of clearance letter shall be sent by the proponent to concerned panchyat, Zila parisad / 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 website of the company by the proponent.   | Complied with.   |
| xiii) | 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 at Shillong, the respective Zonal Office of CPCB and the Meghalaya SPCB. The criteria pollutant levels 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 projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | <ul style="list-style-type: none"> <li>• The status of compliance of the stipulated environment clearance conditions, including results of environmental monitored data is uploaded in company's website.</li> <li>• Monitored data is submitted periodically to the concerned departments and monitoring data is displayed (hoarding and also LED) at the main entrance to the plant for public.</li> </ul> |
| xiv)  | 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 Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The regional office of the ministry at Shillong / CPCB / Meghalaya SPCB shall monitor the stipulated conditions.  | The stipulation is complied.   |

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| xv)   | The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by SCML 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 environment conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.   | Noted & shall be complied  |
| xvi)  | 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 Meghalaya SPCB and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are widely circulated in the region of which one is in the vernacular language of the locality concerned and copy of the same should be forwarded to the regional office at shillong. | SCML has informed the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Meghalaya SPCB and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This has been advertised within seven days from the date of issue of the clearance letter, in two local newspapers that are widely circulated in the region of which one is in the vernacular language of the locality concerned. |
| xvii) | The project authority shall inform the regional office at shillong as well as the ministry, the date of Financial Closure and final approval of the project by the concerned authority and the date of commencing the land development work.  | Date of Financial Closure for the project and regarding commencement of development work has been informed vide our letter no. JD/MoEF/2009-10 dated 06.01.10.   |