MEGHALAYA CEMENTS LIMITED

TOPCEM CEMENT
Mazbooti ka bharosa...hamesha

Ref: MCL/Comm/MsPCB/Compliance/2016-17/61

Date:-23/05/2016

To

The Member Secretary
Meghalaya State Pollution Control Board,
'ARDEN' LYMPYNGGAD
Meghalaya, Shillong

Sub:- Submission of half yearly compliance report.

Dear Sir,
We are hereby furnishing the half yearly compliance report (hard copy and soft copy) for the period from Dec'2015 to May'2016 on Environmental Stipulation for Expansion of Cement Plant (from 900 TPD to 2600 TPD) along with 10MW Captive Power Plant at Village- Thangskai, East Jaintia Hills District, Meghalaya, vide your Environment Clearance letter no SEIAA/PROJECT-2/2007/18 dated: 25th March'2009.

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

(Authorized Signatory)

Enc: As stated above

Copy to:

1) The Joint Director (S), Ministry of Environment and Forest, North Eastern Regional Office, Shillong, Meghalaya.
2) The Member Secretary, State Environment Impact Assessment Authority, Shillong

ISO 9001:2000 & ISO 14001:2004 CERTIFIED COMPANY

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HELPLINE NO : 18001233666

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.	The online monitoring system (CEMS) of our stacks has been commissioned and working properly.	**Complied.** A stack of 100m is provided and opacity meter for continuous online monitoring (CEMS) is provided. The data transmission of online data to MsPCB and CPCB are being monitored in the system.
(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.** ESP is provided for thermal power plant and it is working satisfactorily.
(iii)	Sorbent limestone shall be fed (12% of coal by weight) along with coal in the boiler of the TPP to reduce formation of SOx and thus help neutralize the impact of sulphur in coal.	Such limestone is being used in the process.	**Complied.** We are using limestone for above purpose, as and when required for the process.

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(iv)	Space provision shall be made for Flue Gas De-sulphurisation [FGD] unit of requisite efficiency for removal of SO2 when required at a later stage.	At the project stage Flue Gas De-sulphurisation provision to be made	**Complied.** Specific location identified & 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.** We have made the provision of water sprinkling system at coal storage area and other vulnerable area of TPP.
(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.	No ground water is applicable in our system.	**Complied.** No extraction of ground water.
(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.** System has been adopted and it is working.

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(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.** Regular safety training is being provided. Fire protection system is already installed in coal stock yard as well as other vulnerable areas of TPP. The fire protection equipments and machineries are being tested periodically and kept in operation mode. Mock drill is also conducting every year by our Safety & Vigilance Department. Details of Mock drills are attached as an ***Annexure-I***
(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.** This treated water is utilized in greenbelt development around the plant and colony. Also a ground sump is made for recycle/Treatment. We are enclosing here with a Flow diagram of STP, along with a map of plant area showing STP is attached an ***Annexure-* II**

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(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.	**Partially Complied.** We have been seeking technical guidance from several Departments/Board for upgrading the existing system to recharge the ground water aquifer and we are in process to upgrade the system. Scheme for rain harvesting pit is made, lay out copy enclosed. ***Annexure- III***
(xi)	Permission for drawal of water of the required quantity from the streams in favor 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.	**Complied.** 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. ***Annexure-IV***

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(xii)	Leq of Noise level in the Thermal Power Plant premises shall be limited to 75 dBA and regular maintenance of 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.	Provision in the equipments for reducing the noise pollution to be made and in operation protective equipment shall be used.	**Complied.** Noise levels are under control. Schedule maintenance is being carried out as per the Manufacturers' manuals and using necessary PPE's. (Half yearly report is enclosed). ***Annexure- V***
(xiii)	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.	While finalizing the machinery acoustic hoods shall also be planned.	**Complied.** We have provided acoustic hoods in the Thermal Power Plant.

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(xiv)	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.	Dry ash collection and transportation system to be given in the project.	**Complied.** The fly ash generated in our Thermal Power Plant is completely collected by the ESP to its hoppers and it is being loaded into tankers for feeding to cement mill hoppers pneumatically. Hence 100% consumption of the ash generated is achieved in our cement plant.
(xv)	The stack emission from various sources shall not exceed 50 mg/Nm3	The regular monitoring to be done by Environment Department.	**Complied.** (Six month's report is enclosed) as an ***Annexure- V***
(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.	**Not Complied.** We are in dialogue with concerned institute.
(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.** Nuisance bag filter has been provided to control fugitive emission at Raw Mill, Coal Mill, Kiln and Cement mill. And water sprinkler has also install at transportation area, Coal storage area and other vulnerable area of the plant.

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(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.** Proper water sprinkling on the places of fugitive dust generation is implemented and controlled.
(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.** Ambient Air Quality monitors – Installed as required having one point at crusher area where maximum concentration is anticipated. (Six month's report is enclosed) as ***Annexure- V***

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(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 0.05 mg/t.	Emission levels, surface and water quality shall be submitted to MSPCB Quarterly reports on Testing for Chromium (VI) level in nearby surface water bodies monitoring. Monthly monitoring of Chromium (VI).in effluent pit. Provision of effluent treatment plant.	**Complied.** Monitoring of surface water from River pumped to CPP and ground water from water harvesting pit near primary crusher is being tested and report given to MsPCB, Chromium (VI) level testing from the effluent is being tested on monthly basis and reports are attached as an ***Annexure-VI***

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(xxi)	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 m^3 /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.	Total water requirement shall not exceed 2000cum/day including TPP and zero discharge shall be ensured.	**Complied.** We are regularly intimating the water consumption reports to the Board and consuming water under the limit. (Half yearly report is enclosed) ***Annexure- V***

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(xxii)	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.	Utilization of high calorific value hazardous waste – refer MePCB letter dated 14.04.2009 on the subject.	**Not complied.** Procurement of materials for use of high calorific value hazardous waste is not available around the plant within 50 kms. Radius.
(xxiii)	The project proponent shall transport raw materials and industrial products through covered means.	Transportation of raw materials by covered means.	**Complied.** Raw materials like coal and industrial products like clinker are being transport from one location to other location by properly covered with tarpaulin to avoid any spreading of fugitives.
(xxiv)	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.	Development of green belt up to 33% of the project area i.e. 20.143 Ha of land shall be developed as green belt.	**Complied.** Development of Green belt has been started since 2009and 90% of the project area has been completed. Suitable species are being planted as per project approved by DFO (Territorial), Jaintia hills. Our development details and Map are enclosed ***as an Annexure- VII***

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(xxv)	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 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.	Provision of Health Care Centre.	**Complied.** The Health Care Centre is functioning under qualified Doctor, Nurses and staffs. We have also an Ambulance facility to meet up the emergency.
(xxvi)	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.	Annual review is completed increments given to employees and this has reflected in salaries.	**Complied.** The salaries of Cleaners have risen. The detailed are attached as an ***Annexure- VIII***
(xxvii)	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.	We are taking preventive measures for emission of particulate matters to the surrounding private forest area.	**Complied.** We are planning for Ambient Air Quality Analysis nearby plant area to verify the air quality.

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(xxviii)	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 encouraged in the process.	This is regarding purchase of lime stone.	**Complied.** During the renewal of mines lease, we are in practice with to verify the environmental clearance.
(xxix)	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: i) *Pteracanthus griffithianus,* Acanthaceae ii) *Nepenthes Khasiana,* Nepenthaceae iii) *Argostemma khasianum,* Rubiaceae iv) *Fimbristylish nigrobrunnea,*	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 made and activity to be shown within one year.	**Not complied.** We are in dialogue with concerned institute.

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	Cyperaceae v) *Trivalvaria kanjilali,* Annonaceae vi) *Begonia rubrovenia,* Begoniaceae vii) *Ceologyne ovalis,* Orchidceae 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.		

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(xxx)	The project proponent shall sponsor research and development for conservation of threatened category of species occurring locally such Hedychium dekianum, [Zingiberaceae], Cymbidium eburneum (Orchidceae), or Dendrobium denonianum (Orchidceae) which would be carried out by an appropriate research or academic institution located in Meghalaya within a year of issue of prior 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.	Research and Development Project for conservation of threatened category of species – with the help of Research or Academic Institution of Meghalaya to be done.	**Not Complied**. We are in dialogue with concerned institute.

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(xxxi)	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.	**Not complied.** Action has been taken and It is stated that we have no endangered wildlife animals in and around of the plant area as per the departmental Studies.
(xxxii)	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 as ***Annexure- IX***
(xxxiii)	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	Socio-Economic development. An eco-development plan to be prepared and submitted.	**Complied.** Implemented an expenditure details are enclosed as ***Annexure- X***

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	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.		

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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.	**Agreed for compliance.**
(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.	**Agreed for compliance.**

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(iv)	The gaseous emissions (SO2, NOx) 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.	Interlocking system of machines to control SO2, NOx levels in case of failure.	**Complied.** ABB make SCADA based Interlocking is in system and working properly.
(v)	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.	Adhering to the provision in the fly ash notification.	**Complied.** The fly ash generated in our Thermal Power Plant is completely collected by the ESP to its hoppers and it is being loaded into tankers for feeding to cement mill hoppers pneumatically. Hence 100% consumption of the ash generated is achieved in our cement plant.

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(vi)	The industry shall undertake the following waste minimization measures: • 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.	It is an ongoing process and has been implemented.	**Complied.** We are not generating any by product in our plant. Closed pneumatic system is employed for transport of fine material in the manufacturing process. All venting systems are connected with dust or particulate arresting equipments such Bag Filters.
(vii)	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.	Monitoring fugitive emissions.	**Complied.** Monitoring of fugitive emission as already been under taken and conducted by the third party and we are submitting monthly report to MsPCB as generated by the third party.

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(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.** We have provided different Environmental Protection Equipments for collection of dust/particulate matter to reuse the same in our process. The required spares are also maintaining for optimum functioning of the said equipments.
(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.	**Complied.** Authorization letter No. MPCB/TB/ATH/CON-21-2007/ 2015-2016/10; dated 21ST December 2015 obtained from MSPCB. Valid up to 30TH Nov' 2020.

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(x)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Environmental Quality Monitoring functions. A state of the art Chromium testing kit shall be maintained in the laboratory.	Formation of Environmental Management Cell with laboratory and Chromium testing kit.	**Complied.** Dedicated environmental Management Cell functioning. We have developed some more infrastructures like B.O.D and C.O.D testing facilities as well as an expansion of laboratory building for monitoring the desired test parameters. The existing list of laboratory equipments and chemicals are attached as an ***Annexure -XI***
(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.	**Complied**. The STP project has been commissioned and using the same for suppresses the fugitive dust of our internal roads. Drainage system and STP map are enclosed as an ***Annexure- II***
(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 reports to SEIAA/SEAC and posting in website.	**Complied**. Six monthly compliance reports along with monitoring data have been submitting to concerned officials on regular basis and posting the same data on the website also.

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(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 recommendation of the SEAC, if implementation of any of the above conditions is not satisfactory. 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. The above conditio0ns 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	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.	**Agreed for compliance.**

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	(Management & Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.		

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ANNEXURE-I

Meghalaya Cements Ltd.

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

Evaluation of Training

Doc. No.:MCL/IMS & EnMS/MR/G11
Rev. No. :00
Dept: HR&A Date: 27/006/15

Training Details: IMS/E~~pMS~~/~~Induction~~ Training : Fire Mock Drill & Disaster Programme

Trainer: Mr. N. I. Singha.

Training Subject: Fire Mock Drill & Disaster Programme

Training Date: 27/05/15

Response of Trainees: It is being found that all the workers are taking interest for the Fire Mock Drill. Both theory and practical are giving to the trainees.

Comments of Trainers: During my mock drill on fire Safety and disaster management try periode, I found all who were present very interested and they were eager to learn. I hope, they should succe-ed in their lifes in future.

Remarks of HOD (HR):

Mock Drill of any kind ultimately helps to prepare oneself for any kind of emergency in future. We are planning to include others too, who were not able to attend this training program in future training.

Madini Gogoi

Remarks of concerned HOD

During the Training it was observed most of the participants with attention learnt the procedure & could understand also they had practised the rescue procedures. Hence we will planning for conduct the training for remain person also.

Signatures:

[signature] 27/06/15 | [signature] Madini Gogoi | [signature] | [signature]

Trainer | HOD(HR) | HOD (Concern) | M.R.

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ANNEXURE-I

Meghalaya Cements Ltd.

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

Attendance Sheet for IMS/EnMS/External Agency Training

Doc.No:MCL/ IMS &EnMS/MR/G10
Rev No.:00
Date:

Training Details : Fire Mock Drill & Disaster Programme
Agency : Fire & Emergency Service, Shillong.
Duration : 1 Day
(a) Date/s From: 27/06/15 To:
(b) Time From: 11:00AM To: 5:30 PM
Names of Trainers :
1. Mr. N.I Singha. 2.

Attendance Record:

Sl.	Employee Name	Department	Designation	Signature
1	Rimio Lapasam	Safety & Vigilance	Trainee	[signature]
2.	Santu Kumar Pand	S&V	Comp. Opt.	[signature]
3	Rajesh Kamu	Safety & Vigil.	Supervisor	[signature]
4	Bipul Baru	H.R	Supervisor	[signature]
(5)	Bistu Basglary	Mech.	Rigger	[signature]
(6)	Dhomanray Basu.	mech.	Fabricator	[signature]
(7)	Tiponath Hazari	Production	Supervisor	[signature]
8	MEHROJ ALAM	Production	Mason+P101	[signature]
(9)	Bhigu Nath	Production	Pelletizer	[signature]
(10)	Saraswati	Production	Fitter.	[signature]
(11)	Rajmel Purbiya	Production	Mason	[signature]
(12)	Chasang Ingti	Production	Petroller	[signature]
(13)	Bikram Taro	Production	petroller	[signature]
(14)	Miraz Alam	Production	petroller	[signature]

[signature]
HOD

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ANNEXURE – II

MEGHALAYA CEMENTS LIMITED

CIN-U26942ML2003PLC007125

TOPCEM

Mazbooti ka bharosa...hamesha

Ref: MCL/Comm./MsPCB/15-16/

To, **Date: 02.02.2016.**

MEMBER SECRETARY

MEGHALAYA STATE POLLUTION CONTROL BOARD

'ARDEN' LUMPYNGNGAD

SHILLONG- 793014

SUB: - Intimation of Sewage Treatment Plant at our cement plant premises: reg.

Dear Sir,

The CONSENT to OPERATE issued in favour of M/s MEGHALAYA CEMENTS LIMITED. Vide T.O Order No.MPCB/TB-27(2009)/2011-2012/12 dated 11th june 2011 for operating a 2600 TPD CEMENT MANUFACTURING UNIT at Thangskai Village, East Jaintia Hills District, **as specified in General Conditions No-09.** Domestic Wastewater generated from the factory and colony shall have to be treated in a Sewage Treatment Plant. This treated water shall be utilized in greenbelt development around the plant and colony.

We would like to inform you that the Sewage Treatment Plant has been commissioned and it has adopted in our system. The capacity of the said plant is 100 m^3/day. The STP is located at the lower point where all the drainage system discharges the used water. The water so collected is treated with sodium hypo chloride (NaOCl). We have also installed a water flow meter at the discharge point and the initial & final reading is being intimated to MsPCB on monthly basis as a specified format of Form-1 (See Rule 4)

Page: 2 Conti.....

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Fax : 033 2334 [illegible]
E-mail : kolkata@topcem.in

Registered Office : Village: Thangskai, P.O. & P.S. Lumshnong
District : East Jaintia Hills, Meghalaya, PIN: 793210
Tel. : 03655 278324 / 383 / 384
Fax : 03655 278327
E-mail : meghalaya@topcem.in

ANNEXURE-II

MEGHALAYA CEMENTS LIMITED

CIN-U26942ML2003PLC007125

TOPCEM
Mazbooti ka bharosa...hamesha

The Sewage Treatment plant water is being utilized for watering in our plantation work/green belt development and dust suppression through water sprinkle in dust prone area/road, in and around our plant. Finally, the treated water is discharge/pump out to the water sprinkle. The treated water is pumped out to sprinkle/tanker regularly. We neither dispose nor discharge the effluent material. It is totally utilized. We are enclosing here with a Flow Diagram of STP, Along with a map of plant area showing STP is attached herewith as an ***Annexure - I & II.***

This is for your kind information please.

Thanking You,

Yours Faithfully,

MEGHALAYA CEMENT LTD
M. C. L.
THANGSKAI

Authorized Signatory

MEGHALAYA CEMENTS LTD
THANGSKAI

Sales & Marketing Office :
Mega Plaza, 4th Floor,Christian Basti
G.S. Road, Guwahati - 781 005
Tel. : 0361 2345421/22/23, Fax : 0361 2345419
E-mail : guwahati@topcem.in
Web : www.topcem.in

Kolkata :
BE-77, Salt Lake City
Sector-1, Kolkata - 700 064
Tel. : 033 2334 0666 / 0004
Fax : 033 2334 0505
E-mail : kolkata@topcem.in

Registered Office :
Village: Thangskai, P.O. & P.S. Lumshnong
District : East Jaintia Hills, Meghalaya, PIN: 793210
Tel. : 03655 278324 / 363 / 364
Fax : 03655 278327
E-mail : meghalaya@topcem.in

HELPLINE NO : 18001233666

ANNEXURE-III

O/C

MEGHALAYA CEMENTS LIMITED

CIN-U26942ML2003PLC007125

TOPCEM
Mazbooti ka bharosa...hamesha

Ref: MCL/ENV/SWB/2015-16/01 **Date: 22nd February, 2016**

To
The Director,
Soil & Water Conservation Department,
Shillong

Through The Chief Engineer,

Sub: Submission of Detailed Scheme for Rain Water Harvesting Pit to recharge the ground water aquifer.

Dear Sir,

With reference to above subject, we beg to inform you that we are complying the compliances and conditions under MoEF North Eastern Regional Office, Shillong for our expended project. We are interested to develop a Rain water harvesting pit at proper place in the campus of M/s Meghalaya Cement Limited, Village- Thangskai, P.O-Lumshnong, East Jaintia Hills Dist, Meghalaya.

In this regard we have submitted a letter dated 24th Nov'2015, for provide us a technical guide line for the said Scheme through The Executive Engineer, Water Resources Department, khliehriat (Meghalaya).

We shall be highly thankful to you for provide us a technical guide line which is suitable as per the Stipulated environmental condition of our plant premises.

As per MoEF norms the "Rain Water Harvesting Pit" scheme should be approved by State Ground Water Authority Board.

Therefore, we are enclosing here with a **LAYOUT PLAN** for your kind approval please.

This is for your kind information and needful action from your end.

Thanking you,

Yours Faithfully,
For Meghalaya Cements Limited

MEGHALAYA CEMENT LTD ★ M. C. L. ★ THANGSKAI

MEGHALAYA CEMENTS LTD THANGSKAI

DIRECTOR (S) 23/2/16 MEGHALAYA, SHILLONG

Authorized Signatory

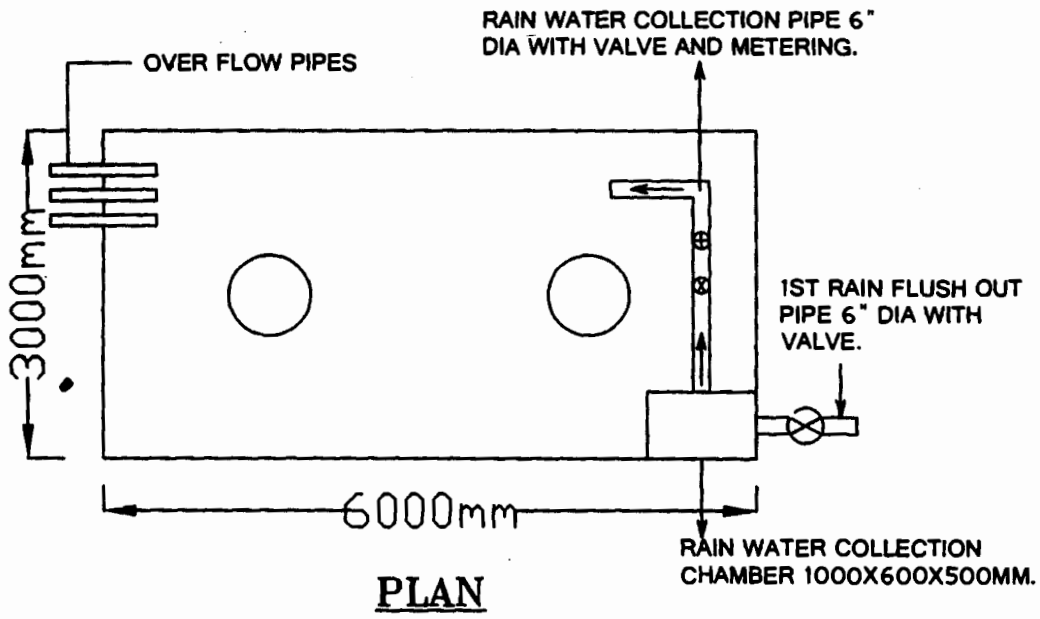
Sales & Marketing Office :
Mega Plaza, 4th Floor,Christian Basti
G.S. Road, Guwahati - 781 005
Tel. : 0361 2345421/22/23, Fax : 0361 2345419
E-mail : guwahati@topcem.in
Web : www.topcem.in

Kolkata :
BE-77, Salt Lake City
Sector-1, Kolkata - 700 064
Tel. : 033 2334 0666 / 0004
Fax : 033 2334 0605
E-mail : kolkata@topcem.in

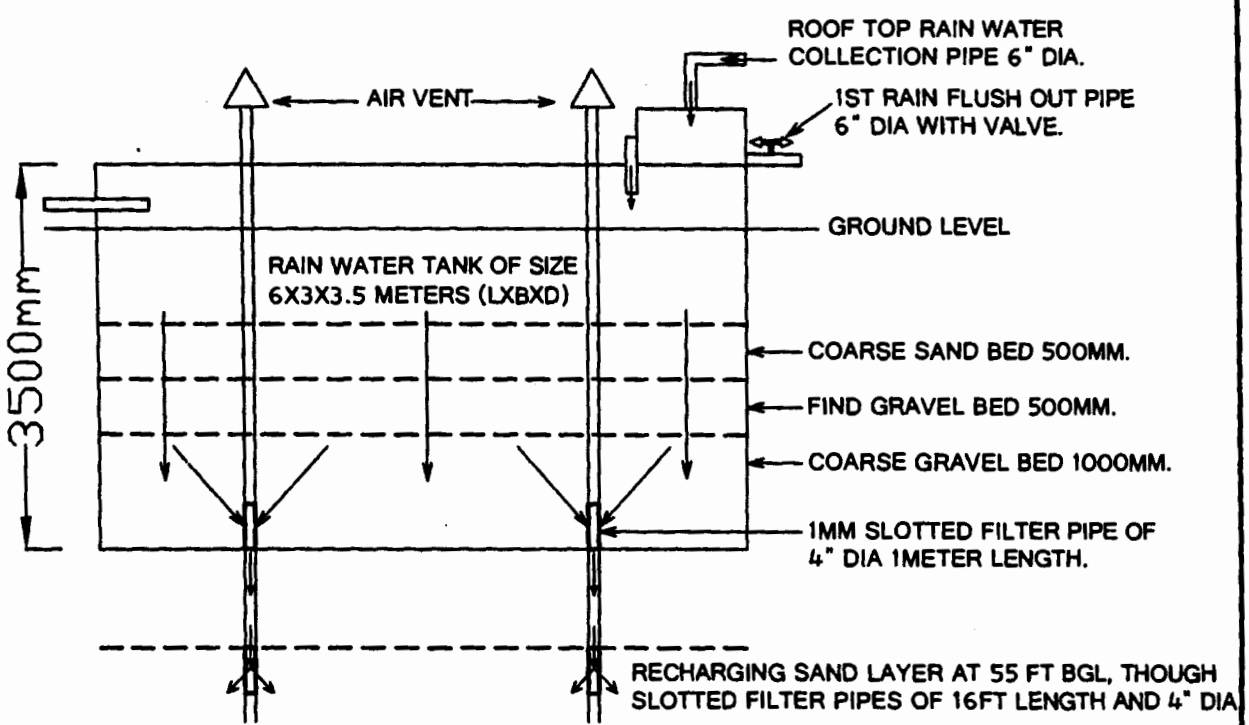
Registered Office :
Village: Thangskai, P.O. & P.S. Lumshnong
District : East Jaintia Hills, Meghalaya, PIN: 793210
Tel. : 03655 276324 / 363 / 364
Fax : 03655 276327
E-mail : meghalaya@topcem.in

HELPLINE NO : 18001233666

ANNEXURE - III



PLAN



ELEVATION

MEGHALAYA CEMENTS LTD THANGSKAI

MEGHALAYA CEMENT LTD M. C. L. THANGS

RAIN WATER HARVESTING SYSTEM				
MEGHALAYA CEMENTS LIMITED				
SCALE NTS	DRAWN BY K.A.	DATE 06.02.16	CHKD. BY	APPD. BY
DRG. NO. MCL/LAYOUT/RWHS/001				REV 0

ANNEXURE-IV

GOVERNMENT OF MEGHALAYA
OFFICE OF THE CHIEF ENGINEER (IRRIGATION)
MEGHALAYA SHILLONG

NO. AGRI/IRRI-1308/2007-08/243 **Dated, Shillong the ___Mar 2008**

From:- Shri P. S.Lyngdoh
Chief Engineer (Irrigation)
Meghalaya, Shillong

To:-

The Executive Engineer (Irrigation)
Jowai.

Sub:- **Permission for drawal of water from Chynryntong Umparti for the Proposed cement plant at Thangksai in Jaintia Hills District.**

Ref:- Letter No.AID(J)/223/2007 - 08/ 144/3670 Dt 31. 01. 2008.

With reference to the above, I am to state that the undersigned has technically approved the Meghalaya Cement Limited to draw water from river from Chynryntong Umparti at Thangksai in Jaintia Hills District based on your letter under reference above. However you are instructed to issue necessary 'No Objection Certificate' after observing all necessary formalities relating to the District.

This is for your information and necessary action.

Chief Engineer (Irri)
Meghalaya, Shillong

Memo NO. AGRI/IRRI-1308/2007-08/243 **Dated, Shillong the 17 Mar 2008**

Copy to:-

Chief Executive Officer, Meghalaya Cement Limited Thangksai Jaintia Hills District for information.

Chief Engineer (Irri)
Meghalaya, Shillong

MEGHALAYA CEMENT LTD
THANGSKAI

ANNEXURE-IV

GOVERNMENT OF MEGHALAYA
DEPARTMENT OF IRRIGATION
OFFICE OF THE EXECUTIVE ENGINEER (IRRIGATION)
JAINTIA HILLS DIVISION, JOWAI

No.AID(J)223/2007-2008/ Dated Jowai,the 24th March 2008.

NO OBJECTION CERTIFICATE.

The Executive Engineer Irrigation Jaintia Hills Jowai after due consideration of all formalities relating to the issue of N.O.C. to Meghalaya Cement Limited for drawal of water from the River Chynryntong – Umparti near Thangskai village for its Cement Plant with its Captive Power Plant at Thangskai village, subject to approval by the Meghalaya State Pollution Board, Shillong, N.O.C. issued by District Administration of Jaintia Hills District, Jaintia Hills Autonomous District Council, Jowai, Durbar Elaka Narpuh, Durbar Shnong Thangskai, Narpuh, the undersigned is pleased to grant this NO OBJECTION CERTIFICATE to the Meghalaya Cement Limited for the drawal of water from Chynryntong – Umparti River to the proposed Cement Plant and Captive Power Plant of Meghalaya Cement Limited at Thangskai village subject to the following condition:-

1. The Company will not claim any right over the river nor shall refrain any other agency from utilizing the water from Chynryntong-Umparti River as and when required.

2. The Company is to draw only the required quantity of water of 0.04 Cumecs and extra requirement should be obtained prior permission from the undersigned before drawal of the water form Chynryntong – Umparti River.

3. To prevent pollution of river/streams, the company is to ensure that no liquid effluent should flow from the factory to any stream or river by construction of Treatment plants/ soak pits.

4. The company should pay royalty/Cess as and when required as per the rule and regulation laid by the Government.

5. Regular monitoring as to the observance of the terms and condition to be done by the representative of the Department and the company on half yearly basis.

Cont.... P/2

MEGHALAYA CEMENTS LTD
THANGSKAI

ANNEXURE-IV

P/2

6. The company should obtained No Objection Certificate for setting up plant from the Jaintia Hills Autonomous District Council including Trading Licence.

7. The company must follow the above terms and condition otherwise the legal action should be taken against the company.

Shri.K.D. Phawa
Executive Engineer(Irrigation)
Jaintia Hills Division, Jowai

Memo.No.AID(J)223/2007-2008/ 4456 Dated Jowai,the 24th March 2008.

Copy:

1. The Deputy Commissioner,Jaintia Hills District,Jowai – for favour of information.
2. The Chief Engineer(Irri), Meghalaya,Shillong – for favour of information as per technical approval vide letter no Agri/IRRI-1308/
3. The Superintending Engineer(I) Meghalaya, Shillong Circle for favour of information.
4. Shri. Gopal Sharma, Authorised Signatory of Meghalaya Cement Ltd. Thangskai for favour of information.

Shri.K.D. Phawa
Executive Engineer(Irrigation)
Jaintia Hills Division, Jowai

MEGHALAYA CEMENTS LTD
THANGSKAI

ANNEXURE-IV

OFFICE OF THE JAINTIA HILLS AUTONOMOUS DISTRICT COUNCIL::JOWAI.

::::::

NO.JHADC/FOR/22/04/1318 Dated Jowai, the 5-6- 2007.

To,

M/S Meghalaya Cement Limited,
Thangskai, Jaintia Hills District.

Subject :- No-objection certificate.

Reference :- Your letter dt.03.05.07.

With reference to your petition above, I am directed to inform you that this Office have no -objection for your drawl of water from Wah Chynryntong to the Cement Plant site on the following conditions.

1. This N.O.C is valid for drawl of water only.

2. The number and size of trees to be felled during the course of pipeline connection should be reported to this Office for necessary action.

3. The company shall have to reclaim out of its own cost any damage caused during the time of drawing of water from the river source.

4. It shall be the prime responsibility of the company that the nearby population crops, orchards etc. shall not be effected due to the drawl of water.

5. Non observance and violation of the above conditions this No-objection certificate is liable to be cancelled.

Dy.Chief Forest Officer,
Jaintia Hills Autonomous District Council,
Jowai.

MEGHALAYA CEMENTS LTD
THANGSKAI

/////

ANNEXURE-V

MEGHALAYA CEMENTS LIMITED

Stack Emission and Ambient Air Quality,

From Dec'2015 to May'2016

Chimney	Suspended Particulate Matter (SPM) :mg/Nm^3						
	Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
Pr. Crusher	37.70	37.90	28.30	27.90	28.70	29.20	31.62
Sec. Crusher	38.50	36.80	27.80	28.30	29.10	29.50	31.62
Coal mill 1	38.20	37.30	26.10	26.70	27.10	27.60	30.50
Coal mill 2	37.10	37.50	27.30	28.30	28.60	28.40	31.20
RABH 1	34.80	35.40	32.20	29.10	28.30	28.60	31.40
RABH 2	32.40	33.90	34.60	32.70	31.30	29.60	32.42
ESP 1	30.40	32.40	23.80	24.20	25.10	27.10	27.17
ESP 2	33.70	31.50	35.40	31.40	30.20	29.70	31.98
Packing House	36.90	38.10	28.60	28.10	27.70	28.40	31.30
Cement Mill	36.50	37.60	26.50	27.20	28.30	27.90	30.67

Location		Ambient Air Quality (AAQ) : µg/m^3						
		Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
DG House	PM 10	66.80	64.90	69.20	72.10	70.80	74.60	69.73
	PM 2.5	37.20	35.20	42.90	46.30	45.20	42.70	41.58
Guest House	PM 10	41.50	43.50	52.90	63.70	61.60	57.80	53.51
	PM 2.5	24.70	21.30	28.30	32.70	30.40	25.90	27.22
Crusher	PM 10	80.30	78.20	84.30	87.30	89.80	92.30	85.37
	PM 2.5	42.50	40.70	50.80	52.40	51.10	52.60	48.35

Analyzed by

Sunil Kunwar

MEGHALAYA CEMENTS LTD THANGSKAI

Verified by

Sunil Kumar Choudhary

ANNEXURE-V

MEGHALAYA CEMENTS LIMITED

Six Monthly Report: Noise Intensity and Water Consumption, From Dec'2015 to May' 2016

Location		Noise Intensity: (Db)						
		Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
DG House	Day	73	75	74	73	74	76	74.16
	Night	68	69	68	66	68	70	68.17
Guest House	Day	58	61	62	59	54	57	58.50
	Night	46	43	40	42	44	46	43.50
Crusher	Day	74	76	78	79	80	82	78.17
	Night	69	70	73	71	69	69	70.17

Location	Water Consumption: M^3						
	Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
Domestic	3656	3569	3294	3761	3569	2481 up to 22/05/ 2016.	3388
Industrial	49048	43060	42280	45186	45270	25100 up to 22/05/ 2016.	41657

Analyzed by

Sunil Kunwar

MEGHALAYA CEMENTS LTD THANGSKAI

Verified by

Sunil Kumar Choudhary

ANNEXURE-V

MEGHALAYA CEMENTS LIMITED

Six Monthly Report (CPP): SPM, AAQ and Water Consumption, From Dec'2015 to May' 2016

Chimney: CPP	Suspended Particulate Matter (SPM) :mg/Nm^3						
	Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
	35.10	31.40	27.40	28.10	27.60	28.70	29.72

Location: CPP		Ambient Air Quality (AAQ) :µg/m^3						
		Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
S↔E	PM $_{10}$	40.28	39.22	36.20	46.10	51.10	49.60	43.75
	PM $_{2.5}$	20.64	21.58	20.50	22.50	28.60	29.10	23.82
S↔W	PM $_{10}$	44.36	42.34	44.30	42.60	46.40	48.80	44.80
	PM $_{2.5}$	26.68	24.62	26.60	27.60	27.80	28.10	26.90
N↔E	PM $_{10}$	38.24	36.24	38.20	40.20	52.20	51.10	42.70
	PM $_{2.5}$	22.45	24.42	22.40	24.40	30.40	30.10	25.70

Location: CPP	Water Consumption:M^3						
	Dec 2015	January 2016	February 2016	March 2016	April 2016	May 2016	Avg.
	21734	23518	21953	25567	18311	12304 up to 15/05/ 2016.	20564

Analyzed by

Sunil Kunwar

MEGHALAYA CEMENTS LTD THANGSKAI

Verified by

Sunil Kumar Choudhary

ANNEXURE-VI

ENVIROCON

DRINKING WATER ANALYSIS RESULTS

M/s MEGHALAYA CEMENTS LTD.
Village: Thangskai; PO: Lumshnong
Meghalaya

(MAY – 2016)

Sample Type : Drinking Water
Collected By : Jointly by Envirocon & Client
Sample Source : Guest House
Collected On : 11.05.2016

Sl. No.	Parameters	Results	Desirable Limit (IS: 10500)
01	Colour (Hazen Unit)	<1	5
02	Odour	Odourless	Unobjectionable
03	Taste	Acceptable	Agreeable
04	Turbidity, NTU	0.24	5.0
05	pH	7.3	6.5 – 8.5
06	Total Hardness, (as $CaCO_3$), mg/l	121	300
07	Total Dissolved Solids, mg/l	194	500
08	Alkalinity, mg/l	84	200
09	Chlorides, mg/l	17	250
10	Residual Free Chlorine, mg/l	0.062	0.2
11	Sulfate, mg/l	38	200
12	Nitrates, mg/l	1.6	45
13	Fluorides, mg/l	ND	1.0
14	Calcium, mg/l	34	75
15	Magnesium, mg/l	5.6	30
16	Copper, mg/l	ND	0.05
17	Manganese, mg/l	ND	0.1
18	Iron, mg/l	0.067	0.3
19	Mercury, mg/l	ND	0.001
20	Cadmium, mg/l	ND	0.01
21	Selenium, mg/l	ND	0.01
22	Arsenic, mg/l	ND	0.05
23	Cyanide, mg/l	ND	0.05
24	Lead, mg/l	ND	0.05
25	Zinc, mg/l	ND	5.0
26	Chromium, (as Cr^{+6}). mg/l	ND	0.05
27	Aluminium, mg/l	ND	0.03
28	Boron, mg/l	ND	1.0
29	Phenolic Compounds (as C_6H_5OH), mg/l	ND	0.001
30	Anionic Detergents (as MBAS), mg/l	ND	0.2
31	Total Coliform, MPN/100 ml	NIL	10 Max
32	Faecal Coliforms/ 100 ml	NIL	Absent
33	E. Coli / 100 ml	NIL	Absent

Analysis Protocol: **IS 3025**

ND: Not Detected

MEGHALAYA CEMENTS LTD. THANGSKAI

ENVIROCON DIGBOI

Checked By: Pankaj Baroi, ENVIROCON

NOTE: 1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, Digboi Stores Building, New Market, Digboi – 786171, Assam.

ENVIROCON

WASTE WATER ANALYSIS RESULTS

M/s MEGHALAYA CEMENTS LTD.
Village: Thangskai; PO: Lumshnong
Meghalaya

(MAY – 2016)

Sample Type : Waste Water
Collected By : Jointly by Envirocon & Client
Sample Source : STP Outlet
Collected On : 11.05.2016
Analysis Protocol : IS 3025

S. No.	Parameters	Results	Limits (IS:2490)
01	BOD (3 days, 27 °C), mg/l	19	30
02	COD, mg/l	82	250
03	Total Suspended Solids (TSS), mg/l	53	100

ENVIROCON DIGBOI

Checked By: Pankaj Baroi, ENVIROCON

MEGHALAYA CEMENTS LTD THANGSKAI

NOTE:
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
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ENVIROCON

DRINKING WATER ANALYSIS RESULTS

M/s MEGHALAYA CEMENTS LTD.
Village: Thangskai; PO: Lumshnong
Meghalaya

(April – 2016)

Sample Type : Drinking Water
Collected By : Jointly by Envirocon & Client
Sample Source : Guest House
Collected On : 08.04.2016

Sl. No.	Parameters	Results	Desirable Limit (IS: 10500)
01	Colour (Hazen Unit)	<1	5
02	Odour	Odourless	Unobjectionable
03	Taste	Acceptable	Agreeable
04	Turbidity, NTU	0.19	5.0
05	pH	7.2	6.5 – 8.5
06	Total Hardness, (as $CaCO_3$), mg/l	116	300
07	Total Dissolved Solids, mg/l	173	500
08	Alkalinity, mg/l	76	200
09	Chlorides, mg/l	11	250
10	Residual Free Chlorine, mg/l	0.051	0.2
11	Sulfate, mg/l	34	200
12	Nitrates, mg/l	1.3	45
13	Fluorides, mg/l	ND	1.0
14	Calcium, mg/l	36	75
15	Magnesium, mg/l	5.1	30
16	Copper, mg/l	ND	0.05
17	Manganese, mg/l	ND	0.1
18	Iron, mg/l	0.071	0.3
19	Mercury, mg/l	ND	0.001
20	Cadmium, mg/l	ND	0.01
21	Selenium, mg/l	ND	0.01
22	Arsenic, mg/l	ND	0.05
23	Cyanide, mg/l	ND	0.05
24	Lead, mg/l	ND	0.05
25	Zinc, mg/l	ND	5.0
26	Chromium, (as Cr^{+6}). mg/l	ND	0.05
27	Aluminium, mg/l	ND	0.03
28	Boron, mg/l	ND	1.0
29	Phenolic Compounds (as C_6H_5OH), mg/l	ND	0.001
30	Anionic Detergents (as MBAS), mg/l	ND	0.2
31	Total Coliform, MPN/100 ml	NIL	10 Max
32	Faecal Coliforms/ 100 ml	NIL	Absent
33	E. Coli / 100 ml	NIL	Absent

Analysis Protocol: **IS 3025**

ND: Not Detected

MEGHALAYA CEMENTS LTD. THANGSKAI

ENVIROCON DIGBOI

Checked By: Pankaj Baroi, ENVIROCON

NOTE:
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, Digboi Stores Building, New Market, Digboi – 786171, Assam.

ENVIROCON

WASTE WATER ANALYSIS RESULTS

M/s MEGHALAYA CEMENTS LTD.
Village: Thangskai; PO: Lumshnong
Meghalaya

(April – 2016)

Sample Type : Waste Water
Collected By : Jointly by Envirocon & Client
Sample Source : STP Outlet
Collected On : 08.04.2016
Analysis Protocol : IS 3025

S. No.	Parameters	Results	Limits (IS:2490)
01	BOD (3 days, 27 °C), mg/l	16	30
02	COD, mg/l	87	250
03	Total Suspended Solids (TSS), mg/l	61	100

Checked By: Pankaj Baroi, ENVIROCON

MEGHALAYA CEMENTS LTD THANGSKAI

NOTE:
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, Digboi Stores Building, New Market, Digboi – 786171, Assam.

TOPCEM

MEGHALAYA CEMENTS LIMITED

CAPTIVE POWER PLANT - 10 MW

WATER ANALYSIS REPORT

Date:- 02.05.206

SL NO	PARAMETER	UNIT	DM WATER		FEED WATER		CBD		SAT. STEAM		S.H. STEAM		CONDENCER		RAW WATER	COOLING WATER		
			NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	MEAS URED	NORM.	MEASURED (Shift A)	MEASURED (Shift B)
1	pH		8.5-8.8		8.8-9.2		9.8-10.2	10.06	8.8-9.2		8.8-9.2		8.8-9.2			7.0 - 8.0		
2	Conductivity	µs/ cm	5		10		200	28	5		5		5					
3	TDS	ppm	3		5		100	18	3		3		3					
4	Total hardness	ppm						NIL										
5	Ca Hardness	ppm						〃										
6	Mg Hardness	ppm						〃										
7	P- Alkallnity	ppm						7										
8	M- Alkanity	ppm						12										
9	Silica	ppm	<0.02		<0.02		<5	0.24	<0.02		<0.02		<0.02					
10	Phosphate	ppm					10 - 20	4.58										
11	Iron	ppm																
12	Hydrazine	ppm			<0.1													
13	Chloride	ppm																
14	FRC	ppm																
15	Turbidity	NTU																
16	Cr^{+6}							0.020								<20		

02.05.2016

MEGHALAYA CEMENTS LTD
THANGSKAI

TOPCEM

MEGHALAYA CEMENTS LIMITED

CAPTIVE POWER PLANT - 10 MW

WATER ANALYSIS REPORT

Date:- 03-04-2016

SL NO	PARAMETER	UNIT	DM WATER		FEED WATER		CBD		SAT. STEAM		S.H. STEAM		CONDENCER		RAW WATER	COOLING WATER		
			NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	MEAS URED	NORM.	MEASURED (Shift A)	MEASURED (Shift B)
1	pH		8.5-8.8		8.8-9.2		9.8-10.2	10.08	8.8-9.2		8.8-9.2		8.8-9.2			7.0 - 8.0		
2	Conductivity	µs/ cm	5		10		200	30	5		5		5					
3	TDS	ppm	3		5		100	17	3		3		3					
4	Total hardness	ppm						Nil										
5	Ca Hardness	ppm						"										
6	Mg Hardness	ppm						"										
7	P- Alkalinity	ppm						7										
8	M- Alkanity	ppm						12										
9	Silica	ppm	<0.02		<0.02		<5	0.26	<0.02		<0.02		<0.02					
10	Phosphate	ppm					10 - 20	4.56										
11	Iron	ppm																
12	Hydrazine	ppm			<0.1													
13	Chloride	ppm																
14	FRC	ppm																
15	Turbidity	NTU																
16	Cr^{+6}							0.029								<20		

03-04-2016

MEGHALAYA CEMENTS LTD
THANGSKAI

TOPCEM

MEGHALAYA CEMENTS LIMITED

CAPTIVE POWER PLANT - 10 MW

WATER ANALYSIS REPORT

Date:- 01.03.2016

SL NO	PARAMETER	UNIT	DM WATER		FEED WATER		CPD		SAT. STEAM		S.H. STEAM		CONDENCER		RAW WATER	COOLING WATER		
			NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	MEAS URED	NORM.	MEASURED (Shift A)	MEASURED (Shift B)
1	pH		8.5-8.8		8.8-9.2		9.8-10.2	9.94	8.8-9.2		8.8-9.2		8.8-9.2			7.0 - 8.0		
2	Conductivity	µs/ cm	5		10		200	30	5		5		5					
3	TDS	ppm	3		5		100	18	3		3		3					
4	Total hardness	ppm						NIL										
5	Ca Hardness	ppm						11										
6	Mg Hardness	ppm						11										
7	P- Alkalinity	ppm						7										
8	M- Alkanity	ppm						12										
9	Silica	ppm	<0.02		<0.02		<5	0.25	<0.02		<0.02		<0.02					
10	Phosphate	ppm					10 - 20	4.70										
11	Iron	ppm																
12	Hydrazine	ppm			<0.1													
13	Chloride	ppm																
14	FRC	ppm																
15	Turbidity	NTU																
16	Cr^{+6}	Mg/Ltr						0.025								<20		

01.03.16

MEGHALAYA CEMENTS LTD THANGSKAI

TOPCEM

MEGHALAYA CEMENTS LIMITED

CAPTIVE POWER PLANT - 10 MW

WATER ANALYSIS REPORT

Date: 02.02.2016

SL NO	PARAMETER	UNIT	DM WATER		FEED WATER		CBD		SAT. STEAM		S.H. STEAM		CONDENCER		RAW WATER	COOLING WATER		
			NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	MEAS URED	NORM.	MEASURED (Shift A)	MEASURED (Shift B)
1	pH		8.5-8.8		8.8-9.2		9.8-10.2	10.05	8.8-9.2		8.8-9.2		8.8-9.2			7.0 - 8.0		
2	Conductivity	µs/ cm	5		10		200	32	5		5		5					
3	TDS	ppm	3		5		100	18	3		3		3					
4	Total hardness	ppm						NIL										
5	Ca Hardness	ppm						"										
6	Mg Hardness	ppm						"										
7	P- Alkalinity	ppm						7										
8	M- Alkanity	ppm						12										
9	Silica	ppm	<0.02		<0.02		<5	0.24	<0.02		<0.02		<0.02					
10	Phosphate	ppm					10 - 20	4.58										
11	Iron	ppm																
12	Hydrazine	ppm			<0.1													
13	Chloride	ppm																
14	FRC	ppm																
15	Turbidity	NTU																
16	Cr^{+6}							0.020								<20		

02.02.2016

MEGHALAYA CEMENTS LTD
THANGSKAI

TOPCEM

MEGHALAYA CEMENTS LIMITED

CAPTIVE POWER PLANT - 10 MW

WATER ANALYSIS REPORT

Date:- 05.01.2016

SL NO	PARAMETER	UNIT	DM WATER		FEED WATER		CBD		SAT. STEAM		S.H. STEAM		CONDENCER		RAW WATER	COOLING WATER		
			NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	NORM.	MEAS URED	MEAS URED	NORM.	MEASURED (Shift A)	MEASURED (Shift B)
1	pH		8.5-8.8		8.8-9.2		9.8-10.2	10.08	8.8-9.2		8.8-9.2		8.8-9.2			7.0 - 8.0		
2	Conductivity	µs/ cm	5		10		200	30	5		5		5					
3	TDS	ppm	3		5		100	18	3		3		3					
4	Total hardness	ppm						NIL										
5	Ca Hardness	ppm						"										
6	Mg Hardness	ppm						"										
7	P- Alkalinity	ppm						7										
8	M- Alkanity	ppm						12										
9	Silica	ppm	<0.02		<0.02		<5	0.26	<0.02		<0.02		<0.02					
10	Phosphate	ppm					10 - 20	4.58										
11	Iron	ppm																
12	Hydrazine	ppm			<0.1													
13	Chloride	ppm																
14	FRC	ppm																
15	Turbidity	NTU																
16	Cr^{+6}							0.022								<20		

05.01.2016

MEGHALAYA CEMENTS LTD
THANGSKAI

ENVIROCON

WASTE WATER ANALYSIS RESULTS

M/s MEGHALAYA CEMENTS LTD.
Village: Thangskai; PO: Lumshnong
Meghalaya

(January – 2016)

Sample Type : STP Water
Collected By : Jointly by Envirocon & Client
Collected On : 08.01.2016
Sample Source : Inlet & Outlet of Treatment Plant
Analysis Protocol : IS 3025

Sl. No.	Parameters	Results		Limits (IS:2490)
		Before Treatment	After Treatment	
01	pH	6.5	6.7	5.5 – 9.0
02	Colour	Clear	Clear	--
03	Temperature	18	18	Shall Not Exceed 5°C above the receiving water temperature
04	BOD (3 days, 27 °C), mg/l	19	16	30
05	COD, mg/l	83	72	250
06	Suspended Solids , mg/l	74	62	100

MEGHALAYA CEMENTS LTD THANGSKAI

Report Verified By:

Pankaj Baroi
ENVIROCON

NOTE:
1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, Digboi Stores Building, New Market, Digboi – 786171, Assam.

ANNEXURE.– VII

Office of the Jaintia Hills Autonomous District Council, Jowai
NO.JHADC/FOR/78/2015/5624-31 Dated Jowai the 5th Nov' 2015.

To

The Managing Director
M/S Meghalaya Cement Ltd
Thangskai Village.

7/12/15

Subject: - Certificate for Raising of Plantation and Green belt by Meghalaya Cement Ltd.

Reference: - Your petition Date 2nd April 2015.

This is to certify that M/S Meghalaya Cement Limited, Village Thangskai, P.O – Lumshnong, East Jaintia Hills, Meghalaya, has been completed the plantation work for greenbelt development in the following areas in and around factory premises.

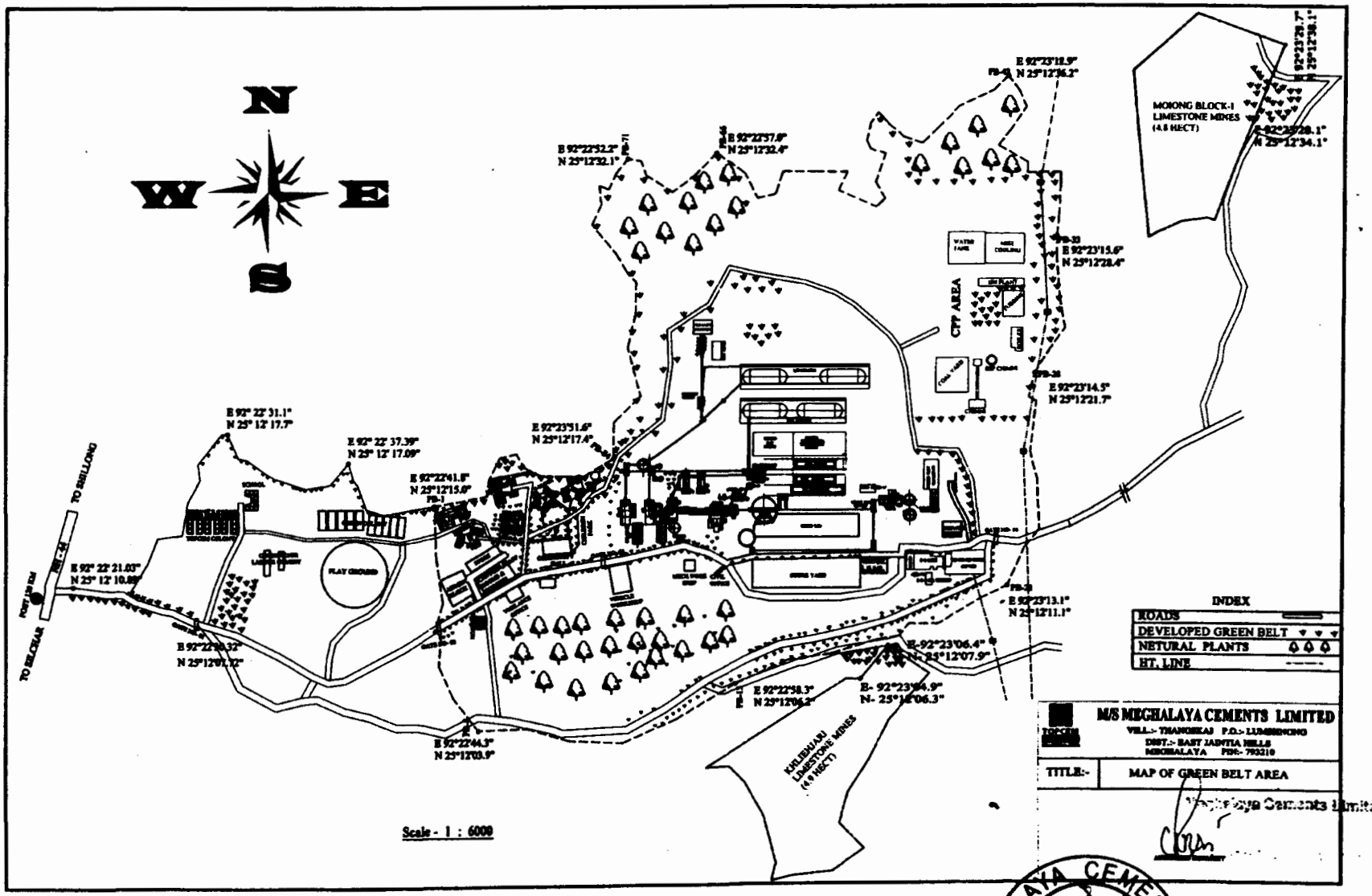
Plant Area Period/Year : From 2009 – 2010 to June 2015.
Area – 4.46 Ha
Location : Plant premises
Mines Area Period/ Year :- From 2009 – 2010 to June 2015
Area – 0.49 **Ha**
Location : View point of Moiong Block I Limestone Mine & View point of Khliehjeri Limestone Mine.
Near Gate No – 1
Period/ Year :- From July 2015-11-05
Location : Near Gate No – 1
Type :- Rapid Forestation by "**Akria Miyawaki**"method under the guidance of Central Pollution Control Board, Shillong
Natural Green Belt Area (Natural grown plants maintained as green belt)
Period/ Year :- From 2003 to 2015
Area – 12.95 Ha
Location :- In north eastern and South eastern side of plant area

Total Greenbelt **as on date is 18.16Ha**

Chief Forest Officer
Jaintia Hills Autonomous District Council,
Jowai.

MEGHALAYA CEMENTS LTD
THANGSKAI

ANNEXURE-VII



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Annexure: - VII

YEAR WISE PLANTATION DETAILS

MEGHALAYA CEMENTS LIMITED

Date:-09.09.2015

YEAR	Saplings planted (Nos.)	Area covered (Hect.)	Saplings Survive (Nos.)	Survival Rate	Remarks
2009-10	10630	1.063	6909	65%	Planted near Office Campus, residential blocks, Children park, Guest house Temple and road side.
2010-11	4485	0.4485	3304	73%	CPP Campus,
2011-12	1425	0.1425	1271	89%	CPP Campus.
2012-13	1725	0.1725	1609	93%	CPP Campus, Lawn of residential blocks & Dispensary.
2013-14	1793	0.1293	1365	76%	Planted in the Topcem Public School Campus, Children Park & Approach Road side.
2014-15	7904	0.8	5532	70%	CPP Campus, Along Plant Boundary & Crusher Road side.
2015-16	12905	1.70	9290	72%	Approach Road side, CPP Campus, Along Plant Boundary & Dispensary Campus.
Total=	**40867**	**4.4558**	**29280**	**71.6%**	

Note: -1. We have natural green belt area of 2.45 hectares and 10.5 hectares situated at north eastern and south-eastern part of the plant area and we are maintaining the said area regularly. Therefore, the total area under green belt is **17.40 hectares.**

MEGHALAYA CEMENTS LTD
THANGSKAI

ANNEXURE – VIII

MEGHALAYA CEMENTS LIMITED

TOPCEM
Mazbooti ka bharosa...hamesha

SALARY DETAILS OF CLEANER AS ON 31.12.2015			
SL.NO.	NAME	DESIG	GROSS SALARY
1	DISWONLANG BAREH	CLEANER	8347
2	EDEN LALOO	CLEANER	7936
3	PRAS BAREH	CLEANER	9930
4	SABINA SYIH	CLEANER	7188
5	KHALMISS SUTING	CLEANER	8374
6	PHINIAL DHAR	CLEANER	7084
7	SHNGAIN PALE	CLEANER	8640
8	TNGENMON SYIH	CLEANER	8280
9	IBASHISHA KHARSATI	CLEANER	7501
10	ESTAR PUSIEN	CLEANER	7519
11	DIL PHAWA	CLEANER	6378
12	PHIMAI SUTNGA	CLEANER	8008
13	HILDIS SYRTI	CLEANER	5965
14	LILY POHBAN	CLEANER	5870
15	KYRSOI SYIH	CLEANER	7435
16	PHYRNAI SYRTI	CLEANER	6069
17	RIDAMON SUCHEN	CLEANER	6148
18	JUBLI LAPASAM	CLEANER	6257
19	OMEGA SUTING	CLEANER	5870
20	METHILDA SYIEMLIEH	CLEANER	5736
21	SPELBHA SUCHIANG	CLEANER	5870
22	PRAYSILLA RYMBAI	CLEANER	5914
23	CHEBARIMA BAREH	CLEANER	6356
24	MEYOKI RYMBAI	CLEANER	5614
25	MINU RAI	CLEANER	6900

MEGHALAYA CEMENTS LTD THANGSKAI

MEGHALAYA CEMENTS LTD THANGSKAI

Sales & Marketing Office :
Mega Plaza, 4th Floor, Christian Basti
G.S. Road, Guwahati - 781 005
Tel. : 0361 2345421/22/23, Fax : 0361 2345419
E-mail : guwahati@topcem.in
Web : www.topcem.in

Kolkata
BE-77, Salt Lake City
Sector-1, Kolkata - 700 064
Tel. : 033 2334 0886 / 0004
Fax : 033 2334 0505
E-mail : kolkata@topcem.in

Registered Office :
Village Thangskai, P.O. Lumshnong
Pin - 793 200, District Jaintia Hills, Meghalaya
Tel. : 03655 278324 / 363 / 364
Fax : 03655 278327
E-mail : meghalaya@topcem.in

HELPLINE NO : 18001233666

ANNEXURE-IX

M/s. Meghalaya Cements Limited
Thankskai, Meghalaya

The revenue expenditure incurred on environmental protection equipments /Machineries

From 01.12.2015 to 23.05.2016

Sl- no-	Heading	Amount
1	Bag Filter (Cement Mill, Coal Mill, Raw mill, Crusher	3618596
2	ESP	10601
3	RABH	293083
4	RAW MATERIAL YARD	596486
Grand Total		**4518765**

For
M/s. Meghalaya Cements Limited

Authored Signatory

MEGHALAYA CEMENTS LTD
THANGSKAI

ANNEXURE-X

Expenditure Incurred for Socio-Economic Deverlopment under CSR
From 01.12.15 to 31.05.16

SL.NO.	HEADING	AMOUNT
1	Emphasis on Education	484,848
2	Encouraging/Felicitation prog. For Students.	-
3	Awareness campaign for personally given.	8,000
4	Polio Immunization Camps, Family planning, etc.	297,764
5	Infrastructure development of Hospitals/Schools	263,218
6	Cement Distribution Programme.	1,978,800
7	Plant Distribution Programme.	24,300
8	Donation to Churches & Road Repairing etc.	5,000
9	Drinking water supplying scheme.	708,505
10	Village Development Funds.	310,000
	Total	4,080,435

MEGHAYA CEMENTS LTD.

Authorised Signatory

MEGHALAYA CEMENTS LTD
THANGSKAI

ANNEXURE – XI

MEGHALAYA CEMENTS LIMITED

ENVIRONMENT SECTION

LIST OF THE EQUIPMENTS

Sl. No	Name of Equipment	For Testing	Supplier's Name	Quantity
1.	BDH portable water testing kit	Drinking water testing – Total Hardness, Calcium Hardness,Alkalinity,Chloride ,p^H	BDH	01
2. A	Stack Monitoring Kit, APM-602 & APM -620 with accessories.	Volume of gas in Stack, Temperature, Dust Concentration of emission and For measuring of Sox & Nox.	M/s-VAYUBODHAN UPKARAN PVT.LTD	01
2. B	Pitot Tube (1.5 meter length) Extra	Supporting Accessories for Stack Monitoring Kit.	M/s-VAYUBODHAN UPKARAN PVT.LTD	01
3.	Respirable Dust Sampler APM-550 with accessories.	For measuring PM_{10} & $PM_{2.5}$ (Ambient Air Quality)	M/s Envirotech Instruments Pvt.Ltd.	03
4.	Gaseous Analyzer APM - 433	For measuring of Sox & Nox. (Ambient Air Quality)	M/s Envirotech Instruments Pvt.Ltd.	02
5.	High Volume Sampler APM-430 & APM-411	For measuring of Air Ambient Quality.	M/s Usha Instruments & Chemicals Pvt.Ltd.	03
6.	Data Taker DT-50 with accessories.	For measuring of Wind speed, Wind direction, Temperature, humidity and Rainfall.	M/s AIMIL Ltd.	01
7.	Pressure Meter	For measuring of dp across level	M/s NEVCO ENGINEERS PVT.LTD.	01

(1)

MEGHALAYA CEMENTS LTD THANGSKAI

8.	C.O.D DIGESTION	For measuring of Chemical Oxygen Demand in STP water.	M/s Commercial Equipments, New Delhi.	01
9.	B.O.D INCUBATOR	For measuring of Biological Oxygen Demand in STP water.	M/s BIO-TECHNICS INDIA	01
10.	DECIBEL METER (Raython Technology RT-5001)	For measuring of Noise Level	M/s RAYTHONE TECHNOLOGY Chennai.	01
11.	Top Loading Balance	For Weighment.	M/s Citizen Scale India Pvt.Ltd.	01
12.	E.Coil Test Kit	For water testing	M/s Hi-Media Pvt.Ltd.	01
13.	Aqua Check Multi Parameters Water Testing Kit	For water testing	M/s Hi-Media Pvt.Ltd.	01
14.	Carbon Dioxide Testing Kit	For water testing	M/s Hi-Media Pvt.Ltd.	01
15.	Aqua Check Total Hardness Testing Kit	For water testing	M/s Hi-Media Pvt.Ltd.	01
16.	Arsenic Test Kit	For water testing	M/s Hi-Media Pvt.Ltd.	01
17.	Dissolve Oxygen Testing Kit	For water testing	M/s Hi-Media Pvt.Ltd.	01
18.	Digital p^H Meter	For water testing	M/s Hi-Media Pvt.Ltd.	01
19.	Digital Conductivity Meter	For water testing	M/s Hi-Media Pvt.Ltd.	01

MEGHALAYA CEMENTS LTD THANGSKAI

20.	Digital Turbidity Meter	For water testing	M/s Hi-Media Pvt.Ltd.	01
21.	ANEMOMETER Model-AM-4201	For measuring Wind Speed.	M/s Digital Instruments.	01
22.	Hot Air Oven	For measuring of Moisture Test	M/s Commercial Equipments, New Delhi	01
23.	Hot Plate	For TSS Measuring	M/s Commercial Equipments, New Delhi	01
24.	Chromium VI Testing Kit	For water testing	M/s Porshvnath Lab solutions.	01
Note: All Relevant Chemicals and Glassware availed in existing Env. Laboratory.				

MEGHALAYA CEMENTS LTD
THANGSKAI

MEGHALAYA CEMENTS LIMITED

ENVIRONMENT SECTION

List of Chemicals

Sl.No	Name of the Chemicals	Quantity	Remarks
1.	Hydrogen Peroxide	2500ml	
2.	Pyrogallol GR	400gms	
3.	Acetic Acid	100ml	
4.	Formaldehyde	500ml	
5.	Sulphuric Acid 5%	200ml	
6.	KOH 40%	250ml	
7.	Alkaline Pyrogallol	300ml	
8.	Zinc Sulphate heptadehydrate GR	2000gms	
9.	Potassium Dichromate	500gms	
10.	1-Amino-2-Nepthal-4 Sulphonic Acid Extra Pure	300gms	
11.	Sodium Thiosulphate	500gms	
12.	Sodium Disulphate Purified	1000gms	
13.	Citric Acid Monohydrate	500gms	
14.	Sodium Nitrate	500gms	
15.	Starch Solution	500gms	
16.	Sulphamic Acid	500gms	
17.	Sodium Hydroxide Pellets	500gms	
18.	Acetic Acid Glacial	250ml	
19.	Formaldehyde solution	500ml	
20.	Hydroquinon Solution	500ml	
21.	Wanklyn Solution	500ml	
22.	Q-Tolidine Reagent	-	
23.	Alkaline Cuprous Chloride	500ml	
24.	Methanol	300ml	
25.	Polykote high vacuum compound silicon compound	250gms	
26.	Cadmium chloride monohydrate pure	500gms	
27.	Potassium Iodate GR	500gms	
28.	Mercury(II) Iodide red purified	200gms	
29.	Cuprous Chloride	200gms	
30.	Potassium Iodide	100gms	
31.	Silver Nitrate	50ml	
32.	Paralosaniline Hydrochloride	100gms	
33.	Silicon Oil	250ml	
34.	Mercuric Iodide Red	200gms	

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35.	Neda	75gms	
36	Methyl red	30gms	
37.	Sulphanilamide	40gms	
38.	Sodium Nitrite	20gms	
39	Bromocrosol green	20gms	
40.	Desicator	02 no	
41.	Hydrochloric Acid	1500 ml	
42.	Sulphuric Acid	5.0 liter	
43.	Ammonia Solution	5.0 liter	
44.	Methanol	1.0 liter	
45.	Ortho Phosphoric Acid	500 gms	
46.	Sodium Arsenite	500 gms	
47.	Potassium Chloride	500 gms	
48.	Sodium Carbonate	500 gms	
49.	Mercuric Chloride	500 gms	
50.	Isopropanol	500 ml	
51.	Barrette (50ml)	5 Nos.	
52.	Pipette (5ml)	2 Nos.	
53.	Filter Paper (No-40)	03pkt	
54.	Potassium Chromate	25 ml	
55.	Volumetric flask (cap-100 ml)	02 Nos.	
56.	Volumetric flask (cap-250 ml)	05 Nos.	
57.	Measuring Cylinder(cap-500ml)	01Nos.	
58.	Measuring Cylinder (cap1000ml)	01 Nos.	
59.	Measuring Cylinder(cap-100ml)	02Nos.	
60.	Measuring Cylinder(cap-10ml)	02Nos.	
61.	Beaker (cap-500ml)	05Nos.	
62.	Beaker (cap-250ml)	05Nos.	
63.	Beaker (cap-100ml)	05Nos.	
64.	Conical Flask (cap-250 ml)	05Nos.	
65.	Conical Flask (cap-100 ml)	05Nos.	
66.	Boiling Flask (Cap-500ml)	06 Nos.	

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