



MEGHALAYA CEMENTS LIMITED

CIN- U26942ML2003PLC007125



Ref: MCL/ENV/MoEF&CC/Compliance LS-I/2020-21/27

Date:-20/11/2020

To,

The Addl. Director General (Central),
Ministry of Environment Forest & Climate Change,
North Eastern Regional Office, Shillong,
Meghalaya.



Sub: - Submission of half yearly compliance report for limestone mines for an area of 31.05 Ha for the period of April '2020 to September'2020.

Dear Sir,

We are hereby furnishing the half yearly compliance report (hard copy and soft copy) for the period from April '2020 to September'2020 on Environmental Stipulations for limestone mining for an area of 31.05 Ha, at South Khliehji at Village- Thangskai, East Jaintia Hills District, Meghalaya, vide your Environment Clearance letter no SEIAA/ (PR-19/2012) PT/PR-05/2015/444 dated: 9th Jan 2017.

This is for your kind information and perusal. You are requested to kindly acknowledge the receipt of the same.

Thanking You,

Yours Faithfully,

For MEGHALAYA CEMENTS LIMITED

R.K. Pareek
(President)



Encl: As stated above.

Copy to:

- 1) The Member Secretary, Meghalaya State Pollution Control Board, Shillong.
- 2) The Member Secretary, State Environment Impact Assessment Authority, Shillong.



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HELPLINE NO : 18001233666

Half yearly Compliance Report (for the period April'20 to September'20) on Environmental Stipulations for limestone mining for an area of 31.05 Ha, at South Khliehjeri, Thangskai Village, Khliehriat, East Jaintia Hills by M/s – Meghalaya Cements Ltd.,(MCL) – Environmental Clearance Letter No. SEIAA/ (PR-19/2012) PT/PR-05/2015/444; Dated 9th Jan 2017.

Sl. No. as per letter dated 09.01.2017 of State Environment Impact Assessment Authority.	Compliance Status
A. SPECIFIC CONDITIONS	
(i) The Project proponent (PP) shall obtain the requisite Wildlife Clearance from the National Board for Wildlife before operationising the project.	Complied With The project area does not fall within the area of Eco Sensitive zone and the Project Proponent (PP) has obtained the requisite Wildlife Clearance from Divisional Forest Officer (Wildlife), Jaintia Hills, Wildlife Division, Jowai, (through office of APCC govt. of Meghalaya, Letter No. FWC/G/278/pt/928, Dated 6 th June 2018) has already been submitted earlier.
(ii) Mining activities shall be restricted to the 31.05Ha. Which is identified as the 'non – forest area' and shall not be extended to any other area.	Agreed to Comply. Mining activities is restricted to the 31.05Ha, which is identified as the 'non – forest area' and will not be extended to any other area at any condition.
(iii) The revised mining plan is valid for 5 years only. After its expiry, The PP shall submit another mining plan duly approved by the authorized agency.	Agreed to Comply. The PP will submit review of mining plan duly approved by the authorized agency before the validity period of 5 years.
(iv) The PP shall obtain Consent to Operate(CTO) from the State Pollution Control Board, Meghalaya, within 2 (two) months from the date of issue of the EC and copy of the same shall be forwarded to the SEIAA, Meghalaya and the MoEF&CC, Regional Office, Shillong. The PP shall effectively implement all the conditions stipulated therein in the CTO.	Complied with. The PP has obtained Consent to Operate (CTO) from the State Pollution Control Board, Meghalaya, vide CTO No. MPCB/CON-191-2016/2020-2021/3, dated 21 st May, 2020.
(v) The Project Proponent should ensure that the mining activities shall not disturb the caves existing nearby the mining lease area.	No caves have been observed nearby the mining lease area.
(vi) The PP shall ensure that a Biodiversity Conservation Plan with focus on conservation of the schedule –I species in the area, is prepared in consultation with the Forests and Environment Department, Meghalaya. The PP shall ensure adequate budgetary provisions and indicate a timeline for the implementation of the plan. The plan shall be submitted to the SEIAA and the NE regional office of the MoEF & CC, Shillong within a period of 1 year from the date of issue of EC.	Complied with. The company has started the work in co-ordination with Environment Department of North Eastern Hill University (NEHU), Shillong. The NEHU, officials have already appointed a Project fellow for the Project and he is now working at our site on Biodiversity Conservation Plan with focus on conservation of the schedule – I species in the area. The green house has already been developed and conservation of three flora species namely: <i>Fimbristylis nigrobrunnea</i> , <i>Cyperaceae</i> , <i>Begonia</i>



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		<i>rubrovenia, Begoniaceae and Ceologyne ovalis, Orchidaceae</i> has been initiated. The time line and budgetary provisions were described in the work order given to NEHU. Project report has been attached as - (Annex -i)
(vii)	The Action Plan as spelt out in the EIA Report and on the issues raised during the Public Hearing dated 17/12/2014 shall be implemented by the PP with adequate budgetary provisions. The PP shall complete all the tasks within 1 (one) year and submit a Report to the SEIAA, Meghalaya, and the NE Regional Office, MoEF&CC.	Agreed to Comply. The PP has undertaken and completed all the tasks related to the issues raised during the Public Hearing accordingly and submit the report to the SEIAA, Meghalaya, and the NE Regional Office, MoEF&CC. (Annex -ii)
(viii)	Proponent shall be appoints an Occupational Health Specialist for the medical examination of the workers engaged in the project. Occupational Health check-ups shall be undertaken once in six months for workers and necessary remedial / preventive measures shall be taken. The Recommendations of National Institute for ensuring a good occupational environment for mine workers shall be implemented. The prevention measures for burns, material, and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.	Complied with. Proponent has appointed an Occupational Health Specialist for the medical examination of the workers engaged in the project. Occupational Health check-ups schedule is being followed as per the guideline and necessary remedial/ preventive measures are taken. The Recommendations of National Institute for ensuring a good occupational environment for mine workers are implemented. All other paramedical safeguards are already provided to the workers for mining activities. (Annex -iii)
(ix)	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment, Forest and Climate Change and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out; The Report on six monthly basis on changes in Groundwater level and quality shall be submitted to the SEIAA, Meghalaya and the Regional Office of the Ministry.	Agreed to Comply. The mining operations are strictly restricted to above ground water table, till now no ground water is observed during mining operation. Necessary approval from central ground water authority (CGWA) will be obtained if work below the ground water table. No ground water is being used by project proponent for mining and other activities. PP has approached to CGWA Guwahati for conducting hydro-geological study in mines area. Letter has already been submitted.
(x)	The Pollution due to transportation shall be effectively controlled. Vehicles with Meghalaya Pollution Control Board pollution clearance certificate only shall be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Complied with. Pollution due to transportation is being effectively controlled by proper maintenance of haul roads. PUC certified vehicles are being used by PP. The mineral transportation is carried out through covered trucks only and the vehicles carrying the mineral not allowed being overloaded. (Annex -iv)
(xi)	The PP shall put in place proper rainwater harvesting measures at the site and shall also undertake conservation measures to augment groundwater resources in the area in consultation with the Central Ground water Board.	Complied with. Rainwater recharge measures are already being practiced at the site and will also undertake conservation measures to augment groundwater resources in the area.



(xii)	The Project Proponent shall adopt Best mining Practices for the giving mining conditions. In the mining area adequate number of check dams, retaining walls / structures, garland drains and settling ponds should be provided to arrest the wash-off with rain water in catchment area.	Complied with. Best mining practices are being adopted by the Project Proponent for the giving mining conditions. In the mining area adequate number of check dams, retaining walls / structures, garland drains and settling ponds are provided to arrest the wash-off with rain water in catchment area.
(xiii)	Use of effective sprinkler system to suppress fugitive dust on hauls roads and other transport roads shall be ensured, and cleaning of transport vehicles shall not be done outside the project area. Main haulage roads and other roads should be regularly wetted using water tankers fitted with sprinklers. Crusher and material transfer points should invariable be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust.	Being compiled with Mitigation measures to control dust emission including provision of water sprinkling, bag filters, are in place on crushing operations done, belt-conveyors are covered to avoid air borne dust.
(xiv)	The project Proponent shall ensure that no natural water course and / or water resources shall be obstructed due to any mining operations. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of water scarcity in the area, the Project Proponent shall not use local water for the project and also shall assist in arranging water o the villagers for their use.	Agreed to comply. The project Proponent ensures that no natural water course and / or water resources will be obstructed due to any mining operations. In case of water scarcity in the area, the Project Proponent will not use local water for the project also will arrange water to the villagers for their use.
(xv)	The PP shall ensure that the lights and sounds at night at the project site do not disturb the villages and the also animals. The PP shall must ensure that the biological clock of the village(r)s is not disturbed; by orienting the floodlights / masks away from the villagers and keeping the noise levels well within the prescribed limits for day light / night hours.	Being compiled with The PP is operating the mine in daylight hours only and maintaining the noise levels within the prescribed limits.
(xvi)	The PP shall not transport the minerals by road through the village, without their consent. A 'bypass' road shall preferable be constructed for the purpose of transportation of the minerals so that the impact of sounds, dust and accidents could be mitigated. The PP shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the project.	Agreed to comply. Mineral is being transported by our own haul road without using any public/village road.
(xvii)	Necessary permission as per Acts & Rules shall be obtained from the Competent Authorities for Storage and use of explosives and detonators. The instructions and Rules specified therein shall be strictly adhering to.	Complied with. Necessary permission as per Acts & Rules has already been obtained from the Competent Authorities for Storage and use of explosives and detonators. (Letter No A/EC/MG/P3/5(271) The instructions and Rules specified therein is being



		strictly adhering to. (Annex –v)
(xviii)	As per the Companies Act, 2013 and the CSR Rules, 2% of average net profit of last three years shall be made available by the PP for the socio economic development of the neighborhood habitats. This shall be properly planned by the PP with the help of expert institutes and implemented through registered Agency as per the CSR Rules. Compliance report shall be submitted to the SEIAA, Meghalaya, the NE Regional Office of the MoEF & CC, and Shillong on a six monthly basis.	Agreed to comply. 2% of average net profit of last three years is being made available by the PP for the socio economic development of the neighborhood habitats. Compliance report will be submitted to the SEIAA, Meghalaya, the NE Regional Office of the MoEF & CC, and Shillong on a six monthly basis. Meghalaya Cements Limited has already engaged socio economic development of the neighborhood habitant. (Annex –vi)
(xix)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval, with a copy to Mining & Geology Department, Meghalaya and the SEIAA, Meghalaya.	Agreed to comply. Final Mine Closure Plan with Corpus Fund as approved by IBM shall be submitted to MoEF& CC 5 years in advance of final mine closure for approval.

B. GENERAL CONDITIONS

(i)	No change in mining technology and scope of working shall be made without prior approval of the SEIAA, Meghalaya. No deviation shall be made in the calendar plan including excavation, quantum of mineral and waste.	Agreed to comply. Mining is being done as per mining plan approved by Indian Bureau of Mines. There will be no change in technology and scope of work without prior approval of MoEF & CC.
(i)-a	The Project Proponent shall not violate applicable provisions of any Acts, Rules Orders of the Government and judicial orders issued by the Hon'ble Supreme Court/High Courts/NGT, applicable to the project.	Agreed to comply. The Project Proponent is implementing all applicable provisions of any Acts, Rules Orders of the Government and judicial orders issued by the Hon'ble Supreme Court/High Courts/NGT, applicable to the project.
(ii)	Mining shall be carried out as per the provisions outlined in mining plan approved by Indian Bureau of mines (IBM) as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).	Agreed to comply. Mining is carried out as per the provisions outlined in mining plan approved by Indian Bureau of mines (IBM) as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).
(iii)	Sufficient number of Gullies / drainage channels shall be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the NE Regional Office, MoEF & CC, Shillong and Meghalaya State Pollution Control Board (MSPCB) on six monthly basis.	Sufficient numbers of Gullies / drainage channels are provided for better management of water. Regular Monitoring of pH is being done and reports are submitted to the NE Regional Office, MoEF & CC, Shillong and Meghalaya State Pollution Control Board (MSPCB) on six monthly basis. (Annex –vii)



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(iv)	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient air parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried and record should be maintained.	Complied with. Water sprinkling is provided through water sprinkler on haul roads, loading /unloading points and transfer points and records are maintained and submitted to the State Pollution Control Board. (Annex –viii)
(v)	The limestone shall be preferably transported by covered conveyor belts to the cement plants which shall be set up by the PP. The vehicles carrying the mineral shall not be overloaded. Vehicular emissions shall be kept under control and regular monitored.	Being complied with All the HEMM (Heavy Earth Moving Machinery) are being serviced as per periodical as well as routine maintenance. The results are remained well within the prescribed limit. Smoke density emission testing analyzed by MSPCB for each HEMM and has been included in the compliance report.
(vi)	The top soil, if any, shall temporarily be stored at earmarked site (s) only and shall be used for land reclamation and plantation at the earliest. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site (s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45°. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. During closure of the time the over circumstances the PP shall bring top soil from other areas to fill the pit. In the partially filled pit, the maintenance of terraces should be strictly followed to allow soil to stabilize on the terraces. It is preferable that the orchard is raised by the PP on the reclaimed. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Status shall be reflected in the six monthly compliance reports.	Complied with. Top soil is being stored at earmarked site as per the mining plan approved by the Indian Bureau of Mines and is utilizing in greenbelt development. The soil and over burden (OB) generated during the mining operation is being stacked at designated dump site as per the approved mining plan. The height, width and angle of repose of dumps are maintaining as per the condition stipulated in the environmental clearance. OB dumps will be vegetated with native species.
(vii)	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off or water and flow of sediments directly into the river and other	Complied with. Catch drain and siltation ponds has been constructed to prevent the run-off water and flow of sediments. Water collected in mine pits is being used for dust



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	water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted and maintained properly. The sump capacity shall be designated 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, and it shall allow adequate retention period for proper settling of silt material.	suppression and green belt development. Sedimentation tank are constructed to ensure that proper retention period for settling of silt.
(viii)	Plantation shall be raised in a 7.5 m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting native species, following the CPCB guidelines for green belt plantation and in consultation with the DFO (Social Forestry). Greenbelt shall be developed all along the mine lease in a phased manner and shall be completed within first five years.	Being compiled with. Project Proponent has also being carrying out plantation by maintaining a green belt of 7.5m safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc by planting native species, following the CPCB guidelines. Greenbelt is being developed all along the mine lease in a phased manner and will be completed within first five years. (Annex -ix)
(ix)	Regular monitoring of water quality, both upstream and downstream of water bodies shall be carried out; records / data shall be maintained and submitted to the NE Regional Office, MoEF&CC, Shillong and MSPCB.	Complied with. Monitoring of water quality both upstream and downstream are being maintained and records are submitted to the NE Regional Office, MoEF&CC, Shillong and MSPCB. (Annex -vii)
(x)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by stabling a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to the Regional Office, MoEF&CC, Shillong, and MSPCB.	Ground water is not being utilized by the Project Proponent for any activities. And also there is no availability of ground water source like Common well, Deep Tube well etc. in and around mining lease area. So, Ground water monitoring is not applicable for this area.
(xi)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora and fauna in the project area.	Agreed to comply. The PP has taken all precautionary measures during mining operation for conservation and protection of endangered flora and fauna in the project area.
(xii)	Provision shall be made for the housing of 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, creche etc.	No Contract labours are employed in the mines.



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(xiii)	Critical parameters such as PM _{2.5} , NO _x , SO _x in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per MoEF's notification in 2009. Further, quality of discharged water shall also be monitored (TDS, DO, pH and Total suspended Solids-TSS). The data shall be uploaded on the website of the company and also prominently displayed at the project site. The circular No-J20012/1/2006-IA-II(M) dated 27.05.2009 issued by the MoEF&CC, which is available on the website of the Ministry www.envfor.nic.in shall also be referred to in this regard for its compliance.	Noted for compliance. During operation phase, periodically the critical parameter is being monitored. The monitoring data is being uploaded on the company website and displaying at the main gate of the project. (Annex -viii) & (Annex -vii)
(xiv)	Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to conform to the standard prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of effluents.	Agreed to comply. Effluent Treatment Plant has already been installed at HEMM workshop. Workshop waste water is being reuse after treatment and oil sludge are being properly collected and utilize as alternative fuel.
(xv)	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.	Complied with. PPEs are being provided to all workers. Safety and health training are given to them regularly.
(xvi)	A separate environmental management cell with suitable qualified personnel shall be set-up. The PP shall put in place an administrative mechanism to deal with environmental issues, to ensure compliance to the EC conditions and to implement the EMP, biodiversity action plan, etc. The PP shall inform the details along with the name of such responsible officials, to the SEIAA, MSPCB and the Regional Office of the MoEF & CC, Shillong. In case of any change in respect of the officials responsible, the same shall be intimated by the PP.	Complied with. A separate environmental management cell with suitable qualified personnel is already set up and they are reporting directly to the Head of the Plant. The environmental Cell is prepared with the guidance of Indian Bureau of Mines (IBM) and the cell is looking after all the compliances of EC conditions, CTO conditions of MSPCB and sustainable development of mining activities and also responsible for the said works.
(xvii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purposes. Year wise expenditure shall be reported to the SEIAA, Meghalaya and the Regional Office, MoEF&CC, Shillong.	Agreed to comply. The funds earmarked for environment protection measure are kept in the separate account. Year wise expenditure is being reported to SEIAA, Meghalaya and Regional Office, MoEF & CC, Shillong. Detailed expenditures for the year 2019-20 is being attached as (Annex -x)



(xviii)	Environment Statement for each financial year ending 31 st March in Form – V as mandated shall be submitted to MPSCB with copy of the same to SEIAA, Meghalaya and Regional Office, MoEF&CC, Shillong	Agreed to comply.
(xix)	The Project Proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Regional Office, MoEF&CC, Shillong, Central Pollution Control and State Pollution Control Board. The certified copy of the same shall be forwarded to the SEIAA and SEAC, Meghalaya.	Agreed to Comply.
(xx)	A copy of clearance letter shall be marked to concerned local bodies / NGOs, if any, from whom suggestion / representation has been received while processing the proposal.	Complied With.
(xxi)	The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall 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. A copy of the clearance letter shall be made available on the website of the PP.	Complied With.
(xxii)	Official from the Regional Office of MoEF & CC, Shillong, MSPCB or any authorized officials, who would be monitoring the implementation of the conditions mentioned herein, shall be given full cooperation, facilities and documents / data by the PP during their inspection.	Agreed for compliance. Full co-operation are given to the official from Regional Office of the MoEF& CC, Shillong, MSPCB by furnishing the documents / data / information / monitoring reports during their inspection.
(xxiii)	The Project Proponent shall not violate applicable provisions of any Acts, Rules, Orders of the Government and judicial orders issued by the Hon'ble Supreme Court / High Courts/ NGT, applicable to the project.	Agreed for compliance. The PP do not violate applicable provisions of any Acts, Rules, Orders of the Government and judicial orders issued by the Hon'ble Supreme Court / High Courts/ NGT, applicable to the project.
(xxiv)	The SEIAA reserves the right to add or delete any conditions or safeguarding measures found necessary, and to take action including revoking the clearance granted, if conditions stipulated are not implemented by the PP or in case of submission of false document / wrong declaration.	Noted. Agreed to compile with.



(xxv)	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
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4. SPECIAL CONDITIONS

(1) The Project proponent (MPC) shall submit the proposed Wildlife Clearance from the National Green Tribunal (NGT) within 30 days of the date of the Environmental Clearance from the Ministry of Environment, Government of India.	The project area does not fall within the range of any Scheduled Species and the Project Proponent (MPC) has obtained the necessary Wildlife Clearance from the Ministry of Environment, Government of India, through office of MPC. The Wildlife Clearance No. FWC/12/2018/pt/528, dated 15/01/2018, has already been submitted.
(2) The project proponent shall submit the Environmental Management Plan (EMP) to the concerned authority within 30 days of the date of the Environmental Clearance from the Ministry of Environment, Government of India.	The EMP will submit within 30 days of the date of the Environmental Clearance from the Ministry of Environment, Government of India.
(3) The EMP shall comply with the provisions of the Environmental Management Plan (EMP) Guidelines, 2006, issued by the Ministry of Environment, Government of India, and the Meghalaya Environmental Protection Act, 2006, and the Meghalaya Environmental Protection Rules, 2007.	The EMP will comply with the provisions of the Environmental Management Plan (EMP) Guidelines, 2006, issued by the Ministry of Environment, Government of India, and the Meghalaya Environmental Protection Act, 2006, and the Meghalaya Environmental Protection Rules, 2007.
(4) The project proponent shall submit the EMP to the concerned authority within 30 days of the date of the Environmental Clearance from the Ministry of Environment, Government of India.	The EMP will submit within 30 days of the date of the Environmental Clearance from the Ministry of Environment, Government of India.
(5) The EMP shall comply with the provisions of the Environmental Management Plan (EMP) Guidelines, 2006, issued by the Ministry of Environment, Government of India, and the Meghalaya Environmental Protection Act, 2006, and the Meghalaya Environmental Protection Rules, 2007.	The EMP will comply with the provisions of the Environmental Management Plan (EMP) Guidelines, 2006, issued by the Ministry of Environment, Government of India, and the Meghalaya Environmental Protection Act, 2006, and the Meghalaya Environmental Protection Rules, 2007.



**BIODIVERSITY INVENTORIZATION AND CONSERVATION THROUGH ASSISTED
REGENERATION OF RET SPECIES IN LIMESTONE MINING AREA OF
MEGHALAYA CEMENTS LTD**

PROJECT TEAM

**Prof. D. Paul Principal, Investigator
Dr. S. S. Chaturvedi, Co-investigator
Paka I Yo Suja, Project Fellow**

**Department of Environmental Studies
North Eastern Hill University, Shillong-793022**

April, 2019



for me

Executive Summary

Meghalaya Cement Ltd. (MCL) is located at Thangskai in District Jaintia Hills, Meghalaya. The area forms a part of the Shillong Plateau characterized by a rugged hilly topography. The geotectonic activities in the past have resulted in the development of deep gorges, valleys & steep cliffs, with several streams dissecting the hilly terrain. The elevation of plant area is 754msl. The plateau area around village Thangskai is dissected by numerous streams which drain the area and ultimately join the rivers Prang and Lubha. The company intended to increase the production capacity of its existing plant from 900 TPD clinker to 2,600 TPD clinker along with a 18 MW captive thermal power plant and captive limestone mines including 33.45ha ML. The plant is based on nearby limestone deposits in the villages of Moing, Kheliegari and New Kheliegari, and proposed mines in South Khlehjeri in Jaintia hills district of Meghalaya. The environmental clearance for the expansion was accorded by the State Environmental Impact Assessment Authority (SEIAA), Govt. of Meghalaya, wherein, it was stipulated that an area not less than 2 ha within the green belt of the project area would be year marked to construct a green house. It was also stipulated that a conceptual plan for raising threatened species would be prepared in consultation with a reputed institution.

The Department of Environmental Studies, North Eastern Hill University (NEHU) was entrusted to undertake the stipulations prescribe by SEIAA through a 3 year project entitled "Biodiversity inventorization and conservation through assisted regeneration of RET species in Limestone mining area Meghalaya Cements Ltd."

An extensive survey of the flora & fauna of the project area was undertaken. Line transact and quadrat sampling revealed that the flora of the project area comprised of 54 tree species and 50 species of shrub, herb and climber and species. A questionnaire survey undertaken for fauna documented the presence of 29 animal species comprising Amphibians, Reptiles, Aves and Mammals. However, camera traps failed to document the presence of animals in the project area. In consonance with the stipulations of SEIAA, several species of herbaceous plants and orchid species were collected for establishment in an installed green house and subsequent planting out



in the designated plot/s in the project area. Further, seedlings of other indigenous tree species and fruit bearing species have been raised in the green house and/ or procured from the Forest department for planting out in designated plots. The company has been advised to utilize the green house for continuous raising of recommended species which are to be planted out in vacant locations within the project area.

For the eco-development of the project area, it is prescribed that mine spoils are properly stacked and managed with mulches to discourage erosive losses. It is also advised that roads within the project area should have avenue plantations so as to mitigate aerial dispersal of dust due to movement of heavy vehicular traffic within the project area. The mined pits should be appropriately managed for rain water and runoff water harvesting and also as ground water recharge pits. Barren and or open areas should be provided with plant cover through green house raised seedlings of recommended tree and fruit bearing species so as to encourage visitation of fauna.



Details of Action Plan for the issues raised during the Public Hearing by the stakeholders of the Elaka Narpuh for 31.05 ha Limestone mines area (as per EIA) and agree to comply.

Annex-II

Sl.No.	Issues	Action Plan	Status / Compliance
1.	During the Public Hearing concern was raised by the stakeholders that as per the environmental conditions granted to Meghalaya Cements Limited for 31.05 ha. limestone mines that the company should allocate about 40 lakh as a capital cost & 25 lakh as annual recurring cost will be kept for the various CSR activities like Health facilities (Ambulance), Education (Development School), Welfare of youth and community development.	M/s Meghalaya Cements Limited will allocate about 40 lakh as a capital cost & 25 lakh as annual recurring cost will be kept for the various CSR activities like Health facilities (Ambulance), Education (development School), welfare of youth and community development.	The detail CSR activities for financial year 2018-2019 have attached. (Annexure -II) Attached herewith as CSR detail - (Annexure -IV)
2.	Local residents have demand from the company to provide the cement at cheap rate.	The company will provide cement at cheap price to local residents.	The detail of cement distribution has attached. (Annexure -II)
3.	The local residents has raised the concern and requested the officials of M/s Meghalaya Cements Limited to take appropriate mitigative measures to avoid pollution to the neighboring village due to mining activities.	M/s Meghalaya Cements Limited has taken appropriate mitigative measures to avoid pollution to the neighboring village due to mining activities.	The detail of action plan has attached (Annexure -II (a))
4.	The local residents has raised the concern and demanded that M/s Meghalaya Cements Limited should generate 60% employment for local people also the Meghalaya Cements Limited should not emit any air pollution from its plant and should not discharge any waste into rivers bodies.	M/s Meghalaya Cements Limited will provide 60% employment to local people also will not emit any air pollution from plant and should not discharge any waste into rivers bodies.	Detailed employment record for mines has attached. The employment given in the mines is controlled by the department mining of our company and the list of employee working under the mining department is already submitted. Detail action plan to mitigate air and water pollution has attached. Annexure -II (a).



ACTION PLAN FOR MITIGATION OF ENVIRONMENTAL POLLUTION

Annex-II – (a)

Sl.No.	Environmental Impact	Action Plan	Status / Compliance	Cost	
				Capital cost	Recurring Cost
1.	Water pollution due to surface run-off from mines area.	a) M/s Meghalaya Cements Limited will construct check dam to avoid water contamination of local water body due to carry over sedimentation from mines area due mining activities.	The company have constructed check dam of length about 160 m at the upstream to control the runoff water to the mines and another two check dams is constructed below the waste dam and soil dam having length of about 580 m and 530 m (the last one is in progress) at the downstream.	Check dam construction – Rs 2.1 Lacs	Cleaning – once in a year – Rs 0.25
		b) M/s Meghalaya Cements Limited will construct garland drain on both side of the haul road and around the soil dump and OB dump to avoid mixing of sediments from mines area to surface run –off.	To avoid mixing of sediments from mines area to surface run –off the company have constructed garland drain of about 1125 m long on both side of the haul roads and dumping yards.	Garland Drain construction – Rs 2.8 lacs	Cleaning – once in a year – Rs 0.25 Lacs
2.(a)	Air pollution due to generation of fugitive dust.	a) M/s Meghalaya Cements Limited will take necessary measures to avoid generation of fugitive dust due to movement of vehicles by providing water sprinkler on haul road for dust suppression.	Water sprinkling is being carried out regularly at the loading point and unloading points, haul roads regularly to suppress the fugitive dust.	i) Water Tanker – Rs 12.0 Lacs	i) Maintenance Cost- 0.4 Lacs ii) Driver Salary – Rs- 4.08 Lacs ii) Diesel & Lubricants- Rs- 2.0 lacs



(b)		b) Plantation of native species to minimize the generation of air born dust due to moment of vehicles.	The afforestation is being carried out as per the approved mining plan and EIA and EMP. A total of 2324 nos. saplings of local species have been planted as on September, 2019 with survival rate of about 77.41%.	Area preparation , Sapling cost, Fertilizer and Fencing – Rs 2.75 lacs	Watch & ward – Rs- 3.25 Lacs
(c) & (d)	Air pollution due to dust generation during mining operation.	c) M/s Meghalaya Cements Limited will use wet drilling system to avoid fugitive emission due to drilling process.	The Meghalaya Cements Limited is using wet drilling from the inception of mining activities and the drilling machines are well equipped with the process.	i) Installation of Wet drilling system to ROC – Rs 0.7 Lacs. ii) Purchase of Real-time Air Sampler – Rs 4.2 Lacs.	
		d) Construction of metallic Haul Road to minimize fugitive dust generation	Metallic haul road has been prepared to transport/carryout limestone as well as Overburden.	Construction Cost – Rs 7.2 Lacs	Maintenance Cost – Rs 3.5 Lacs.
3.	Modification of exhaust system of mining machineries.	M/s Meghalaya Cements Limited will upgrade the exhaust of drilling and excavation machine to mitigate exhaust emission from the machines.	Continuously and periodically we are monitoring the emission of CO ₂ gases and we are taking necessary initiatives as and when required.	i) Flue Gas Analyzer Cost- Rs 2.15 Lacs	i) Spare & maintenance – Rs 0.1 Lacs
4.	Vibration due to use of traditional explosives.	M/s Meghalaya Cements Limited will use advance explosive (NONEL) to minimize the vibration generated during the explosion activity.	i) The Meghalaya Cements Limited is using NONEL/ (bottom initiations system) resulting least vibration.	i) Purchase of Minimate to measure ground vibration – Rs 2.47 Lacs/-	i) Cost of Nonel – Rs 4.7 Lacs
5.	Maintenance of Soil Dump, OB Dump and Haul road.	Compaction of dumps and Haul roads to maintain the Stability.	JCB Compactor is used to maintain the stability of dumps and haul roads.	i) JCB Compactor – Rs 12.0 Lacs	i) Maintenance Cost- 1.5 /- Lacs ii) Driver Salary – Rs- 2. 2 Lacs ii) Diesel & Lubricants- Rs- 0.8 lacs



Thangskai

M/s Meghalaya Cements Ltd
Vill- Thangskai, P.O- Lumshnong
East Jaintia Hills
Meghalaya - 793210.

List of Periodical Medical Exam of Manpowers working in the South Khliehjar Limestone Mine

SL No	Name of Employee	Designation	IME	PME Due Date	PME Done	Remrks
1	Umesh Kumar	Manager	03.09.15	15.03.20	16.03.2020	
2	Abdul Motin Barbhuiya	Geologist	03.12.14	02.12.14	06.12.2019	
3	Jyoti Prakash Panda	Asstt. Manager	06.12.19	05.12.24	-	
4	Uday Kumar Jha	Foreman	10.06.14	09.06.19	02.12.2019	
5	Hansraj Pal	Blaster	03.12.14	02.12.19	02.12.2019	
6	Ashok Kumar	Foreman	06.08.14	05.08.19	29.11.2018	
7	Sanjay Kumar Singh	Mining Mate	06.08.14	05.08.19	26.11.2018	
8	Rakesh Kumar Sharma	Mining Mate	13.06.14	12.06.19	29.11.2018	
9	Sitaram Chetri	Dumper Opt	13.01.18	12.01.23	-	
10	Hemanta Borah	Drill Opt	20.01.18	19.01.23	-	
11	Nabajit Nath	Supervisor/ Blasting Helper	03.07.15	02.07.20	28.06.20.	Medical Exam done during Sept to October 2020-21
12	Ram Pada-Patra	Surveyor	20.01.18	19.01.23	-	
13	Samuel Rymbai	Dumper Opt	13.01.18	12.01.23	-	
14	Pyniohlad Dkhar	Dumper Opt	20.01.18	19.01.23	-	
15	Noril Shylla	Dumper Opt	13.01.18	12.01.23	-	
16	Upendra Prassad	Drill Opt	27.01.18	26.01.23	-	
17	Vinay Sinha	Excavator Opt	27.01.18	26.01.23	-	
18	Ganesh Chandra Mahto	Excavator Opt	27.01.18	26.01.23	-	
19	Prosper Rymbai	Dumper Opt	27.01.18	26.01.23	-	
20	Deibormi Lapasam	Dumper Opt	27.01.18	26.01.23	-	
21	Oniton Pajat	Dumper Opt	27.01.18	26.01.23	-	
22	Amar Kalita	Dumper Opt	27.01.18	26.01.23	-	
23	Pankaj Kumar	Mechanical Engineer	26.11.18	25.11.23	-	
24	Bidyut Baidya	Supervisor	26.11.18	25.11.23	-	
25	Bikky Kumar	Supervisor/ Blasting Helper	06.12.19	05.12.24	-	



Umesh Kumar
Manager

South Khliehjar Limestone Mine



POLLUTION TESTING STATION

LADTHALABOH, JAINTIA HILLS

Name of Licence Holder:-
M/s JASPER I SLONG
Ladthalaboh, Jaintia Hills
Jowai - 793150



LICENCE NO. Com/Trans/74/2004/5
DATE OF ISSUE :- 21ST March, 2005

Book No. **39**

SI No. **3921**

Date **29-06-2020**

SMOKE EMISSION TEST REPORT (DIESEL DRIVEN VEHICLES)

The Vehicle No **ML11 3150** is tested for emission level and reading is as under.

Type of Vehicle other than agriculture tractors	Notified Standard of Maximum smoke density			Actual Reading	
	Light absorption co-efficient	Hatidye Units	Bosch Unit	Light absorption co-efficient	Hatidye Units
1. Full load at 60 to 70% of maximum engine rated rpm declared by the manufacture. or	3.25	75	5.2		35.12
2. Free acceleration	2.45	65	5.2		

Certified that the vehicle meets the emission standard fixed under Rule 115 (2) of the Central Motor Vehicles Rules 1989. This Certificate is valid **28-01-2020**

Com/ Trans/PTS (JIS)/44/2005/74,dated: 17.05.2017



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Authorized Signature
Seal of the Testing Station
Pollution Testing Station
Ladthalaboh, Jaintia Hills

POLLUTION TESTING STATION

LADTHALABOH, JAINTIA HILLS

Name of Licence Holder:-
M/s JASPER I S LONG
Ladthalaboh, Jaintia Hills
Jowai - 793150



LICENCE NO. Com/Trans/74/2004/5
DATE OF ISSUE :- 21ST March, 2005

Book No. 39

SI No. 3927

Date 29-06-2020

SMOKE EMISSION TEST REPORT (DIESEL DRIVEN VEHICLES)

The Vehicle No MR 11 / 800 is tested for emission level and reading is as under.

Type of Vehicle other than agriculture tractors	Notified Standard of Maximum smoke density			Actual Reading	
	Light absorption co- efficient	Hatidye Units	Bosch Unit	Light absorption co- efficient	Hatidye Units
1. Full load at 60 to 70% of maximum engine rated rpm declared by the manufacture. or	3.25	75	5.2		41-16
2. Free acceleration	2.45	65	5.2		

Certified that the vehicle meets the emission standard fixed under Rule 115 (2) of the Central Motor Vehicles Rules 1989. This Certificate is valid 28-12-2020

Com/ Trans/PTS (JIS)/44/2005/74,dated: 17.05.2017



Handwritten signature: anell

Authorized Signature
Seal of the Testing Station
Pollution Testing Station
Ladthalaboh, Jowai, Meghalaya

POLLUTION TESTING STATION

LADTHALABOH, JAINTIA HILLS

Name of Licence Holder:-
M/s JASPER I S LONG
Ladthalaboh, Jaintia Hills
Jowai - 793150



LICENCE NO. Com/Trans/74/2004/5
DATE OF ISSUE :- 21ST March, 2005

Book No. 39

SI No 3928

Date 29-06-2020

SMOKE EMISSION TEST REPORT (DIESEL DRIVEN VEHICLES)

The Vehicle No ML 11 1798 is tested for emission level and reading is as under.

Type of Vehicle other than agriculture tractors	Notified Standard of Maximum smoke density			Actual Reading	
	Light absorption co- efficient	Hatidye Units	Bosch Unit	Light absorption co- efficient	Hatidye Units
1. Full load at 60 to 70% of maximum engine rated rmp declared by the manufacture. or	3.25	75	5.2		41.06
2. Free acceleration	2.45	65	5.2		

Certified that the vehicle meets the emission standard fixed unde Rule 115 (2) of the Central Motor Vehicles Rules 1989. This Certificate is valid 28-12-2020

Com/ Trans/PTS (JIS)/44/2005/74,dated: 17.05.2017



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Seal of the Testing Station
Pollution Testing Station
Ladthalaboh, Jowai, Meghalaya

POLLUTION TESTING STATION

LADTHALABOH, JAINTIA HILLS

Name of Licence Holder:-
M/s JASPER I S LONG
Ladthalaboh, Jaintia Hills
Jowai - 793150



LICENCE NO. Com/Trans/74/2004/5
DATE OF ISSUE :- 21ST March, 2005

Book No. **39**

SI No. **3926**

Date 29-06-2020

SMOKE EMISSION TEST REPORT (DIESEL DRIVEN VEHICLES)

The Vehicle No ML111801 is tested for emission level and reading is as under.

Type of Vehicle other than agriculture tractors	Notified Standard of Maximum smoke density			Actual Reading	
	Light absorption co- efficient	Hatidye Units	Bosch Unit	Light absorption co- efficient	Hatidye Units
1. Full load at 60 to 70% of maximum engine rated rpm declared by the manufacture. or	3.25	75	5.2		40.21
2. Free acceleration	2.45	65	5.2		

Certified that the vehicle meets the emission standard fixed under Rule 115 (2) of the Central Motor Vehicles Rules 1989. This Certificate is valid 28-12-2020

Com/ Trans/PTS (JIS)/44/2005/74, dated: 17.05.2017



Handwritten signature

Authorized Signature
Seal of the Testing Station
Pollution Testing Station
Ladthalaboh, Jowai, Meghalaya



GOVERNMENT OF INDIA
MINISTRY OF COMMERCE & INDUSTRY
PETROLEUM AND EXPLOSIVES SAFETY ORGANISATION (PESO)
(Formerly Department of Explosives)
House No. 216, 2nd Floor, above IDBI, Chandmari,
Guwahati, Assam Guwahati 781021
Tele: 2652783 Fax: 2652503
Email: dycceguwahati@explosives.gov.in

No: A/EC/MG/P3/5(A271)

Dated: 02/04/2019

02 APR 2019

To,
M/s. Meghalaya Cements Ltd.,
Thangskai, East Jaintia Hills,
Town/Village - East Jaintia Hills
Distt. EAST JAINTIA HILLS, State. Meghalaya. Pincode-793210

Subject: Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO) situated at Survey No.: Umpeh Area, Village/Town. Village: Lumshnong, Distt. EAST JAINTIA HILLS, State Meghalaya Licence No.: A/EC/MG/P3/5(A271) granted in Form P-3 of Ammonium Nitrate Rules, 2012 - Renewal regarding

Sir(s),

Reference to your letter No.: 14539 dated: 08/03/2019, the subject licence duly renewed upto 31/3/2022 and issued in Form P-3 of Ammonium Nitrate Rules, 2012 is forwarded herewith, Please acknowledge receipt of the licence.

For further renewal of licence, please submit the following documents so as to reach this office on or before 31/3/2022.

- Application in Form R-1 duly filled in and signed.
- Licence fees for one to five years in the form of demand draft drawn on any Nationalized Bank in favour of Jt. Chief Controller of Explosives, Kolkata payable at Kolkata.
- Original licence with approved plan.
- In this connection, please also refer to Rule 36 of Ammonium Nitrate Rules, 2012.
- Six copies of colour passport size photographs duly signed by the occupier (as defined under Rule 2 (O) of Ammonium Nitrate Rules, 2012) 'in front' by 'black color indelible ink' (if not submitted).

Enclosures :

Yours faithfully,

(Dinesh Singh)

Dy. Controller of Explosives
For Dy. Chief Controller of Explosives

उप मुख्य बिस्फोटक नियंत्रक
गुवाहाटी

Copy Forwarded to:

1. District Magistrate, EAST JAINTIA HILLS (Meghalaya) for information

For Dy. Chief Controller of Explosives,
Guwahati

[For more information regarding status, fees and other details, please visit our web site <http://peso.gov.in>]

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Shobhit

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LICENCE FORM P-3
(See Sr.No.-3 of Schedule I and rule 35
of Ammonium Nitrate Rules, 2012)

Licence to possess for use of Ammonium Nitrate from a store house attached to
(ANFO)



Licence No. : A/EC/MG/P3/5(A271)
Annual Fee Rs: 1000/-

1. Licence is hereby granted to : M/s. Meghalaya Cements Ltd. (Occupier : Ramesh Kumar Pareek)
Thangskai, East Jaintia Hills, Town/Village - East Jaintia Hills
District-EAST JAINTIA HILLS, State-Meghalaya, Pincode - 793210
Phone -, Email-, Fax-
2. Status of licence holder: Company
3. Licence is valid only for the following purpose : Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO)
4. Licence is valid for the following quantity of Ammonium Nitrate:

Name and Description	Quantity at a time (Kg.)	Quantity of Ammonium Nitrate to be purchased in a financial Year (Kg.)
Ammonium Nitrate (Solid)	40000	480000

5. The licensed premises shall conform to the following drawing(s):
Drawing No : A/EC/MG/P3/5(A271) dated : 13/06/2014
6. The Licensed premises are situated at following address:
Survey No. Umpeh Area , Town/Village : Village: Lumshnong
Police Station : Lumshnong District : EAST JAINTIA HILLS State : Meghalaya
PinCode : 793210 Phone : E-Mail : mines@topecm.in Fax :
7. The licensed premises consist of following facilities :
Consist of one store house .
8. The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Ammonium Nitrate Rules, 2012 framed there under and the conditions, additional conditions and Annexures.
(i) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
(ii) Conditions and Additional Conditions of this licence signed by the license issuing authority.
9. This licence shall remain valid till 31st day of March 2019

This licence is liable to be suspended or revoked for any violation of the Explosives Act 1884 or Ammonium Nitrate Rules, 2012 framed there under or the conditions of this license, if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The Date: 13/06/2014

Joint Chief Controller of Explosives
East Circle office, Kolkata

Amendments :

- Change in Authorized Signatory/Occupier/Partners/Directors dated : 26/08/2015
- Change in Authorized Signatory/Occupier/Partners/Directors dated : 04/03/2019

Endorsement for renewal of licence:

Date of Renewal Date of Expiry
02/04/2019 31/03/2022

Signature of licensing Authority

उप मुख्य विस्फोटक नियंत्रक

गुवाहाटी

Statutory Warning : Misuse of Ammonium Nitrate shall constitute serious criminal offence under the law.

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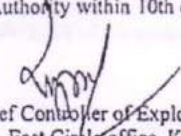


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Conditions

The following are the conditions of licence number A/EC/MG/P3/5(A271) to Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO) in Form P-3 [Sr. No. -3] granted by the Chief Controller or Controller of Explosives.

1. The Ammonium Nitrate shall be possessed only in the licensed storehouse or melt storage tank shown in the approved plan attached with the License.
2. The quantity of Ammonium Nitrate in the premises or any part thereof shall not exceed at any one time the quantity for which License has been issued.
3. Spilled or sweepings of Ammonium Nitrate the waste Ammonium Nitrate collected from sweeping or spilled shall be destroyed by the License holder and account thereof shall be maintained indicating the quantity of the Ammonium Nitrate destroyed.
4. The License holder and every person employed shall take all due precautions for prevention of accidents by fire or explosion in the licensed premises and for preventing unauthorized person from having access to licensed premises and shall abstain from any act from whatsoever which tends to cause or explosion and is not reasonably necessary for the purpose of works related thereto.
5. No additions and alterations shall be carried out in the licensed premises without a previous sanction in writing of the Licensing Authority. Such additions and alterations so sanctioned shall be shown in the amended plan attached to the License.
6. The License holder shall appoint a competent person to supervise the operations shall be conducted under the supervision of the competent person.
7. Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and all facilities shall be offered to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
8. If the License Issuing authority or the inspecting officer informs in writing, the holder of the License to execute any repairs or to make any additions or alterations to the licensed premises or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and therefore the same is necessary for the safety or security of the premises or persons, the holder of the License shall execute the recommendations and report compliance within the period specified by such authority.
9. Accidents by fire or explosion and losses, shortage or theft of Ammonium Nitrate shall be immediately reported to the nearest police station and the District Authority.
10. License holder shall maintain records in the prescribed forms specified in Schedule II Part 3 to ensure accountability, identification and traceability of Ammonium Nitrate and shall produce such records on demand to authority specified in rule 50.
11. The License holder shall submit monthly returns of AN received, sold /used/stolen or short received and destroyed in the form prescribed in Form R-9 of Part 3 of Schedule II so as to reach Licensing Authority and District Authority within 10th day of every succeeding month.


For Joint Chief Controller of Explosives
East Circle office, Kolkata

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MEGHALAYA CEMENTS LIMITED

Village –Thangskai, P.O.-Lumshnong, District- East Jaintia Hills,

Meghalaya, PIN – 793210.

Expenditure Incurred for Socio-Economic Development under CSR activities

From 01st April' 2020 to 30th September'2020.

Sl.No	Heading	Amount in Rs.
1.	Emphasis on Education	132,000.000
2.	Encouraging/Felicitation program for Students.	-
3.	Polio Immunization Camps, family planning, etc.	581,591.00
4.	Infrastructure development of Hospitals / Schools	133,525.00
5.	Cement Distribution Programme.	2,385,967.00
6.	Plant Distribution programme	73,100.00
7.	Donation to Churches, Road & House Repairing etc.	33,000.00
8.	Drinking water supplying scheme.	126,694.00
9.	Village development funds.	375,000.00
10.	Corona Pandemic	929,264.00
Gross Total		4,770,141.00

For MEGHALA CEMENTS LIMITED



R. K. Pareek

(President)





Meghalaya cements limited

Thangskai, Meghalaya

DOWNSTREAM WATER ANALYSIS REPORT FOR THE YEAR 2020-21 (Southern side of reject dump)

Name of the Mine:- SOUTH KHLIEHJRI LIMESTONE MINES

Date:-12.10.2020

Sl. No.	Parameters	Obtained Values in						Average	Permissible Limit
		Apr'2020	May'2020	Jun'2020	Jul'2020	Aug'2020	Sep'2020		
1	pH	7.2	7.7	7.1	6.9	7.4	7.1	7.23	6.5 - 8.5
2	Dissolved Oxygen (mg/lit)	12.06	11.47	13	12.8	11.9	10.7	11.99	-
3	Total Dissolve Solids (mg/Lit)	159	171	134	137	146	151	149.67	<500
4	Conductivity (mg/Lit)	179	168	152	179	171	153	167.00	-
5	Total Hardness (mg/ Lit)	265	167	204	264	249	278	237.83	<300
6	Calcium Hardness (mg/Lit)	204	189	157	167	182	174	178.83	<200
7	Magnesium Hardness (mg/Lit)	91	88	76	81	84	83	83.83	<100
8	Alkalinity (mg/Lit)	84	89	72	81	87	71	80.67	<200

Prepared By
Arti Singh
Arti Singh

Checked & Verified By

Dinesh Meshram



Thangskai

Meghalaya cements limited

Thangskai, Meghalaya

UPSTREAM WATER ANALYSIS REPORT FOR THE YEAR 2020-21 (Near toilet area)

Name of the Mine:- SOUTH KHLIEHJRI LIMESTONE MINES

13.10.2020

Sl. No.	Parameters	Obtained Values in						Average	Permissible Limit
		Apr'2020	May'2020	Jun'2020	Jul'2020	Aug'2020	Sep'2020		
1	pH	7.2	7.6	6.8	7.1	7.5	7	7.20	6.5 – 8.5
2	Dissolved Oxygen (mg/lit)	11.3	11.8	12.1	12.6	12.4	13.4	12.27	-
3	Total Dissolve Solids (mg/Lit)	172	169	147	134	149	160	155.17	<500
4	Conductivity (mg/Lit)	189	176	201	195	186	179	187.67	-
5	Total Hardness (mg/ Lit)	267	284	235	286	249	294	269.17	<300
6	Calcium Hardness (mg/Lit)	184	192	164	192	183	173	181.33	<200
7	Magnesium Hardness (mg/Lit)	93	89	82	86	84	81	85.83	<100
8	Alkalinity (mg/Lit)	72	89	84	79	91	76	81.83	<200

Prepared By

Arif Singh
Arif Singh

Checked & Verified By

Dinesh Meshram
Dinesh Meshram



Arif Singh

MEGHALAYA CEMENTS LIMITED

**Six Monthly Ambient Air Quality Survey Report,
South Khliehjeri Limestone Mine (31.05 Ha), 2020-2021**

Pollutants	Location	Apr' 2020	May' 2020	Jun' 2020	Jul' 2020	Aug' 2020	Sep' 2020	Avg.	Permissible Limits for Rural Areas (By MSPCB 24 hrs Monitoring)
Particulate Matters PM10 ($\mu\text{g}/\text{m}^3$)	A1. North -East (Near Soil Dump)	77.36	65.34	49.32	46.23	50.32	49.62	56.37	100 $\mu\text{g}/\text{m}^3$
	A2. North - West(Near Haul Road)	81.29	63.29	52.19	44.29	46.29	47.43	55.80	100 $\mu\text{g}/\text{m}^3$
	A3. Southern side (Near Lease Boundary)	76.34	70.16	47.24	50.61	53.67	55.34	58.89	100 $\mu\text{g}/\text{m}^3$
Particulate Matters PM2.5 ($\mu\text{g}/\text{m}^3$)	A1. North -East (Near Soil Dump)	51.24	48.61	39.61	31.16	33.18	31.08	39.15	60 $\mu\text{g}/\text{m}^3$
	A2. North - West(Near Haul Road)	54.02	46.37	44.42	28.86	31.09	32.49	39.54	60 $\mu\text{g}/\text{m}^3$
	A3. Southern side (Near Lease Boundary)	49.67	52.64	38.15	32.44	36.58	37.19	41.11	60 $\mu\text{g}/\text{m}^3$

Prepared By


(Arti Singh)


Checked & Verified By


(Dinesh Meshram)

MEGHALAYA CEMENTS LIMITED

Six Monthly Ambient Air Quality Survey Report, South Khliehjeri Limestone Mine (31.05 Ha), 2020-2021

Pollutants	Location	Apr' 2020	May' 2020	Jun' 2020	Jul' 2020	Aug' 2020	Sep' 2020	Avg.	Permissible Limits for Rural Areas (By MSPCB 24 hrs Monitoring)
SO ₂	A1. North -East (Near Soil Dump)	5.89	5.34	7.62	5.41	4.67	4.62	5.59	80 µg/m ³
	A2. North - West(Near Haul Road)	6.89	4.92	3.49	4.62	5.73	3.48	4.86	80 µg/m ³
	A3. Southern side (Near Lease Boundary)	4.16	3.87	5.15	6.32	5.67	4.54	4.95	80 µg/m ³
NO _x	A1. North -East (Near Soil Dump)	7.84	8.69	6.41	7.84	8.34	8.47	7.93	80 µg/m ³
	A2. North - West(Near Haul Road)	10.78	9.57	10.26	9.48	10.91	10.32	10.22	80 µg/m ³
	A3. Southern side (Near Lease Boundary)	7.87	7.19	6.52	5.06	6.84	11.09	7.43	80 µg/m ³

Prepared By

Arti Singh
(Arti Singh)



Checked & Verified By

(Dinesh Meshram)

**INFORMATION ON
AFFORESTATION FOR THE YEAR 2019-20**

1.	Name of the Mine	South Khliehajari Limestone Mine
2.	Owner's Name	R. K. Pareek
3.	District / State	East Jaintia Hills/Meghalaya
4.	Mineral Worked	Limestone
5.	Category of the Mine	A

AFFORESTED DURING THE QUARTER ENDING JUNE (1st April to 30th June 2019)

No. of trees planted		Area covered (in ha.)		No. of trees survived		Survival rate	
WML	OML	WML	OML	WML	OML	WML	OML
1	2	3	4	5	6	7	8
245	115	0.1225	0.0575	181	82	73.87%	71.30%

AFFORESTED DURING THE QUARTER ENDING SEPTEMBER (1st July to 30th September, 2019)

No. of trees planted		Area covered (in Ha.)		No. of trees survived		Survival rate	
WML	OML	WML	OML	WML	OML	WML	OML
1	2	3	4	5	6	7	8
120	92	0.600	0.046	87	63	72.50%	68.47%

CUMULATIVE AT THE END 30th SEPTEMBER, 2020

No. of trees planted		Area covered (in Ha.)		No. of trees survived		Survival rate	
WML	OML	WML	OML	WML	OML	WML	OML
1	2	3	4	5	6	7	8
1578	1129	1.2251	0.4514	1229	855	77.88%	75.73%

Note: - WML- within Mining Lease; OML- Outside Mining Lease




Umesh Kumar
Mines Manager
South Khliehajari Mine

M/s MEGHALAYA CEMENTS LIMITED

Vill- Thangskai, P.O - Lumshnong
East Jaintia Hills, Meghalaya-793210

Expenditure incurred against Enviromental Protection Measures of South Khliehjar during the year 2020-21 (from April,2020 to September,2020)			
1	2	3	4
Sl no	Head	Subhead	Total Expenditure incurred (in lakh)
1	Plantation	Pre plantation cost to develop the area for ready for plantation i. Dumping & dozing of soil to make the area plain ii. Spreading of Topsoil Sappling & Plantation cost Maintenance cost i. Manuring ii. Watering iii. Watching (one permanent labour Rs 9000/- per month) iv. Fencing	3.785
2	Dust suppression	cost against Water sprinkler used in hoal roads & loading point & unloading point	13.27
3	Preparation of Retaining wall, Checkdam, Siltation Tanks and Garland drains	Contruction of Retaing wall 200m Preparation of Siltation Tanks Preparation of Garland drains	0.00
5	PPE supply to mine workers	Nose Mask Ear Muffs Safety Shoe	0.2466
6	Water Treatment	Captial investment for Water Treatment Plant Recurring cost for water treatment	0.8
7	Maintenance of Effluent Treatment Plant	Chemical consumption for treatment of effluents (lime , bleaching powder, alum etc.) Power cost Manpower cost	
8	Dump Compaction	Compection of dumps by compactor	1.65
Total			19.7516

