Dated: 28.05.2019

NA PAOGE

HILA

Ref No: GSCL/EHS/2019-20/06

To. The Ministry of Environment & Forests & Climate Change, North Eastern Regional Office (NEZ), Law-u-sib, Lumbatngen, Near MTC Workshop, Near NTC Workshop, Shillong-793021

Sub: Six monthly compliance of environment clearance letter of M/s Goldstone cements Ltd, Vill: Musiang Lamare (old), Khliehriat, East Jaintia Hills, and Meghalaya-793200

Ref: Environment Clearance letter No:-J-11011/851/2008-IA II(I) dated 30.09.2010

Dear Sir.

With the matter as cited in the subject, we would like to submit the Half Yearly Compliance report for the period 01.10.2018 to 31.03.2019 on Environmental Stipulations for our Cement Plant along with Captive Thermal Power plant located at Vill Musiang Lamare (old), Khliehriat, Dist: East Jaintia Hills, Meghalaya -793200.

All annexures are enclosed as mentioned in compliance report for your kind reference.

Thanking You,

Yours faithfully

For Goldstone Cements Ltd

Author

Encl: As mentione trabove

CC: 1. Regional Director, Gardal Pollution Control Board, Regional Directorate-North East, Lower Motinagar, Shillong-793014.

ENVIRO

2. Member Secretary, Meghalaya State pollution Control Board, "ARDEN" Lumpyngngad, Shillong-793014, Meghalaya.

Central Pollution Control Board

क्षेत्रीक निदेशालय उत्तर पूर्व शिलांग - ७९३०१४

Regional Directoret - Worth Cast, Shillong - 793014 पर्यावरण, बन रच जननाचु शरेवर्तन संत्रालय, भारत सरकार

Ministry of Environment, Forest & Climate Change, Govi. of India

Goldstone Cements Limited

CIN No.: U26940ML2007PLC008298

SL.	MW) AT VILL MUSIANG LAMARE (OLD), P.O.KHLIEHRI CEMENTS LTD – ENVIRONMENTAL CLEARENCE VIDE M	10EF LETTER NO. J-11011/851/2008-IA II (1), DATED 50.09.2010.
NO	CONDITIONS	COMPLIANCE
	A. SPECIFIC CONDITIONS	a in the state of the Material is in working condition and
i	Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After expansion, limit of SPM shall be controlled within 50 mg/Nm³ by installing adequate air pollution Control system. Electrostatic precipitators (ESP) to clinker cooler, bag house raw mill/kiln and bag filters to coal mill and cement mill. Low NOx burners should be provided to control NOx emissions.	online data transferred to CPCB & MSPCB.  ●ESP (Electrostatic Precipitators) for Clinker cooler, Bag house/Bag filters for Raw Mill / Coal Mill & other pollution control equipments were already installed in plant to keep SPM below 30 mg/Nm3 in Cement Plant stacks and 50 mg/Nm3 in Centive Power Plant stack as per our consent guideline.
ii	Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB). A feasibility report shall be prepared and submitted to the ministry and its Regional office at Shillong within 03 months from the date of issue of the letter.	Hot gases generated from kiln are required for drying out moisture in Raw Mill and Fuel. Hence Kiln waste heat is being utilized partially in Raw Mill and partially in Coal Mill to meet our operational requirement. Some heat is lost in clinker cooler. Moreover, in our case the installed capacity of kiln is only 1700 TPD and after utilization of hot gases in Raw mill and Coal mill it becomes the remaining
*		quantum of waste heat is not sufficient for setting up WHRB.  We have also explored the Cement plants in the near vicinity and none of them have installed Waste Heat Recovery Plant.  However, we have appointed consultant for study and submission of report.
iii	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 <sup>th</sup> November 2009 shall be followed.	The same is being followed during operation of plant. Ambient air quanty monitoring is being done through Third party (Recognized laboratory).  Ambient air quality parameters are found to be within the limit for all the parameters  (Details attached in Annexure-1)
iv	Secondary fugitive emission shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of practice issued by the CPCB in this regard should be followed.	emission. Started constructing concrete road in the plant.  (Photographs are enclosed in Annexure: 2)
		Water sprinklers installed in lime stone crusher and coal area and plant roads.  (Photographs are enclosed in Annexure: 2a, 2b, 2c)  Full time water tanker has been deployed in the plant as shown in Annexure: 2d
	1 OF 6	Guideline / Code of practice issued by the CPCB is being followed during operation of plant. Regular monitoring for control of secondary fugitive emission under prescribed limit is being done.  (Details attached in Annexure-1)

v	should be transported in the closed containers only and shall not be over loaded. The company shall have separate truck parking area.	Raw Material and end products are transported keeping in consideration that surrounding environment and agriculture land is protected. There is separate designated parking space for truck parking.  It is ensured that without valid PUC no vehicle is allowed in plant premises. Few certificates enclosed for your reference.  (Details attached in Annexure-3)  (Details attached in Annexure-3)
vi	Total water requirement for cement and captive power plant shall not exceed 2,370 m <sup>3</sup> / day. All the treated wastewater shall be recycled and reused in the process and / or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'Zero' discharge should be adopted.	Total water requirement is much below the stipulated limit of 2,370 m³ / day as our  Total water requirement is much below the stipulated limit of 2,370 m³ / day as our  Plant has been designed as per close circuit arrangements for cooling water.  Company has adopted "ZERO discharge" of waste water.  We have constructed a reservoir of 1 lac liters capacity in the west side; however  We have constructed a reservoir is planned.
vii	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	(Photographs)
viii	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional office at Shillong, SPCB and CPCB.	We are not generating any process effluent as the process of the p
ix	All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / re-processors	All the dust collected through pollution control equipments cement dust. Those are collected and recycled in a closed loop.
x	maximum in making Pozzolana Portland Cement (PPC).	Fly ash generated in our capture of Pozzolana Portland Cement (PPC) manufacturing of Pozzolana Portland Cement (PPC)  Low grade limestone / Dolomite Stones are blended with high quality grade limestone / Dolomite Stones are blended with high quality grade limestone / Pozzola times Fly ash generated in CPP is used in-house in manufacturing of Pozzola times Fly ash generated in CPP is used in-house in manufacturing around 80% PPC with blend of
ĸi	Effort shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.	I Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Pozzola in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones are blended with high quality grade in Low grade limestone / Dolomite Stones / Dolomite Sto

xii	An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.	We do not have significant quantum of high calorific hazardous waste except very insignificant quantity of Lubricating Oil and the same is disposed off as per defined rules in this regard.
xiii	As proposed, green belt shall be developed in at least 33% area in around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.	The green belt plan to achieve 33 % area coverage is already finalized. Coverage in major area has been in place. Plantation in balance area is under progress. Plantation of Native species is being done in consultation of DFO. 29.12% area is already under greenbelt.
		Balance and required plantation shall be done in phase manner.  (Greenbelt development Drawing is enclosed in Annexure: 6)
xiv	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants should be implemented.	All recommendations were considered during the design of plant and machineries and as such all the issues in this regard are complied with.
xv	All the commitments made to the public during the Public Hearing / Public consultation meeting held on 27 <sup>th</sup> November 2009 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional office at Shillong.	All of the points of public hearing have been addressed and complied.  (Details are mentioned in annexure-7)  Company has given preference to local people for employment in company.  Company has conducted social development activities in nearby vicinity areas as health facilities, ambulance facilities, water facilities, free and subsidized cements for constructing the roads, churches, schools, community halls, cultural programmes and etc
xvi	At least 5% of the total cost of the project shall be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional office at Shillong. Implementation of such program shall be ensured accordingly in a time bound manner.	Company has conducted CSR activities in nearby vicinity areas as health facilities, ambulance facilities, water facilities, free and subsidized cements for constructing the roads, churches, schools, community halls, cultural programmes and etc.  (The CSR activities with expenditure details are enclosed in annexure-8)
xvi i	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Company has already constructed workers accommodations with all necessary infrastructure and facilities such as Fuel for cooking, Toilets & Bathrooms, safe drinking water, medical health care etc.
	B. GENERAL CONDITIONS	
i	The project authorities must strictly adhere to the stipulations made by the Meghalaya State Pollution Control Board and the State Government.	Stipulations mandated in the CTE and CTO are being adhered to.

ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	There will be no expansion or modifications beyond permissions already granted without prior approval of MoEF.
iii	The gaseous emissions from various process units shall confirm to the load / mass based standards notified by this Ministry on 19 <sup>th</sup> May, 1993 and standards prescribed from time to time. The State Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Our newly commissioned unit with more sophisticated technologies is able to meet with the new standards of emission for cement industries, including load based standards.
iv	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional office at Shillong and the SPCB/CPCB once in six month.	At present, monthly monitoring of ambient air quality is being carried out with the help of recognized laboratory. Online emission monitoring system is installed in all the major stacks. Compiled data are submitted to MOEF&CC, CPCB and MSPCB once in six months. We are also submitting the Environmental Monitoring reports once in every month to MOEF&CC, CPCB and MSPCB.  (Details are attached as per Annexure-1)
v	Industrial waste water shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	Treated wastewater from DM plant is used entirely in dust suppression measures. Process water requires for cooling of bearing in the cement plant are cooled, treated and recycled fully.
vi	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA	Care has been taken during project planning and ordering of equipment. Noise level is monitored and being found within the prescribed limit.  (Details are attached as per Annexure-1)
vii	(daytime) and 70 dBA (nighttime).  Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	We are working for occupational health surveillance to our workers as per factory act and will be submitted as soon as possible.  However, the health care center is already available in our Plant Campus. Trained staff and visiting doctor appointed with essential medicine for health surveillance on regular basis.
viii	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	We have constructed a reservoir of 1 lac liters capacity in the west side; however

ix	The project proponent shall also comply with all the environmental	We are working on the implementation of the conditions given in EIA/EMP.
1X	protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water	drinking water facility in nearby village.
x	supply and health care etc.  As proposed, Rs 25 Crores and Rs 1.80 Crores shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by	following equipments apprx 22.41 Cr as capital cost.
	the Ministry of environment & Forests as well as the state government. An implementing all the conditions stipulated herein shall be submitted to the Regional office of the Ministry at Shillong .The Funds so provided shall not be diverted for any other purpose	<ul> <li>Material transfer points bag filters installed to control fugitive dust</li> <li>Sox &amp; NOx analyzer and opacity meters have been installed to monitor the emission and data transmission to CPCB server.</li> </ul>
Xi	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Has been implemented. Copy was already submitted to the MOEF &CC.
xii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Shillong. The respective Zonal office of CPCB and the SPCB. The criteria pollutant levels namely; PM 10, SO <sub>2</sub> , NOx (ambient levels as well as stack emissions) or critical sectoral parameters. Indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Environmental Parameters display board has been installed near company main gate.  (Photograph is enclosed in annexure-10)  The EC and six monthly EC compliance reports are shown in our company website <a href="http://gscl.blacktigerso.com/">http://gscl.blacktigerso.com/</a>
xiii	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MOKE Green respective Zonal office of CPCB and the SPCB. The Regional office of this Ministry at Shillong / CPCB /SPCB shall monitored stipulated conditions.	MSPCB periodically. (Reports are enclosed in annexure-11)

xiv	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional office of the MOEF at Shillong by e-mail.	Environmental Statement (Form V) for the year 2017-18 has been Submitted to Regional office of the State Pollution Control Board, MoEF and CPCB.  (Details attached as per Annexure-I2)  The process shall be followed for each FY.
xv	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local news papers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Shillong.	Has been implemented.
xvi		Followed the norms and land development work completed accordingly.

For Goldstone coments Ltd.

Authorized Signatory



HILA NA PAOCE

Ref: GSCL/EHS/ 2018-19/06

Dated: 17.11.2018

To
The Member Secretary
Meghalaya State Pollution Control Board
Arden, Lumpyngngad,
Shillong-793014.

Central Pollution Control Board क्षेत्रीय निदेशालय उत्तर पूर्व शिलांग - ७९३०१४ Regional Directorate - North Fast, Shillong - 783014 पर्यावरण, बन एवं जलपायु परिवर्तन मंत्रालय, मास्त सरव Ministry of Environment, Forest & Cimpse Change, Govt. of

Sub: Submission of Monthly Environmental Monitoring Reports RECO

Sir.

ATED .....

20/11/2018

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With reference to the subject as cited above, we are submitting Monthly Environmental Monitoring Reports for the month of October -2018, which was monitored by Authorized Third Party M/s. ENVIROCON.

We request you to acknowledge the receipt.

Thanking You.

Yours faithfully

For Goldstone Cements Ltd

( ''

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CC: 1. Regional Director, Central Pollution Control Board, Regional Directorate-North East. Lower Motinagar, Shillong-793014.

2. The Ministry of Environment & Forests & Climate Change, Law-u-sib, Lumbatngen, Near MTC Workshop, Shillong-793014, Meghalaya.

Encl: Ambient air quality test report - October 2018
Stack Emission test report - October 2018
Drinking water analysis report - October 2018
Process Fugitive Emission test report - October 2018
Noise level measurement report - October 2018

Goldstone Cements Limited
CIN No.: U26940ML2007PLC008298



Digboi Stores Building, New Market Digboi, Assam - 786 171

E-mail: envirocon@rediffmail.com

Ph: 03751-264414, 9435008657, 8876028672 Website: www.envirocon.net.in



Report No.: ENV/GSCL/AAQ/OCT/18-19/01

Date

: 25/10/2018

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old)

P. O .:- Khliehriat Meghalaya-793200

# AMBIENT AIR QUALITY TEST RESULTS

SL.	Location(s)	Date of	PM 2.5 (μg/m³) 60 (24 Hrs. Av.)	PM 10 (μg/m³)	NO <sub>2</sub> (μg/m³)	SO <sub>2</sub> (μg/m³) 80 (24 Hrs. Av.)
No.	Limit(s) -	Sampling		100 (24 Hrs. Av.)	80 (24 Hrs. Av.)	
_		10.10.2018		62.8	10.8	5.6
1.	Near CPP	11.10.2018	32.4			
		10.10.2018		66.7	8.1	BDL
2.	Near Secondary Crusher	11.10.2018	26.1			
		10.10.2018	-	68.4	6.9	BDL
3.	Near Fly Ash Shed	11.10.2018	31.4	·		
		10.10.2018		53.4	6.2	BDL
4.	Near Temple	11.10.2018	20.4	-		

**BDL: Below Detection Level** Analysis Protocol: IS 5182

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. 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.



Digboi Stores Building, New Market Digboi, Assam – 786 171

Ph: 03751-264414, 9435008657, 8876028672 E-mail: envirocon@rediffmail.com

E-mail: envirocon@rediffmail.co Website: www.envirocon.net.in



Report No.: ENV/GSCL/SE/OCT/18-19/01

Date : 25/10/2018

# GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

# STACK EMISSION TEST RESULTS

iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	349.7	mg/Nm³	800	
íi.	Sulphur Dioxide (as SO <sub>2</sub> )	765.4	mg/Nm³	1000	
i.	PM- Particulate Matter	23.4	mg/Nm³	30	
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s	
08	Analysi	s Results of Flue Gas			
07	Type of Fuel Used		Kiln Coal		
06	Exit Velocity of Gas (m/sec)		12.8		
05	Flue Gas Temperature (°C)		182		
04	Stack Attached To		R. A. B. H.		
03	Material of Construction		M. S.		
02	Date of Sampling		10,10.2018		
01	Stack Emission Test Ref. No.	GSG	GSCL/SE/OCT/18-19/01		



Checked By: Mr. Pankaj Barol, ENVIROCON

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Report No.: ENV/GSCL/SE/OCT/18-19/02

Date

:25/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old)

P. O.:- Khliehriat Meghalaya- 793200

### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/OCT/18-19/02		
02	Date of Sampling		10.10.2018		
03	Material of Construction M. S.				
04	Stack Attached To		Coal Mill		
05	Flue Gas Temperature (°C)	57			
06	Exit Velocity of Gas (m/sec)		8.7		
07	Type of Fuel Used	NA*			
08	Analysis	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	28.2	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	355.2	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	177.4	mg/Nm³	800	

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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# Envirocon

Recognised By PCB, Assam & MSPCB, Meghalaya

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Report No.: ENV/GSCL/SE/OCT/18-19/03

Date : 25/10/2018

### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

# STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL	/SE/OCT/18-19	GSCL/SE/OCT/18-19/03	
02	Date of Sampling		11.10.2018		
03	Material of Construction		м. S.		
04	Stack Attached To		Cooler E. S. P.		
05	Flue Gas Temperature (°C)		216		
06	Exit Velocity of Gas (m/sec)		13.5		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	24.1	mg/Nm³	30	
II.	Sulphur Dioxide (as SO <sub>2</sub> )	212.4	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	60.4	mg/Nm³	800	

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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PCB, Assam & MSPCB, Meghalaya

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E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in





Report No.: ENV/GSCL/SE/OCT/18-19/04

Date :25/10/2018

#### GOLDSTONE CEMENTS LIMITED

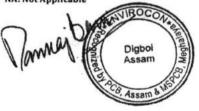
Village- Musiang Lamare (Old) P. O .: - Khliehriat Meghalaya-793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/OCT/18-19/04		
02	Date of Sampling		11.10.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Cement Mill		
05	Flue Gas Temperature (°C)		61		
06	Exit Velocity of Gas (m/sec)		11.4		
07	Type of Fuel Used		NA*		
08	Analysis I	Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	27.1	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL	mg/Nm³	800	

**BDL: Below Detection Limit** 

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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# Envirocon

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Report No.: ENV/GSCL/SE/OCT/18-19/05

Date : 25/10/2018

# GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

# STACK EMISSION TEST RESULTS

06	Exit Velocity of Gas (m/sec)  Type of Fuel Used		8.9 Coal		
07	Type of Fuel Used		Coal		
07	Type of Fuel Used		Coal		
07	Type of Fuel Used		Cont		
06	Exit Velocity of Gas (m/sec)		8.9		
06					
05	Flue Gas Temperature (°C)		84		
04	Stack Attached To	Capt	Captive Power Plant (CPP)		
04	Stock Association To				
03	Material of Construction		Refractory Brick		
02	Date of Sampling		12.10.2018		
01	Stack Emission Test Ref. No.	GSC	GSCL/SE/OCT/18-19/06		



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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Digboi Stores Building, New Market Digboi, Assam - 786 171 Ph: 03751-264414, 9435008657, 8876028672

E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No. : ENV/GSCL/DW/OCT/18-19/01 Date : 25/10/2018

**GOLDSTONE CEMENTS LIMITED** 

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya-793200

### **DRINKING WATER ANALYSIS RESULTS**

Sample Type : Drinking Water	Sample Source	: Canteen
Collected By : Jointly by Envirocon & Client	Collected On	: 12.10.2018
, , , and a district of the control	conected on	

SI. No.	Parameters	Results	Desirable Limit (IS: 10500)
1.	Colour , Hazen Units, Max	<1	5
2.	Odour	Odourless	Agreeable
3.	Taste	Acceptable	Agreeable
4.	Turbidity, NTU, Max	0.15	1.0
5.	pH	7.2	6.5 - 8.5
6.	Total Dissolved Solids, mg/l, Max	142	500
7.	Aluminium (as Al), mg/l, Max	ND	0.03
8.	Boron (as B), mg/l, Max	ND	0.5
9.	Calcium (as Ca), mg/l, Max	22	75
10.	Chloride (as Cl), mg/l, Max	3.2	250
11.	Copper (as Cu), mg/l, Max	ND	0.05
12.	Fluorides (as F), mg/l, Max	ND	1.0
13.	Free Residual Chlorine, mg/l, Min	ND	0.2
14.	Iron (as Fe), mg/l, Max	0.096	0.3
15.	Magnesium (as Mg), mg/l, Max	. 3.4	30
16.	Manganese (as Mn), mg/l, Max	ND	0.1
17.	Zinc (as Zn), mg/l, Max	ND	5.0
18.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	ND	45
19.	Phenolic Compounds (as CoHsOH), mg/l, Max	ND	0.001
20.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	17	200
21.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	76	200
22.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	6.3	200
23.	Cadmium (as Cd), mg/l, Max	ND	0.003
24.	Cyanide (as CN), mg/l, Max	ND	0.05
25.	Lead (as Pb), mg/l, Max	ND	0.01
26,	Mercury (as Hg), mg/l, Max	ND	0.001
27.	Selenium (as Se), mg/l, Max	ND	0.01
28.	Total Arsenic (as As), mg/l, Max	ND	0.01
29.	Total Chromium, (as Cr), mg/l, Max	ND	0.05
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

Digboi

**ND**: Not Detected

1. Results reported are valid at the time of and under the prevailing conditions of measurement.

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Checked By: Mr. Pankaj Baroi, ENVIROCOM

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# Envirocon

Recognised By
PCB, Assam & MSPCB, Meghalaya

Digboi Stores Building, New Market Digboi, Assam – 786 171 Ph: 03751-264414, 9435008657, 8876028672 E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No.: ENV/GSCL/FE/OCT/18-19/01

Date : 25/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### PROCESS FUGITIVE EMISSION TEST RESULTS

Date	Locations	Fugitive Emission Results for SPM (μg/m³)	Limits (µg/m³)
11.10.2018	Fly-ash Storage Section	2562	5000
11.10.2018	Coal Storage Section	988	2000
12.10.2018	Limestone Storage Section	1981	5000
12.10.2018	Cement Packing Section	2548	5000

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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# Envirocon

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Report No.: ENV/GSCL/NLM/OCT/18-19/01

Date

:25/10/2018

# GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### **NOISE LEVEL MEASUREMENT RESULTS**

Measurement Date: 11.10.2018

SI. No.	Location(s)	Day time			Night Time	
31.140.	. Location(s)	Result(s) (dB - A)	Limit(s) (dB - A)	Result(s) (dB - A)	Limit(s) (dB - A)	
1	Near Coal Mill	72	75	64	70	
2	Near CPP Area	70	75	63	70	
3	Near Limestone Storage Yard	66	75	50	70	
4	Near Coal Storage Yard	64	75	52	70	
5	Near R. A. B. H.	73	75	62	. 70	
6	Near Cement Mill	68	75	58	70	
7	Near Administrative Building	63	75	53	70	
8	Power House	74	75	69	70	



(F.

Checked By: Mr. Pankaj Baroi, ENVIROCON

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Ref: GSCL/EHS/ 2018-19/07

Dated: 27.11.2018

To
The Member Secretary
Meghalaya State Pollution Control Board
Arden, Lumpyngngad,
Shillong-793014.

Sub: Submission of Monthly Environmental Monitoring Reports

Sir,

With reference to the subject as cited above, we are submitting Monthly Environmental Monitoring Reports for the month of November -2018, which was monitored by Authorized Third Party M/s. ENVIROCON.

We request you to acknowledge the receipt.

Thanking You,

Yours faithfully For Goldstone Cements Ltd

Authorise Signator

CC: 1. Regional Directorate-North East. Lower Whinagar, Shillong-793014.

2. The Ministry of Environment & Forests & Climate Change, Law-u-sib, Lumbatngen, Near MTC Workshop, Shillong-793014, Meghalaya.

Encl: Ambient air quality test report - November 2018
Stack Emission test report - November 2018
Drinking water analysis report - November 2018
Process Fugitive Emission test report - November 2018
Noise level measurement report - November 2018



GOVT. OF INDIA

Goldstone Cements Limited
CIN No.: U26940ML2007PLC008298

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Report No.: ENV/GSCL/AAQ/NOV/18-19/01

Date

:24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya-793200

### **AMBIENT AIR QUALITY TEST RESULTS**

SL. No.	Location(s) ↓	Date of	PM 2.5 (μg/m³)	PM 10 (μg/m³)	NO <sub>2</sub> (μg/m³)	SO <sub>2</sub> (μg/m <sup>3</sup> )
NO.	Limit(s)	Sampling	60 (24 Hrs. Av.)	100 (24 Hrs. Av.)	80 (24 Hrs. Av.)	80 (24 Hrs. Av.)
1.	Near CPP	10.11.2018		58.2	8.3	4.2
•	wear or r	11.11.2018	29.4			-
2.	Near Secondary Crusher	11.11.2018	-	62.7	9.4	BDL
	. Wear Secondary Crusher	12.11.2018	31.3			••
3.	Near Fly Ash Shed	11.11.2018		66.2	7.2	BDI.
J.	ivear Fly Asii Siled	12.11.2018	34.6	Mark of Mark Mark	LALIES TO DOT	
4.	Near Temple	10.11.2018		48.6	5.1	BDL
**	iveal remple	11.11.2018	22.4		-	

BDL: Below Detection Level Analysis Protocol: IS 5182

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

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# ENVIROCON

<u>Recognised By</u> PCB, Assam & MSPCB, Meghalaya Digboi Stores Building, New Market Digboi, Assam – 786 171 Ph: 03751-264414, 9435008657, 8876028672 E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No.: ENV/GSCL/SE/NOV/18-19/01

Date

:24/11/2018

# GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

# STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL/SE/NOV/18-19/01		
02	Date of Sampling		11.11.2018	
03	Material of Construction		M. S.	
04	Stack Attached To		Raw Mill	
05	Flue Gas Temperature (°C)	183		
06	Exit Velocity of Gas (m/sec)	14.2		
07	Type of Fuel Used	Kiln Coal		
08	Analysi	s Results of Flue Gas	-	
SI. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	PM- Particulate Matter	21.4	mg/Nm³	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	695.9	mg/Nm³	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	317.9	mg/Nm³	800



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/NOV/18-19/02

Date

:24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old)

P. O.:- Khliehriat Meghalaya- 793200

### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL	GSCL/SE/NOV/18-19/02		
02	Date of Sampling		11.11.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Coal Mill		
05	Flue Gas Temperature (°C)		54		
06	Exit Velocity of Gas (m/sec)		10.6		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s	
i.	PM- Particulate Matter	18.8	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	318.3	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>*</sub> )	176.9	mg/Nm³	800	

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/NOV/18-19/03

Date : 24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

### **STACK EMISSION TEST RESULTS**

Sl. No.	Parameter(s)	Result(s) Unit(s) Limit(s			
08	Analysi	s Results of Flue Gas			
07	Type of Fuel Used	NA*			
06	Exit Velocity of Gas (m/sec)	12.3			
05	Flue Gas Temperature (°C)	205			
04	Stack Attached To	Cooler E. S. P.			
03	Material of Construction	M. S.			
02	Date of Sampling	12.11.2018			
01	Stack Emission Test Ref. No.	GSCL/SE/NOV/18-19/03			

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/NOV/18-19/05

Date : 24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old)
P. O.:- Khliehriat
Meghalaya- 793200

# STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL	GSCL/SE/NOV/18-19/05		
02	Date of Sampling		11.11.2018		
03	Material of Construction		Refractory Brick		
04	Stack Attached To	Capti	Captive Power Plant (CPP)		
05	Flue Gas Temperature (°C)		98		
06	Exit Velocity of Gas (m/sec)	7.1			
07	Type of Fuel Used	Coal			
08	Analysi	s Results of Flue Gas			
SI. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
í.	PM- Particulate Matter	33.8	mg/Nm³	50	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	546.5	mg/Nm³	600	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	204.8	mg/Nm³	300	



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/NOV/18-19/04

Date : 24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old)
P. O.:- Khliehriat
Meghalaya- 793200

### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCI	GSCL/SE/NOV/18-19/04		
02	Date of Sampling		11,11.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Cement Mill		
05	Flue Gas Temperature (°C)		63		
06	Exit Velocity of Gas (m/sec)	gwigo, and an old the company of the	10.6		
07	Type of Fuel Used	NA*			
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s	
i.	PM- Particulate Matter	26.1	mg/Nm³	30	
11.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL	mg/Nm³	1000	
111.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL	mg/Nm³	800	

**BDL: Below Detection Limit** 

\*NA: Not Applicable



NOTE: 1. Results reported are valid at the time of and under the prevailing conditions of measurement.

Digbol

Assam

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Digboi Stores Building, New Market Digboi, Assam – 786 171 Ph: 03751-264414, 9435008657, 8876028672 F-mail: environn@rediffmail.com

E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No.: ENV/GSCL/FE/NOV/18-19/01

Date : 24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

### PROCESS FUGITIVE EMISSION TEST RESULTS

Date	Locations	Fugitive Emission Results for SPM (µg/m³)	Limits (µg/m³)
11.11.2018	Fly-ash Storage Section	2492	5000
11.11.2018	Coal Storage Section	1024	2000
12.11.2018	Limestone Storage Section	1872	5000
12.11.2018	Cement Packing Section	2624	5000

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Barol, ENVIROCON

NOTE

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PCB, Assam & MSPCB, Meghalaya

Digboi Stores Building, New Market Digboi, Assam - 786 171

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E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No. : ENV/GSCL/DW/NOV/18-19/01

:24/11/2018

**GOLDSTONE CEMENTS LIMITED** Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

### **DRINKING WATER ANALYSIS RESULTS**

Sample Type : Drinking Water Collected By : Jointly by Envirocon & Client Sample Source : Canteen Collected On : 13.11.2018

SI. No.	Parameters	Results	Desirable Limit (IS: 10500)
1.	Colour , Hazen Units, Max	<1	5
2.	Odour	Odourless	Agreeable
3.	Taste	Acceptable	Agreeable
4.	Turbidity, NTU, Max	0.17	1.0
5.	pH	7.4	6.5 - 8.5
6.	Total Dissolved Solids, mg/l, Max	152	500
7.	Aluminium (as Al), mg/l, Max	ND	0.03
8.	Boron (as B), mg/l, Max	ND	0,5
9.	Calcium (as Ca), mg/l, Max	24	75
10.	Chloride (as CI), mg/l, Max	3.4	250
11.	Copper (as Cu), mg/l, Max	ND	0.05
12.	Fluorides (as F), mg/l, Max	ND	1.0
13.	Free Residual Chlorine, mg/l, Min	ND	0.2
14.	Iron (as Fe), mg/l, Max	0.098	0.3
15.	Magnesium (as Mg), mg/l, Max	3.6	30
16.	Manganese (as Mn), mg/l, Max	ND	0.1
17.	Zinc (as Zn), mg/l, Max	ND	5.0
18.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	ND	45
19.	Phenolic Compounds (as CoH5OH), mg/l, Max	ND	0.001
20.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	21	200 ·
21.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	78	200
22.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	6.5	200
23.	Cadmium (as Cd), mg/l, Max	ND	0.003
24.	Cyanide (as CN), mg/l, Max	ND	0.05
25.	Lead (as Pb), mg/l, Max	ND	0.01
26.	Mercury (as Hg), mg/l, Max	ND	0.001
27.	Selenium (as Se), mg/l, Max	ND	0.01
28.	Total Arsenic (as As), mg/l, Max	ND	0.01
29.	Total Chromium, (as Cr), mg/l, Max	ND	0.05
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 8025

Digbo Assam

ND: Not Detected

Checked By: Mr. 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.

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Report No.: ENV/GSCL/NLM/NOV/18-19/01

Date : 24/11/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

### **NOISE LEVEL MEASUREMENT RESULTS**

Measurement Date: 12.11.2018

		Day time		Night Time		
Sl. No.	Location(s)	Result(s) Limit(s) Result(s) (dB-A) (dB-A)			Limit(s) (dB-A)	
1	Near Coal Mill	71	75	66	70	
2	Near CPP Area	72	75	64	70	
3	Near Limestone Storage Yard	64	75	52	70	
4	Near Coal Storage Yard	65	75	55	70	
5	Near Raw Mill	69	75	64	70	
6	Near Cement Mill	69	75	59	70	
7	Near Administrative Building	65	. 75	55	70	
8	Power House	71	75	67	70	



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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Ref: GSCL/EHS/ 2018-19/10

Dated: 28.01.2019

To The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong-793014.

Sub: Submission of Monthly Environmental Monitoring Reports

Sir,

With reference to the subject as cited above, we are submitting Monthly Environmental Monitoring Reports for the month of December-2018, which was monitored by Authorized Third

We request you to acknowledge the receipt.

Thanking You,

Yours faithfully For Goldstong Cen

Central Pollution Control Board केत्रीब निदेशालय उत्तर पूर्व शिलांग । ७९३०१४ Regional Directorate - North East, Shillong - 7930相 पर्याबरण, बन एवं जलकायु परिवर्तन मंत्रीलय, मारत संस्कार Ministry of Environment, Forest & Cityrate Change, Govt. of India

RECEIPT NO .....

DATED ..... CC: 1. Regional Director, Central Pollution Control Board, Regional Directorate-North East, Lower Motinagar, Shillong-793014.

2. The Ministry of Environment & Forests & Climate Change, Law-u-sib, Lumbatngen, Near MTC Workshop, Shillong-793014, Meghalaya.

Ambient air quality test report - December 2018 Encl: Stack Emission test report - December 2018 Drinking water analysis report - December 2018 Process Fugitive Emission test report - December 2018 Noise level measurement report - December 2018



Goldstone Cements Limited CIN No.: U26940ML2007PLC008298

Corporate Officer

510, 5th Floor, Diamond Heritage, 16, Strand Road, Kolkata - 700001

Village Musiang Lamare(Old), Khliehriat, East Jaintia Hills,

Sales & Marketing Office

5A, 5th Floor, Shine Towers, 57 Sati Jaymati Road Arya Chowk, Rehabari, Guwahati, Assam 781008



Digboi Stores Building, New Market Digboi, Assam - 786 171 Ph: 03751-264414, 9435008657, 8876028672

E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No.: ENV/GSCL/AAQ/DEC/18-19/01

Date :04/01/2019

# GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## **AMBIENT AIR QUALITY TEST RESULTS**

SL.	Location(s) ↓	Date of	PM 2.5 (μg/m³)	PM 10 (μg/m³)	NO <sub>2</sub> (μg/m³)	SO <sub>2</sub> (μg/m³)
140.	Limit(s)	Sampling	60 (24 Hrs. Av.)	-		80 (24 Hrs. Av.)
1.	Near CPP	18.12.2018		59.8	7.9	5.1
2		19.12.2018	31.2	-	-	-
2.	Near Secondary Crusher	18.12.2018	-	63.4	9.2	BDL
		19.12.2018	29.7	·		-
3.	Near Fly Ash Shed	18.12.2018		64.2	6.9	BDL
٥.	Near Fly Asii Shed	19.12.2018	30.1			_
4.	Near Temple	18.12.2018		47.6	5.5	BDL
	wat remple	19.12.2018	23.7			-

**BDL: Below Detection Level** Analysis Protocol: IS 5182

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Website: www.envirocon.net.in



Report No.: ENV/GSCL/SE/DEC/18-19/01

Date : 04/01/2019

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/DEC/18-19/01		
02	Date of Sampling		18.12.2018		
03	Material of Construction	M. S.			
04	Stack Attached To		Raw Mill		
05	Flue Gas Temperature (°C)		171		
06	Exit Velocity of Gas (m/sec)		17.8		
07	Type of Fuel Used		Kiln Coal		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	19.3	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	474.7	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	231.5	mg/Nm³	800	



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E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No.: ENV/GSCL/SE/DEC/18-19/02

Date

:04/01/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Muslang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

# STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCI	GSCL/SE/DEC/18-19/02		
02	Date of Sampling		18.12.2018		
03	Material of Construction		м. s.		
04	Stack Attached To		Coal Mill		
05	Flue Gas Temperature (°C)		64		
06	Exit Velocity of Gas (m/sec)		10.6		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	26.4	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	385.5	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	158.8	mg/Nm³	800	

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/DEC/18-19/03

Date

: 04/01/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat

Meghalaya- 793200

### STACK EMISSION TEST RESULTS

SI. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
08	Analysis Results of Flue Gas				
07	Type of Fuel Used	NA*			
06	Exit Velocity of Gas (m/sec)	13.5			
05	Flue Gas Temperature (°C)	216			
04-	Stack Attached To	Cooler E. S. P.			
03	Material of Construction	M. S.			
02	Date of Sampling	18.12.2018			
01	Stack Emission Test Ref. No.	GSCL/SE/DEC/18-19/03			

<sup>\*</sup>NA: Not Applicable



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Report No.: ENV/GSCL/SE/DEC/18-19/04

Date

: 04/01/2019

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat

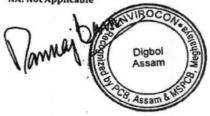
Meghalaya-793200

### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/DEC/18-19/04		
02	Date of Sampling		19.12.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Cement Mill		
05	Flue Gas Temperature (°C)		66		
06	Exit Velocity of Gas (m/sec)		10.7		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	24.2	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL	mg/Nm³	800	

**BDL: Below Detection Limit** 

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/DEC/18-19/05

Date : 04/01/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

Stack Emission Test Ref. No.	GSCI	GSCL/SE/DEC/18-19/05		
Date of Sampling		19.12.2018		
Material of Construction		Refractory Brick		
Stack Attached To	Capti	Captive Power Plant (CPP)		
Flue Gas Temperature (°C)		87		
Exit Velocity of Gas (m/sec)		8.2		
Type of Fuel Used		Coal		
Analysi	s Results of Flue Gas			
Parameter(s)	Result(s)	Unit(s)	Limit(s)	
PM- Particulate Matter	32.4	mg/Nm³	50	
Sulphur Dioxide (as SO <sub>2</sub> )	477.1	mg/Nm³	600	
Oxides of Nitrogen (as NO <sub>x</sub> )	198.2	mg/Nm³	300	
	Date of Sampling  Material of Construction  Stack Attached To  Flue Gas Temperature (°C)  Exit Velocity of Gas (m/sec)  Type of Fuel Used  Analysi  Parameter(s)  PM- Particulate Matter  Sulphur Dioxide (as SO <sub>2</sub> )	Date of Sampling  Material of Construction  Stack Attached To Capti  Flue Gas Temperature (°C)  Exit Velocity of Gas (m/sec)  Type of Fuel Used  Analysis Results of Flue Gas  Parameter(s) Result(s)  PM- Particulate Matter 32.4  Sulphur Dioxide (as SO <sub>2</sub> ) 477.1	Date of Sampling  Material of Construction  Stack Attached To  Captive Power Plant (  Flue Gas Temperature (°C)  Exit Velocity of Gas (m/sec)  Type of Fuel Used  Coal  Analysis Results of Flue Gas  Parameter(s)  Result(s)  Unit(s)  PM- Particulate Matter  Sulphur Dioxide (as SO2)  19.12.2018  Refractory Brick  Captive Power Plant (   8.2  Coal  Unit(s)  477.1  mg/Nm³	



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No. : ENV/GSCL/DW/DEC/18-19/01 Date :04/01/2019

GOLDSTONE CEMENTS LIMITED Village- Musiang Lamare (Old) P. O.:- Khliehrlat

Meghalaya- 793200

# DRINKING WATER ANALYSIS RESULTS

Sample Type	: Drinking Water	Sample Source	: Canteen
Collected By	: Jointly by Envirocon & Client	Collected On	: 19.12.2018
	•		

SI. No.	Parameters	Results	Desirable Limit (IS: 10500)
1.	Colour, Hazen Units, Max	<1	-
2.	Odour	Odourless	5
3.	Taste	Acceptable	Agreeable
4.	Turbidity, NTU, Max	0.15	Agreeable
5.	pH	7.2	1.0
6.	Total Dissolved Solids, mg/l, Max	166	6.5 - 8.5
7.	Aluminium (as Al), mg/l, Max	ND ND	500
8.	Boron (as B), mg/l, Max	ND	0.03
9.	Calcium (as Ca), mg/l, Max	26	0,5
10.	Chloride (as CI), mg/l, Max		75
11.	Copper (as Cu), mg/l, Max	3.2	250
12.	Fluorides (as F), mg/l, Max	ND	0.05
13.	Free Residual Chlorine, mg/l, Min	ND ND	1.0
14.	Iron (as Fe), mg/l, Max	ND	0.2
15.	Magnesium (as Mg), mg/l, Max	0.08	0.3
16.	Manganese (as Mn), mg/l, Max	3.3	30
17.	Zinc (as Zn), mg/l, Max	ND	0.1
18.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	ND	5.0
19.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	ND	45
20.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	ND	0.001
21.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	25	200
22.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	92	200
23.	Cadmium (as Cd), mg/l, Max	79	200
24.	Cyanide (as CN), mg/l, Max	ND	0.003
25.	Lead (as Pb), mg/l, Max	ND	0.05
26.		ND	0.01
7.	Mercury (as Hg), mg/l, Max	ND	0.001
8.	Selenium (as Se), mg/l, Max	ND	0.01
	Total Arsenic (as As), mg/l, Max	ND	0.01
9.	Total Chromium, (as Cr), mg/l, Max	ND	0.05
	Anionic Detergents (as MBAS), mg/l	ND	0.2
1.	Total Coliform, MPN/100 ml	NIL	10 Max
2.	Faecal Coliforms/ 100 ml	NIL	Absent
3.	E. Coli / 100 ml	NIL	Absent

Analysis Protocol 153025

ND: Not Detected

Checked By: Mr. Pankal Barol, ENVIROCON

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Dated: 23.02.2019

Ref: GSCL/EHS/ 2018-19/11

The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong-793014.

Sub: Submission of Monthly Environmental Monitoring Reports

Sir,

With reference to the subject as cited above, we are submitting Monthly Environmental Monitoring Reports for the month of January-2019, which was monitored by Authorized Third Party M/s. ENVIROCON.

We request you to acknowledge the receipt.

Thanking You,

Yours faithfully For Goldstone Cements Ltd

Authorise

fal Director, Central Pollution Control Board, Regional Directorate-North East, Lower Motinag#

fronment & Forests & Climate Change, Law-u-sib, Lumbatngen, Near MTC 2. The Ministr Workshop, Shillong-793014, Meghalaya.

Ambient air quality test report - January 2019 Stack Emission test report - January 2019 Drinking water analysis report - January 2019 Process Fugitive Emission test report - January 2019 Noise level measurement report - January 2019 Effluent Water Analysis report- January 2019

Central Pollution Control Board क्षेत्रीब निदेशालय उत्तर पूर्व शिलांग - ७९३०१४ Regional Directorate - North East, Shillong - 793014 पर्यावरण, बन एवं जलवायु परिवर्तन मुंबालय, भारत सरकार Ministry of Environment, Forest & Climate Change, Govt. of inc.

RECEIPT NO .....

DATED ......

Goldstone Cements Limited

CIN No.: U26940ML2007PLC008298

Corporate Office 510, 5th Floor, Diamond Heritage, 16, Strand Road, Kolkata - 700001 P +91-33-66079604

Factory Office Village Musiang Lamare(Old), Khliehriat, East Jaintia Hills, Meghalaya - 793200

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E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No.: ENV/GSCL/AAQ/JAN/18-19/01

:03/02/2019

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## AMBIENT AIR QUALITY TEST RESULTS

SL. No.	Location(s) ↓	Date of	PM 2.5  Date of (µg/m³)	PM 10 (μg/m³)	NO <sub>2</sub> (μg/m³)	<b>SO<sub>2</sub></b> (μg/m <sup>3</sup> )
	Limit(s)	Sampling	60 (24 Hrs. Av.)	100 (24 Hrs. Av.)	80 (24 Hrs. Av.)	80 (24 Hrs. Av.)
		23.01.2019		64.7	2.4	4.9
1.	Near CPP	24.01.2019	34.6			
	Near Secondary Crusher	23.01.2019	-	68.4	7.7	BDL
2.		24.01.2019	25.2			-
	Near Fly Ash Shed	23.01.2019	-	65.2	6.6	BDL
3.		24.01.2019	30.5			
		24.01.2019	-	55.6	6.8	BDL
4.	Near Temple	25.01.2019	22.7			

**BDL**: Below Detection Level Analysis Protocol: IS 5182

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

1. Results reported are valid at the time of and under the prevailing conditions of measurement. NOTE:



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Report No.: ENV/GSCL/SE/JAN/18-19/01

:03/02/2019 Date

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .: - Khliehriat Meghalaya-793200

## STACK EMISSION TEST RESULTS

ii.	Sulphur Dioxide (as SO <sub>2</sub> )	456.9	mg/Nm³	600	
i.	PM- Particulate Matter	25.7	mg/Nm³	30	
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
08	Analysi	s Results of Flue Gas			
07	Type of Fuel Used	Kiln Coal			
06	Exit Velocity of Gas (m/sec)	13.7			
05	Flue Gas Temperature (°C)		169		
04	Stack Attached To		Raw Mill		
03	Material of Construction		M. S.		
02	Date of Sampling		23.01.2019		
01	Stack Emission Test Ref. No.	GSCI	GSCL/SE/JAN/18-19/01		



Checked By: Mr. Pankaj Baroi, ENVIROCON

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TABLE OF THE OHSAS 18001

Report No.: ENV/GSCL/SE/JAN/18-19/02

Date :

:03/02/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/JAN/18-19/02 24.01.2019		
02	Date of Sampling				
03	Material of Construction		M. S.		
04	Stack Attached To		Coal Mill		
05	Flue Gas Temperature (°C)		57		
06	Exit Velocity of Gas (m/sec)		10.5		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	17.8	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	395.4	mg/Nm³	1000	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	162.8	mg/Nm³	600	

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/JAN/18-19/03

Date : 03/02/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## **STACK EMISSION TEST RESULTS**

Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)			
08		Analysis Results of Flue Gas					
07	Type of Fuel Used		NA*				
			17.8				
06	Exit Velocity of Gas (m/sec)		17.8				
05	Flue Gas Temperature (°C)		227				
04	Stack Attached To		Cooler E. S. P.				
03	Material of Construction		M. S.				
02	Date of Sampling		24.01.2019				
01	Stack Emission Test Ref. No.	GSC	GSCL/SE/JAN/18-19/03				

\*NA: Not Applicable



Checked By: Mr. 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.



<u>Recognised By</u>
PCB, Assam & MSPCB, Meghalaya

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Report No.: ENV/GSCL/SE/JAN/18-19/05

Date : 25/01/2019

## GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/JAN/18-19/06		
02	Date of Sampling		24.01.2019		
03	Material of Construction		Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)			
05	Flue Gas Temperature (°C)	93			
06	Exit Velocity of Gas (m/sec)	7.2			
07	Type of Fuel Used	Coal			
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	39.9	mg/Nm³	50	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	504.7	mg/Nm³	600	
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	209.6	mg/Nm³	300	



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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Recognised By PCB, Assam & MSPCB, Meghalaya

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Report No.: ENV/GSCL/SE/JAN/18-19/04

Date : 25/01/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

,	- mander (s)	- Acount(3)	o.ii.(a)	Zimit(3			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s			
08	Analysis Res	Analysis Results of Flue Gas					
07	Type of Fuel Used	. NA*					
06	Exit Velocity of Gas (m/sec)	11.8					
05	Flue Gas Temperature (°C)	61					
04	Stack Attached To	Cement Mill					
03	Material of Construction	M. S.					
02	Date of Sampling		23.01.2019				
01	Stack Emission Test Ref. No.	GSCL/SE/JAN/18-19/04					

\*NA: Not Applicable



Checked By: Mr. 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.



Digboi Stores Building, New Market Digboi, Assam - 786 171 Ph: 03751-264414, 9435008657, 8876028672 E-mail: envirocon@rediffmail.com

Website: www.envirocon.net.in

Report No.: ENV/GSCL/NLM/JAN/18-19/01

Date

:03/02/2019

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## NOISE LEVEL MEASUREMENT RESULTS

Measurement Date: 23.01.2019

Cl. N.		Day time		Night Time	
Sl. No.	Location(s)	Result(s) (dB - A)	Limit(s) (dB - A)	Result(s) (dB - A)	Limit(s) (dB - A)
1	Near Coal Mill	73	75	66	70
2	Near CPP Area	71	75	62	70
3	Near Limestone Storage Yard	67	75	53	70
4	Near Coal Storage Yard	63	75	50	70
5	Near Raw Mill	72	75	60	70
6	Near Cement Mill	69	75	59	70
7	Near Administrative Building	60	75	51	70
8	Power House	73	75	68	70



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/FE/JAN/18-19/01

Date :03/02/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## PROCESS FUGITIVE EMISSION TEST RESULTS

Date	Locations	Fugitive Emission Results for SPM (μg/m³)	Limits (μg/m³)
23.01.2019	Fly-ash Storage Section	2678	5000
23.01.2019	Coal Storage Section	979	2000
24.01.2019	Limestone Storage Section	1877	5000
24.01.2019	Cement Packing Section	2642	5000

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE: 1. Results reported are valid at the time of and under the prevailing conditions of measurement.

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Report No.: ENV/GSCL/ETP/JAN/18-19/01

Date : 03/02/2019

## GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## EFFLUENT WATER ANALYSIS RESULTS

Sample Type : Treated ETP Water

Sample Source : ETP Outlet

Collected By: Jointly by Envirocon & Client

Collected On: 24.01.2019

Sl. No.	Parameter(s)	Unit(s)	Result(s)	Desirable Limits (IS: 2490)
01	pH		6.9	5.5 – 9.0
02	Temperature	°C	19.7	shall not exceed 5°C above the receiving water temperature
03	Total Suspended Solids	mg/l	14	100
04	Biochemical Oxygen Demand (3 Days @27°C)	mg/l	18	30
05	Chemical Oxygen Demand	mg/l	44	250
06	Oil & Grease	mg/l	1.2	10
07	Total Residual Chlorine	mg/l	<0.01	1.0
08	Ammonical Nitrogen (as N)	mg/l	11.9	50
09	Total Kjeldahl Nitrogen (as NH₃)	mg/l	34.4	100
01	Free Ammonia (as NH <sub>3</sub> )	mg/l	<0.01	5.0

Analysis Protocol: IS 3025



Checked By: Mr. 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.



Recognised By

PCB, Assam & MSPCB, Meghalaya

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E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No. : ENV/GSCL/DW/JAN/18-19/01

te : 03/02/2019

**GOLDSTONE CEMENTS LIMITED** 

Village- Musiang Lamare (Old) P. O.:- Khliehriat

P. O.:- Khliehriat Meghalaya- 793200

## **DRINKING WATER ANALYSIS RESULTS**

Sample Type : Drinking Water Sample Source : Canteen Collected By : Jointly by Envirocon & Client Collected On : 24.01.2019

Sl. No.	Parameters	Results	Desirable Limit (IS: 10500)
1.	Colour , Hazen Units, Max	<1	5
2.	Odour	Odourless	Agreeable
3.	Taste	Acceptable	Agreeable
4.	Turbidity, NTU, Max	0.17	1.0
5.	pH	7.4	6.5 - 8.5
6.	Total Dissolved Solids, mg/l, Max	144	500
7.	Aluminium (as Al), mg/l, Max	ND	0.03
8.	Boron (as B), mg/l, Max	ND	0.5
9.	Calcium (as Ca), mg/l, Max	20	75
10.	Chloride (as CI), mg/l, Max	2.6	250
11.	Copper (as Cu), mg/l, Max	ND	0.05
12.	Fluorides (as F), mg/l, Max	ND	1.0
13.	Free Residual Chlorine, mg/l, Min	ND	0.2
14.	Iron (as Fe), mg/l, Max	0.049	0.3
15.	Magnesium (as Mg), mg/l, Max	. 3.2	30
16.	Manganese (as Mn), mg/l, Max	ND	0.1
17.	Zinc (as Zn), mg/l, Max	ND	5.0
18.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	ND	45
19.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	ND	0.001
20.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	19	200
21.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	82	200
22.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	5.9	200
23.	Cadmium (as Cd), mg/l, Max	ND	0.003
24.	Cyanide (as CN), mg/l, Max	ND	0.05
25.	Lead (as Pb), mg/l, Max	ND	0.01
26.	Mercury (as Hg), mg/l, Max	ND	0.001
27.	Selenium (as Se), mg/l, Max	ND	0.01
28.	Total Arsenic (as As), mg/l, Max	ND	0.01
29.	Total Chromium, (as Cr), mg/l, Max	ND	0.05
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

Checked By: Mr. Pankaj Baroi, ENVIROCON

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Digboi Assam

Assam

Ref: GSCL/EHS/ 2018-19/12

Dated: 24.03.2019

To The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong-793014.

Sub: Submission of Monthly Environmental Monitoring Reports

Sir,

With reference to the subject as cited above, we are submitting Monthly Environmental Monitoring Reports for the month of February-2019, which was monitored by Authorized Third Party M/s. ENVIROCON.

We request you to acknowledge the receipt.

Thanking You,

Yours faithfully For Goldstone Cements Ltd

Central Pollution Control Board क्षेत्रंग्न भिदेशालाच उत्तर पूर्व शिलांग - ७९३०१४

Regional Prestorate - North East, Shillong - 793014 पर्यावरण, यन एवं जरमदाय परिवर्तन मंत्रालय, भारत सरकार Ministry of Environment, Forest & male Change, Govt. of India

REUSIPT NO .....

Author

or, Central Pollution Control Board, Regional Directorate-North East, Lower Motinagar, Spile Bg-793014.

2. The Ministry of Environment & Forests & Climate Change, Law-u-sib, Lumbatngen, Near MTC Workshop, Shillong-793014, Meghalaya.

Encl: Ambient air quality test report - February 2019 Stack Emission test report - February 2019 Drinking water analysis report - February 2019 Process Fugitive Emission test report - February 2019 Noise level measurement report - February 2019 Effluent Water Analysis report-February 2019



Goldstone Cements Limited

CIN No.: U26940ML2007PLC008298



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Website: www.envirocon.net.in

Report No.: ENV/GSCL/AAQ/FEB/18-19/01

:28/02/2019 Date

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old)

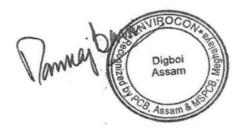
P. O .:- Khliehriat Meghalaya-793200

## AMBIENT AIR QUALITY TEST RESULTS

SL.	Location(s)	PM 2.5  Date of (μg/m³)  Sampling 60 (24 Hrs. Av.)		PM 10 (μg/m³)	NO <sub>2</sub> (μg/m <sup>3</sup> )	<b>SO<sub>2</sub></b> (μg/m <sup>3</sup> )	
No.	Limit(s)>		60 (24 Hrs. Av.)	100 (24 Hrs. Av.)	80 (24 Hrs. Av.)	80 (24 Hrs. Av.)	
		12.02.2019		62.4	2.9	4.4	
1.	Near CPP	13.02.2019	31.9				
	Near Secondary Crusher	12.02.2019		64.9	7.8	BDL	
2.		13.02.2019	26.2				
	Near Fly Ash Shed	12.02.2019		63.6	6.9	BDL	
3.		13.02.2019	33.4				
		13.02.2019		52.8	6.2	BDL	
4.	Near Temple	14.02.2019	20.8				

**BDL**: Below Detection Level Analysis Protocol: IS 5182

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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Report No.: ENV/GSCL/SE/FEB/18-19/01

Date

: 28/02/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old)

P. O .:- Khliehriat Meghalaya-793200

## STACK EMISSION TEST RESULTS

111.	Sulphur Dioxide (as SO <sub>2</sub> )  Oxides of Nitrogen (as NO <sub>x</sub> )	386.9 185.2	mg/Nm³	600	
i.	PM- Particulate Matter	18.7	mg/Nm³	30	
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
08	Analysis	s Results of Flue Gas			
07	Type of Fuel Used		Kiln Coal		
06	Exit Velocity of Gas (m/sec)		12.9		
05	Flue Gas Temperature (°C)		165		
04	Stack Attached To		Raw Mill		
03	Material of Construction		M. S.		
02	Date of Sampling		12.02.2019		
01	Stack Emission Test Ref. No.	GSCI	GSCL/SE/FEB/18-19/01		



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/FEB/18-19/02

Date : 28/02/2019

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old)

P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

ii.	Sulphur Dioxide (as SO <sub>2</sub> )  Oxides of Nitrogen (as NO <sub>x</sub> )	136.6	mg/Nm³	600				
i.	PM- Particulate Matter	323.6						
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)				
08	Analysi	s Results of Flue Gas						
07	Type of Fuel Used		NA*					
06	Exit Velocity of Gas (m/sec)		11.2					
05	Flue Gas Temperature (°C)		55					
04	Stack Attached To		Coal Mill					
03	Material of Construction		M. S.					
02	Date of Sampling		12.02.2019					
01	Stack Emission Test Ref. No.	GSCI	GSCL/SE/FEB/18-19/02					

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE: 1. Results reported are valid at the time of and under the prevailing conditions of measurement.

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Report No.: ENV/GSCL/SE/FEB/18-19/05

Date : 28/02/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old)

P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCI	GSCL/SE/FEB/18-19/05					
02	Date of Sampling		13.02.2019					
03	Material of Construction		Refractory Brick					
04	Stack Attached To	Capti	Captive Power Plant (CPP)					
05	Flue Gas Temperature (°C)	1/2	90					
06	Exit Velocity of Gas (m/sec)		8.0					
07	Type of Fuel Used		Coal					
08	Analysi	s Results of Flue Gas						
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)				
i.	PM- Particulate Matter	26.8	26.8 mg/Nm³					
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	480.2	mg/Nm³	600				
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	200.4	mg/Nm³	300				



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE: 1. Results reported are valid at the time of and under the prevailing conditions of measurement.

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Report No.: ENV/GSCL/SE/FEB/18-19/04

:28/02/2019 Date

## GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old)

P. O .:- Khliehriat Meghalaya-793200

## STACK EMISSION TEST RESULTS

Sl. No.	Parameter(s)	Result(s)				
08	Analysis	s Results of Flue Gas				
07	Type of Fuel Used	NA*				
06	Exit Velocity of Gas (m/sec)	12.2				
05	Flue Gas Temperature (°C)	59				
04	Stack Attached To	Cement Mill				
03	Material of Construction		M. S.			
02	Date of Sampling		13.02.2019			
01	Stack Emission Test Ref. No.	GSCL/SE/FEB/18-19/04				

<sup>\*</sup>NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/NLM/FEB/18-19/01

: 28/02/2019

## GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## NOISE LEVEL MEASUREMENT RESULTS

Measurement Date: 13.02.2019

		Day	time	Night Time	
Sl. No.	Location(s)	Result(s) (dB - A)	Limit(s) (dB - A)	Result(s) (dB - A)	Limit(s) (dB - A)
1	Near Coal Mill	74	75	67	70
2	Near CPP Area	72	75	64	70
3	Near Limestone Storage Yard	65	75	58	70
4	Near Coal Storage Yard	60	75	54	70
5	Near Raw Mill	71	75	63	70
6	Near Cement Mill	67	75	60	70
7	Near Administrative Building	59	75	53	70
8	Power House	74	75	67	70



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/FE/FEB/18-19/01

:28/02/2019 Date

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## PROCESS FUGITIVE EMISSION TEST RESULTS

Date	Locations	Fugitive Emission Results for SPM (μg/m³)	Limits (μg/m³)	
12.02.2019	Fly-ash Storage Section	2749	5000	
12.02.2019 Coal Storage Section		988	2000	
13.02.2019	Limestone Storage Section	1944	5000	
13.02.2019	Cement Packing Section	2459	5000	

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/ETP/FEB/18-19/01

:28/02/2019 Date

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old)

P. O .:- Khliehriat Meghalaya-793200

## EFFLUENT WATER ANALYSIS RESULTS

Sample Type

: Treated ETP Water

Sample Source : ETP Outlet

Collected By: Jointly by Envirocon & Client

Collected On: 13.02.2019

SI. No.	Parameter(s)	Unit(s)	Result(s)	Desirable Limits (IS: 2490)
01	pH	-	6.7	5.5 - 9.0
02	Temperature	oC.	18.9	shall not exceed 5°C above the receiving water temperature
03	Total Suspended Solids	mg/l	16	100
04	Biochemical Oxygen Demand (3 Days @27°C)	mg/l	17	30
05	Chemical Oxygen Demand	mg/l	42	250
06	Oil & Grease	mg/l	1.4	10
07	Total Residual Chlorine	mg/l	<0.01	1.0
08	Ammonical Nitrogen (as N)	mg/l	10.8	50
09	Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/l	32.6	100
01	Free Ammonia (as NH <sub>3</sub> )	mg/l	<0.01	5.0

Analysis Protocol: IS 3025



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Ph: 03751-264414, 9435008657, 8876028672

: Canteen

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Report No. : ENV/GSCL/DW/FEB/18-19/01 Date : 28/02/2019

GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old)

P. O .:- Khliehriat Meghalaya-793200

## DRINKING WATER ANALYSIS RESULTS

Sample Source Sample Type : Drinking Water

Sl. No.	Jointly by Envirocon & Client Colle  Parameters	Results	Desirable Limit (IS: 10500)
1	Colour , Hazen Units, Max	<1	5
1.	Odour	Odourless	Agreeable
2.	Taste	Acceptable	Agreeable
3.	Turbidity, NTU, Max	0.19	1.0
4.		6.9	6.5 - 8.5
5.	pH Total Dissolved Solids, mg/l, Max	179	500
6.	Aluminium (as Al), mg/l, Max	ND	0.03
7.		ND	0.5
8.	Boron (as B), mg/l, Max	22	75
9.	Calcium (as Ca), mg/l, Max	2.4	250
10.	Chloride (as Cl), mg/l, Max	ND	0.05
11.	Copper (as Cu), mg/l, Max	ND	1.0
12.	Fluorides (as F), mg/l, Max	ND	0.2
13.	Free Residual Chlorine, mg/l, Min	0.038	0.3
14.	Iron (as Fe), mg/l, Max	2.8	30
15.	Magnesium (as Mg), mg/l, Max	ND	0.1
16.	Manganese (as Mn), mg/l, Max	ND	5.0
17.	Zinc (as Zn), mg/l, Max	ND	45
18.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	ND	0.001
19.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	22	200
20.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	88	200
21.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	5.6	200
22.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max		0.003
23.	Cadmium (as Cd), mg/l, Max	ND	0.05
24.	Cyanide (as CN), mg/l, Max	ND	0.01
25.	Lead (as Pb), mg/l, Max	ND	0.001
26.	Mercury (as Hg), mg/l, Max	ND	0.001
27.	Selenium (as Se), mg/l, Max	ND	0.01
28.	Total Arsenic (as As), mg/l, Max	ND	
29.	Total Chromium, (as Cr), mg/l, Max	ND	0.05
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

Digboi Assam

ND: Not Detected

Checked By: Mr. Pankaj Baroi, ENVIROCON

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.



Dated: 08.04.2019

No: GSCL/EHS/ 2019-20/04

To, The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong-793014.

Sub: Submission of Monthly Environmental Monitoring Reports - March 2019

Sir,

With reference to the subject as cited above, we are herewith submitting Monthly Environmental Monitoring Reports for the month of March - 2019, which was monitored by Authorized Third Party M/s. ENVIROCON.

Third party monitoring to Hg in CPP stack and ambient air quality for all 12 parameters for PM 2.5, PM 10, NO<sub>2</sub>, SO<sub>2</sub>, NH<sub>3</sub>, CO, O<sub>3</sub>, B(a)P, C<sub>6</sub>H<sub>6</sub>, Ni, As & Pb have been conducted. Test reports are enclosed.

We request you to acknowledge the receipt.

Thanking You,

Yours faithfully

For Goldstone Cements Ltd

Authorised S

Central Pollution Control Board क्षेत्रीय निदेशालय उत्तर पूर्व शिलांग - ७९३०१४ Regional Directorate - North East, Shillong - 793014 षर्यावरण, बन एवं जलवायु परिवर्तन नेत्रालय, नारत सरकार Ministry of Environment, Forest & Climate Change, Govt. of India

DATED .....

al Director, Central Pollution Control Board, Regional Directorate-North East, CC: Lower Motinggar, Shillong-793014.

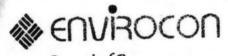
2. The Ministry of Environment & Forests & Climate Change, Law-u-sib, Lumbatngen, Near MTC Workshop, Shillong-793014, Meghalaya.

Encl: Ambient air quality test report - March 2019 Stack Emission test report - March 2019 Drinking water analysis report - March 2019 Process Fugitive Emission test report - March 2019 Noise level measurement report - March 2019 Effluent Water Analysis report- March 2019

Goldstone Cements Limited

CIN No.: U26940ML2007PLC008298

5A, 5th Floor, Shine Towers, 57 Sati Jaymati F Arya Chowk, Rehabari, Guwahati, Assam 7810



Recognised By
PCB, Assam & MSPCB, Meghalaya

Digboi Stores Building, New Market Digboi, Assam – 786 171 Ph: 03751-264414, 9435008657, 8876028672 E-mail: envirocon@rediffmail.com Website: www.envirocon.net.in



Report No. : ENV/GSCL/AAQ/MAR/18-19/01

Date : 08/04/2019

**GOLDSTONE CEMENTS LIMITED** 

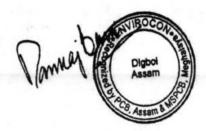
Village: Musiang Lamare (Old); PO: Khliehriat

Meghalaya-793200

## AMBIENT AIR QUALITY TEST RESULTS

LOCATIONS	Date of Sampling	PM 2.5 (μg/m³)	PM 10 (μg/m³)	NO <sub>2</sub> (μg/m³)	SO <sub>2</sub> (μg/m³)	NH <sub>3</sub> (μg/m³)	CO (mg/m³)	O <sub>3</sub> (mg/m³)	B(a)P (ng/m³)	C <sub>6</sub> H <sub>6</sub> (μg /m <sup>3</sup> )	Ni (ng/m³)	As (ng/m³)	Pb (μg/m³)
LIMITS -		60 (24 hrs. Average)	100 (24 hrs. Average)	80 (24 hrs. Average)	80 (24 hrs. Average)	400 (24 hrs. Average)	4.0 (1 hr. Average)	180 (1 hr. Average)	1.0 (Annual Average)	5.0 (Annual Average)	20 (Annual Average)	6.0 (Annual Average)	1.0 (24 hrs. Average)
Near CPP	13.03.2019	56.8	98.9	43.2	26.1	52.8	0.26	13.4	<0.1	<0.01	<0.01	<0.01	<0.01
Near Secondary		52.8	95.4	38.6	21.4	42.6	0.11	8.6	<0.1	<0.01	<0.01	<0.01	<0.01
Crusher	13.03.2019	32.0	73.1	00.0	197. 75,95		1.454			<0.01	<0.01	<0.01	<0.01
Near Fly Ash Shed	14.03.2019	55.9	97.8	28.9	19.2	33.7	0.086	4.2	<0.1	<0.01	-0.01		
Near Temple	14.03.2019	50.2	88.6	24.8	15.8	28.3	0.041	3.1	<0.1	<0.01	<0.01	<0.01	<0.01

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

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2. Results refer only to the particular parameters tested.



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Website: www.envirocon.net.in



Report No.: ENV/GSCL/SE/MAR/18-19/01

Date : 29/03/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/MAR/18-19/01					
02	Date of Sampling		13.03.2019					
03	Material of Construction		M. S.					
04	Stack Attached To	Raw Mill						
05	Flue Gas Temperature (°C)	172						
06	Exit Velocity of Gas (m/sec)	12.4						
07	Type of Fuel Used	Kiln Coal						
08	Analysi	s Results of Flue Gas						
SI. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)				
1.	PM- Particulate Matter	19.2	19.2 mg/Nm <sup>3</sup> 3					
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	393.5	393.5 mg/Nm <sup>3</sup> 100					
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	201.4	201.4 mg/Nm³ 600					



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/MAR/18-19/02

Date

: 29/03/2019

## GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL	GSCL/SE/MAR/18-19/02					
02	Date of Sampling		13.03.2019					
03	Material of Construction		M. S.					
04	Stack Attached To		Coal Mill					
05	Flue Gas Temperature (°C)		56					
06	Exit Velocity of Gas (m/sec)		12.4					
07	Type of Fuel Used		NA*					
08	Analysi	s Results of Flue Gas						
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)				
i.	PM- Particulate Matter	23.7	23.7 mg/Nm³					
II.	Sulphur Dioxide (as SO <sub>2</sub> )	346.8	346.8 mg/Nm <sup>3</sup> 10					
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	144.8	mg/Nm³	600				

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/MAR/18-19/03

Date

: 29/03/2019

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

i.	PM- Particulate Matter	21.5	mg/Nm³	30		
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s		
08	Analysi	s Results of Flue Gas				
07	Type of Fuel Used	NA*				
06	Exit Velocity of Gas (m/sec)	13.4				
05	Flue Gas Temperature (°C)	208				
04	Stack Attached To	Cooler E. S. P.				
03	Material of Construction	M. S.				
02	Date of Sampling	13.03.2019				
01	Stack Emission Test Ref. No.	GSCL/SE/MAR/18-19/03				

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/MAR/18-19/04

Date

: 29/03/2019

# GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya- 793200

# STACK EMISSION TEST RESULTS

i.	Parameter(s)  PM- Particulate Matter	Result(s)	Unit(s)	Limit(s			
08 		s Results of Flue Gas					
00							
07	Type of Fuel Used	NA*					
06	Exit Velocity of Gas (m/sec)	13.6					
05	Flue Gas Temperature (°C)	56					
04	Stack Attached To	Cement Mill					
03	Material of Construction	M. S.					
02	Date of Sampling		14.03.2019				
01	Stack Emission Test Ref. No.	GSCL/SE/MAR/18-19/04					

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/MAR/18-19/05

Date

: 04/04/2019

## **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL/SE/MAR/18-19,		19/05
02	Date of Sampling	14.03.2019		
03	Material of Construction	Refractory Brick		k
04	Stack Attached To	Capt	ive Power Plant	(CPP)
05	Flue Gas Temperature (°C)	86		
06	Exit Velocity of Gas (m/sec)	9.2		
07	Type of Fuel Used	Coal		
08	Analysi	s Results of Flue Gas		
SI. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
1.	PM- Particulate Matter	37.2	mg/Nm³	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	517.2	mg/Nm³	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	224.6	mg/Nm³	300
iv	Mercury (as Hg)	0.022	mg/Nm³	0.05



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Report No. : ENV/GSCL/DW/MAR/18-19/01

Date : 29/03/2019

**GOLDSTONE CEMENTS LIMITED** 

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## DRINKING WATER ANALYSIS RESULTS

Sample Type : Drinking Water	Sample Source	: Canteen	
Collected By : Jointly by Envirocon & Client	Collected On	: 14.03.2019	

Sl. No.	Parameters	Results	Desirable Limit (IS: 10500)
1.	Colour , Hazen Units, Max	<1	5
2.	Odour	Odourless	Agreeable
3,	Taste	Acceptable	Agreeable
4.	Turbidity, NTU, Max	0.16	1.0
5.	pH	7.2	6.5 - 8.5
6.	Total Dissolved Solids, mg/l, Max	168	500
7.	Aluminium (as Ai), mg/l, Max	ND	0.03
8.	Boron (as B), mg/l, Max	ND	0.5
9.	Calcium (as Ca), mg/l, Max	26	75
10.	Chloride (as CI), mg/l, Max	3.2	250
11.	Copper (as Cu), mg/l, Max	ND	0.05
12.	Fluorides (as F), mg/l, Max	ND	1.0
13,	Free Residual Chlorine, mg/l, Min	ND	0.2
14.	Iron (as Fe), mg/l, Max	0.024	0.3
15.	Magnesium (as Mg), mg/l, Max	3.1	30
16.	Manganese (as Mn), mg/l, Max	ND	0.1
17.	Zinc (as Zn), mg/l, Max	ND	5.0
18.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	ND	45
19.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	ND	0.001
20.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	19	200
21.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	76	200
22.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	7.1	200
23.	Cadmium (as Cd), mg/l, Max	ND .	0.003
24.	Cyanide (as CN), mg/l, Max	ND	0.05
25,	Lead (as Pb), mg/l, Max	· ND	0.01
26.	Mercury (as Hg), mg/l, Max	ND	0.001
27.	Selenium (as Se), mg/l, Max	ND	
28.	Total Arsenic (as As), mg/l, Max	ND ND	0.01
29.	Total Chromium, (as Cr), mg/l, Max		0.01
30.	Anionic Detergents (as MBAS), mg/l	ND ND	0.05
31.	Total Coliform, MPN/100 ml	NIL	0.2
32.	Faecal Coliforms/ 100 ml	NIL	10 Max
33.	E. Coli / 100 ml	NIL	Absent

Analysis Protocol IS 3025 Digboi Assam

ND: Not Detected

Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/FE/MAR/18-19/01

Date

:29/03/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

## PROCESS FUGITIVE EMISSION TEST RESULTS

Date Locations		Fugitive Emission Results for SPM (µg/m³)	Limits (µg/m³)	
13.03.2019	Fly-ash Storage Section	2886	5000	
13.03.2019	Coal Storage Section	935	2000	
14.03.2019	Limestone Storage Section	2104	5000	
14.03.2019	Cement Packing Section	2819	5000	

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/NLM/MAR/18-19/01

Date

: 29/03/2019

## GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

# NOISE LEVEL MEASUREMENT RESULTS

Measurement Date: 13.03.2019

SI. No.	Location(s)	Day time		Night Time	
		Result(s) (dB - A)	Limit(s) (dB - A)	Result(s) (dB - A)	Limit(s) (dB - A)
1	Near Coal Mill	73	75	65	70
2	Near CPP Area	70	75	63	70
3	Near Limestone Storage Yard	61	75	56	70
4	Near Coal Storage Yard	58	75	51	70
5	Near Raw Mill	72	75	65	70
6	Near Cement Mill	69	75	62	70
7	Near Administrative Building	56	75	49	70
8	Power House	72	75	66	70



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/ETP/MAR/18-19/01

Date : 29/03/2019

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

## EFFLUENT WATER ANALYSIS RESULTS

Sample Type : Treated ETP Water

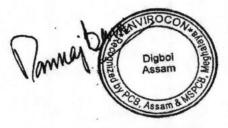
Sample Source : ETP Outlet

Collected By: Jointly by Envirocon & Client

Collected On: 14.03.2019

SI. No.	Parameter(s)	Unit(s)	Result(s)	Desirable Limits (IS: 2490)
01	рН		6.8	5,5 - 9.0
02	Temperature	°C	25.9	shall not exceed 500 above the receiving water temperature
03	Total Suspended Solids	mg/l	12.3	100
04	Biochemical Oxygen Demand (3 Days @27°C)	mg/l	19	30
05	Chemical Oxygen Demand	mg/l	47	250
06	Oil & Grease	mg/l	0.8	10
07	Total Residual Chlorine	mg/l	<0.01	1.0
08	Ammonical Nitrogen (as N)	mg/l	13.7	50
09	Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/l	34.8	100
01	Free Ammonia (as NH <sub>3</sub> )	mg/l	<0.01	5.0

Analysis Protocol: IS 3025



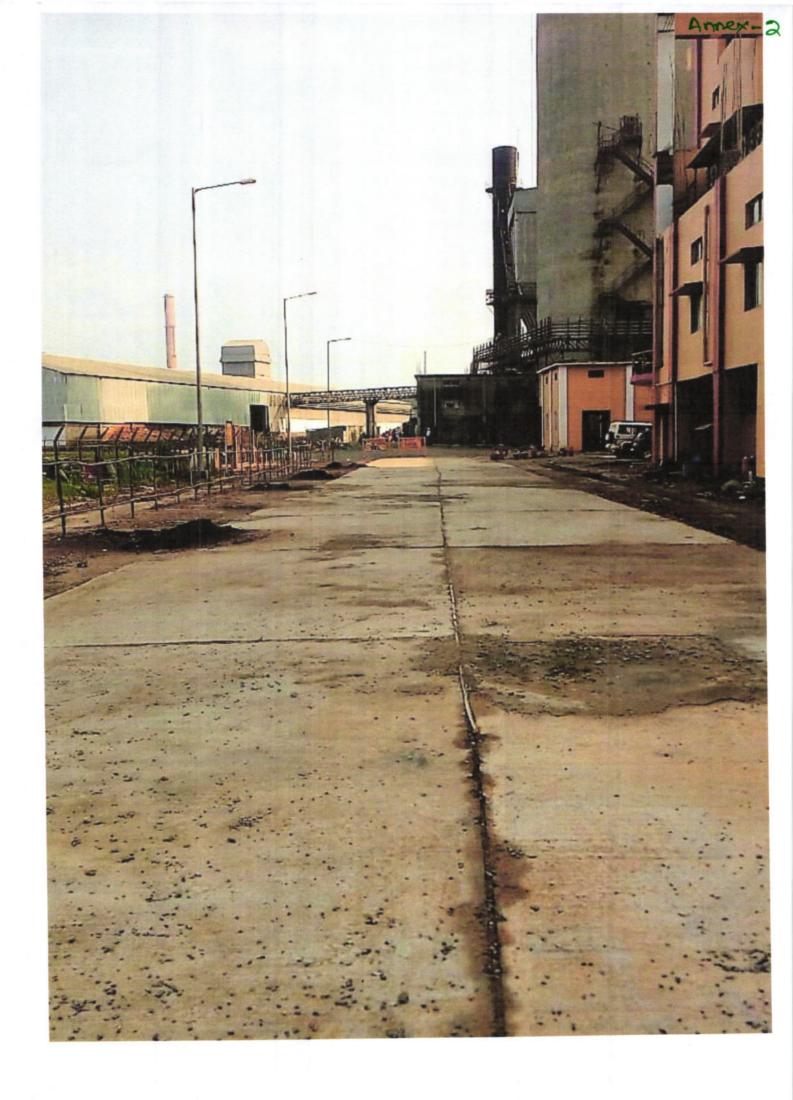
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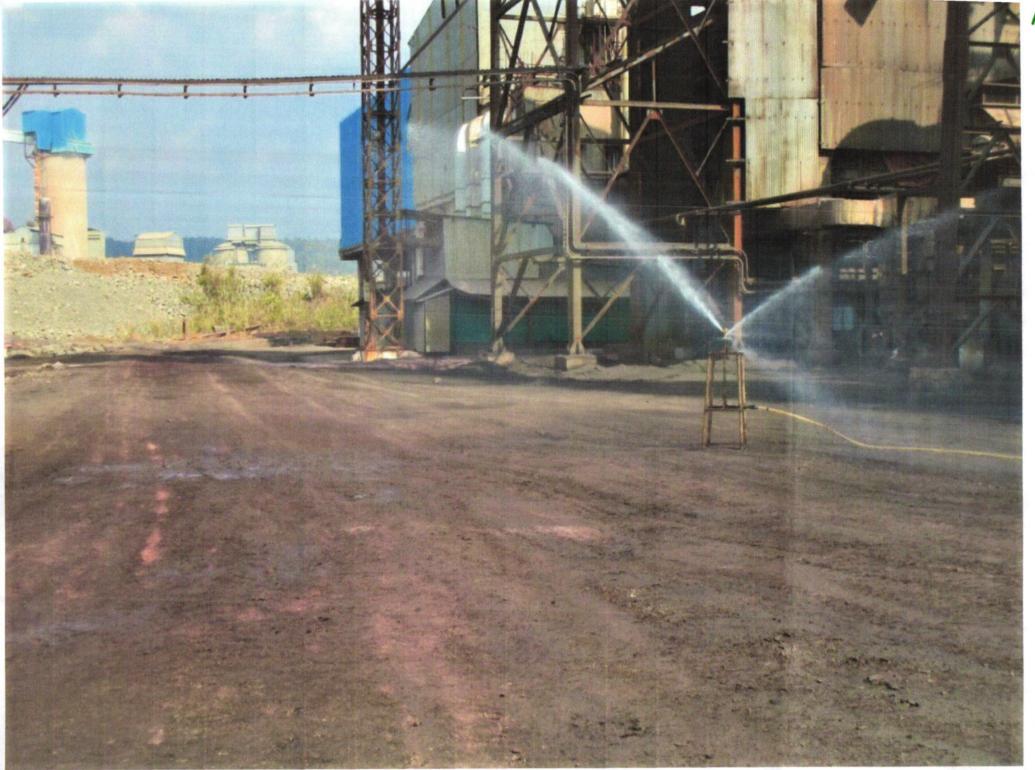
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Associate Services: Certification by Competent Person (CIF), NDT, Hydraulic Testing, Chartered Engineer Services etc.









Amnex

Amer.

# BHAROSA POLLUTION TESTING STATION

vehicle Rules 1989) (Under the Assam M

Approved by

Department.

Parengram New, Market.

License No-02/2003 Mobile No 9678753407,9577828112

Vehicle Registration No :-

AS-01-CC/8104

Date of Issue 26/04/2019

	- C	
CO (%)	4	23.0
HC(PPM)		026
SD(HSU)		

Valid Up to:-

25/10/2019

AS-01CC-8104

**PUC Certificate issue** 

BHAROSA POLLUTION TESTING STATION

100

K.Mazumder

Signature Political Signature Signat Panchgram New Market

TEST REPORT

Vehicle Registration No: - AS-01-CC/8104

Make-TATA

Model:- TATA LPT

H.P:- 5883 cc

Validity = 06 Months Engine No:- ...05006

Valid up tos 25/10/2019

Owner:- F. A. LASKAR

Time:- 10.10 A.M

Flushing Cycle mean: RPM Mean:-00698 RPM Max:-01704

SI No:-159

Fuel:-Diesel.

Test Fees:-130/-

Test Time:-10.10 A.M

Reg. Year: - 2010

Chassis No- .... 17760

I.D Number:-BPTS23M570

Vehicle Color .:- NA

OTP C	HSU%	Km-1	RPM max		
75.81	24.7		Krivinion	RPM min	SLNO
	31.7	1.27	01701	00706	-
76.65	32.5	1.30	01753		1
75.80	33.3	1.31		00717	2
74.21	39.2		01688	00681	3
74.22	35.2	1.22	01666	00694	4
					-
76.63	33.5	1.25	01703	20507	
(2) of CMV	ibed under Rule 115	he standards prescr	01705	00697	Mean

Certified that this Vehicle's CO and HC Emission Level confirm to the standards prescribed un

Rules, 1989

Valid Up To: 25/10/2019

Bharosa Polluction Testin

Panchgram New Ma

Name of Authorized Signatory with Signature

26/04/19

Seal Of Testing Date:-26/04/2019

CO (%)   HC (ppm)   SD (HSU)   Pollution Level   27.7   Licence No. and Sea   Co (2016	TOWN HAR	THE COUNTY	S-01-DC-5	Valid	: 16/06/2019	:
HC (ppm)   SD (HSU)   Pollution Level   27.7   Licence No. and Season   Doctor   D	sue on :	17/12/2	018	upto:		
Continue	NC NC	HC (ppm) SD (HSU)			THE BUILDS	Andrew 198
## 17/12/2018   Comparison   Co	OUC Cert	Pollution Level	ue 27.7	POLITIC	icence No.	and Seal
### Property   Fest Report   F	00 000	1				
## PEST REPORT  UTHORISED BY REPORT DEPT. GOVT OF ASSAM Not to be a seried of Registration of	- 16-05	BTIME	1		06/2016	
Comparison   Com	a was	THE PERSON SERVICE	Bunnas			
Comparison   Com	13/	offen V	(P.)			
Comparison   Com	9/3	Poly	TEGT RI	EPORT		
Comparison   Com	s la	Ho	107	-		
Rukminigaen Khanapara, Guwahati-22, Assam. ph-9854890111  Phicle Registration No. AS-01-DC-5242 Test Fee: 130.00	12	Cin City	ED NISPO	ORT DEP	r. GOVT OF	ASSAM
Phicle Registration No. AS-01-DC-5242 Test Fee: 130.00 pear of Registration 18/08/2006 Fuel Diese 130.00 peedometer Reading 245115  129308	JTHQK!	EDBY	THE THE		nh-9854	4890111
Phicle Registration No. AS-01-DC-5242 Test Fee: 130.00 pear of Registration 18/08/2006 Fuel Diese 130.00 peedometer Reading 245115  129308	ukminiez	en Khanar	ara, Guwa	hati-22,A	ssam. ph-705	
Chicle Registration No. AS-01-DC-5242   Test Fee.   Diese Par of Registration   18/08/2006   Fuel   Diese   18/08/2006   Fuel   Diese   18/08/2006   Fuel   Diese   129308   129308   124079   Vehicle Make   Tata   TRU   Vehicle Color   ASDP000578   Driver   Driver   Driver   MR   17/12/2018   12:11 AM   Owner   MR   17/12/2018   12:11 AM   Owner   MR   18. No.   RPM min   RPM max   K m-1   HSU%   OTP Color   12   100762   01300   2.38   27.5   69.80   1   00762   01306   2.38   26.9   71.20   12   00773   01336   2.38   26.9   71.20   12   00751   01316   2.35   28.2   71.34   12   12   12   12   12   12   12   1	dkiimig					
18/08/2006   Fuer   18/08/2006   Puer   18/08/2006   Puer   129308   129308   124079   Vehicle Make   Tata   TRU   Vehicle Color   ASDP000578   Driver   Owner   MR   17/12/2018   12:11 AM   Owner   MR   17/12/2018	t : A Danie	tration No	AS-01-D	C-5242		Diesel
129308   129308   124079   Vehicle Make   Tata   TRU   SELI   AM   Owner   Indicate	hicle Regis	tration		06	Fuel	-
129308   124079   Vehicle Make Vehicle Color	ar of Regis	Reading	245115			
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ehicle Color D Number	gine Num	her	124079		Vehicle Mod	The Control of the Co
D Number   ASD 1000   MR	phicle Colo	r	OTHER	S		SELF
Time 17/12/2018 Plushing Cycle Mean : RPM Mean : 00759 RPM Max : 01305  Sl. No. RPM min RPM max K m-1 HSU% OTP C  Sl. No. RPM min RPM max K m-1 HSU% 69.80  1 00762 01300 2.38 27.5 69.80  2 00773 01336 2.38 26.9 71.20  3 00750 01266 2.43 28.1 67.99  4 00751 01316 2.35 28.2 71.34  Mean 00759 01305 2.38 27.7 74.98	) Number		ASDPO	)05/8 .		MR B. SING
Plushing Cycle Mean : RPM Mean : 00759 RPM Max : 01303 OTP C   Sl. No. RPM min RPM max K m-1 HSU% OTP C   1 00762 01300 2.38 27.5 69.80   2 00773 01336 2.38 26.9 71.20   3 00750 01266 2.43 28.1 67.99   4 00751 01316 2.35 28.2 71.34			12:11 A	118		
No. RPM min RPM max K m-1 HSU% OTP C 013. No. RPM min RPM max K m-1 HSU% OTP C 013. No. RPM min RPM max K m-1 HSU% OTP C 013. No. RPM min RPM max K m-1 HSU% OTP C 013. No. RPM min RPM max K m-1 HSU% OTP C 09.80    2.38 27.5 69.80   2.38 26.9 71.20   3 00750 01266 2.43 28.1 67.99   4 00751 01316 2.35 28.2 71.34	ate	ni	17/12/20 MA Mean : 00	759 RPM	Max: 01305	
81. No. RPM IIIII   0.1300   2.38   27.5   69.80   1   00762   01300   2.38   26.9   71.20   2   00773   01336   2.38   26.9   71.20   3   00750   01266   2.43   28.1   67.99   4   00751   01316   2.35   28.2   71.34     1   1   1   1   1   1   1   1   1	lushing Cyc	ele Mean : Ki	DDM max	Ter 1		
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Mean 00759 01305 2.38 27.7 74.98	-		01316	2.35	28.2	71.34
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Certified that this vehicle's smoke density committee CMV Rules 1899 The	3 4 	The same of the sa			. / 4	MIN
Certified that this vehicle's smoke density confirm to the standards prescribed under Rule 115(2) of CMV Rules Validity: 6 months Valid UpTo: 16/06/2019	3 4 	The same of the sa		nsity confirm	n CMV Rules	85 All 18 5
Validity: 6 months Valid UpTo: 16/06/2019	3 4 	The same of the sa		nsity confirt e 115(2) of	n CMV Rules	Lic Houselans

# Date of issue. Value Registration No

### AUTHORISED BY GOVT. OF ASSAM

M/S BAJRANGVALEE A. E. T. STATION

BASISTHA CHARIALI, NH-37, NEAR RAJ SERVICE CENTRE, GUWAHATI-29

Phone: 0361-2307146 (OFFICE)

Vehicle Registration No.: AS01KC9012

Year of Registration: 2019

Engine No.: 2624 Chassis No.: 8409

Type of Vehicle: TRUCK

Type of Engine: 6

SI No. :1126187

Vehicle Make:

Owner Name: C Testing Fees: 130

Fuel: DIESEL

On Temp: 68

Valid Upto: 01-08-2019 Test Result: FREE ACCELERATION

No. Of K	Kval	MinRpm	MaxRpm	Interval	OilTemp	Test_Time
1	2.20	772	1580	5.6	67.2	02.34·37PM
2	2.23	775	1583	5.1	67.5	02:34:42PM
3	2.21	779	1590	5.6	67.6	02:34:47PM
4	2.20	776	1589	5.8	67.6	02;34:52PM
5	2.23	778	1593	5.8	68.0	02 34 57PM
6		-		-		
7			•			
8	-	-	2.45		· · ·	
9	-		1		-	
10		-	-	-	-	
K_Avg	2.214				age and any or	
HSU	61.17					L

Certified that this vehicle's K-Mean and HSU% value conforms to the standards prescribed under Rule 115(2) of CMV Rules 1989, the certificate is valid for 6 months.

Validity: 6 Months

Grade .

Name of Authorised Signatory With Signature

Seal of Testing Center

# Date of SSDE AJRANOVALEE AUTO EMISSION TESTING S ASUIDC9288

# COMPUTERISED EMMISSION TEST CERTIFICATE

# AUTHORISED BY GOVT. OF ASSAM

M/S BAJRANGVALEE A. E. T. STATION BASISTHA CHARIALI, NH-37, NEAR RAJ SERVICE CENTRE, GUWAHATI-29

Phone: 0361-2307146 (OFFICE)

Vehicle Registration No.: AS01DC9288

Year of Registration: 2011

Engine No.: 7310 Chassis No.: 8757

Type of Vehicle: TRUCK

Type of Engine: 6

Test Result : FREE ACCELERATION

SI No. :11246905 Vehicle Make Owner Namel: N

Testing Fees

Fuel : DIESE Oil Temp: 68

30-06-2019 Valid Upto:

		MinDam	MaxRpm	Interval	OilTemp	Test_Time
No. Of K	Kval	MinRpm	The second secon	5.6	67.2	11:13:27AM
1	2.20	772	1580	5.0		
2	2.23	775	1583	5.1	67.5	11:13:32AM
3	2.21	779	1590	5.6	67.6	11:13:37AM
4	2.20	776	1589	5.8	67.6	11:13:42AM
5	2.23	778	1593	5.8	68.0	11:13:47AM
6	-	-	-	-	-	-
7	-	-	-		-	-
8	-	-	-	- 1	•	-
9	-	-	-	-	-	- 3
10	-		-	- 1	-	- 616
K_Avg	2.214					3
HSU	61.17					L

Certified that this vehicle's K-Mean and HSU% value conforms to the standards prescribed under Rule 115(2) of CMV Rules 1989, the certificate is valid for 6 months.

Validity: 6 Months

Name of Authorised Signatory With Signature

Vs Bajrangvalee A.E.T. Station N. H. 37. Guwahati-29

Seal of Testing Center

CUITON UNDER CONTROL ON TROL OF THE CATE CUITON UNDER CONTROL ON TROL OF THE CONTROL OF THE CONT ROL POLLUTION UNDER CONTROL OLLUTION UNDER CONT AS01EC8465 ROL POLLUTION UNDER CONTROL **FOLLUTION UNDER CONT** POLITION UNDER CONTROL ROL ITION UNDER CONT NDER CONTROL CLLUTION UNDE 27/Mar/2019 26/Sep/2019 NDER CONTROL NOER CONTRO NOER CONTRO NOER CONTROL PUC CANDER GINTON POLICION DER CONTROL BH TSIgnature CONTROL POLLU TION UNDER TRANSPORT DEPT. GOVT OF ASSAM **AUTHORISED BY** MOBILE AUTO EMISSION TESTING STATION , 8638443173 GUWAHATI,

SI. No.

2992

Time on: 02:01:09 PM Date on: 27/Mar/2019

Vehicle Registration No.:

AS01EC8465

Test Fee (Rs): 130.00

Reg. Year:

2013

Fuel:

Diesel

Speedometer Reading(kms): 0

12679

Vehicle Make:

TATA

Engine Number: Chasis Number:

01776

Vehicle Model: 3118

Vehicle Color:

**OTHERS** D02001225 Driver:

X

I.D. Number:

2:01:09 PM

Owner

S.V.L.L.

Time: Date:

True

Flushing Cycle Mean: RPM min: 710 RPM max: 3550

RPM min	RPM max	K/m	HSU %	OTP C
740	3500	0.53	20.4	63.00
720	3500	0.51	20.0	64.00
740	3640	0.51	20.0	64.00
730	3750	0.51	20.0	66.00
733	3598	0.52	20.1	64.25
	740 720 740 730	740 3500 720 3500 740 3640 730 3750	740 3500 0.53 720 3500 0.51 740 3640 0.51 730 3750 0.51	740         3500         0.53         20.4           720         3500         0.51         20.0           740         3640         0.51         20.0           730         3750         0.51         20.0

Certified that this vehicle's Smoke Density confirm to the standards prescribed under Rule 115(2) of CMV Rules, 1989

Validity:

6 months

Valid UpTo 26/Sep/2019

Grade A

Seal Of Testing

Name of Authorised Signatory With Signature

#### DER CONTRO LUNDER CMY RULES 1989) OUTROL GERTICATE AS09C3249 ON UNLER Registration No. NTROL CERTICA 05-Oct-2019 Valid upto 06-Apr-2019 Issue on : CO (%) HC (ppm) 39.1 SD (HSU) Pollution level PUC Certificate Issuel CERTIC Licence No. and Seal Shama Auto Smoke Emission Testing Station 08/07/2014 Jawahar Nagar, Khanapara, Guwahati-22

**AUTHORISED BY** 

Signature

A.S.E. Testing Station Ghy-22

Jawahar Nagratikhana

Serial No.: D000004959

Make: TATA

Model:

**LPT 3118 TC** 

Jawahar Nag Reg. Year: 2011 Test Time: 11:23:49

uel : Diesel

Test Fee (Rs) :130.00

Category: Truck Validity: 6 months

Spedometer Reading(kms): ---

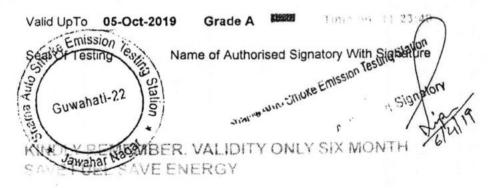
Engine Number -: 3174 Chasis Number -: 8050 vehicle Color-: **OTHERS** Driver:

Owner: S.K CHOUDHARY

Date on : 06 Apr 2019

	FLOSH	CYCLE	MEAN		120000000000000000000000000000000000000
	HIN BPH	HAX PPH	OIL TEMP.		
	770	3960	91		
S. No	HIN BPH	MAX RPM	K /m	HSO %	Temp
1	760	3960	1.58	49.4	91
2	760	3950	1.08	37.2	91
3	760	3920	1.20	40.4	90
4	760	3950	1.12	38.4	90
5	760	3920	1.20	40.4	90
Hean			1.15	39.1	
	1				
	1				

Certified that this vehicle's Smoke Density confirm to the standards prescribed under Rule 115(2) of CMV Rules, 1989





# SOUTH THE TENTOS Date of issue Value Registretion No. AS01DC4973

# AUTHORISED BY GOVT. OF ASSAM

M/S BAJRANGVALEE A. E. T. STATION BASISTHA CHARIALI, NH-37, NEAR RAJ SERVICE CENTRE, GUWAHATI 29

Phone: 0361-2307146 (OFFICE)

Vehicle Registration No.: AS01DC4973

Year of Registration: 2011

Engine No.: 8405 Classis No.: 3767

Type of Vehicle: TRUCK

Type of Engine: 6

SI No. :1127786 Veh ele Makos Owner Name \*

· Testing Fees

Fuel: DIESEL

Oil Temp: 54

Valid Upto: 29-09-2019 Test Result : FREE ACCELERATION

		Mi Dom	MaxRpm	Interval	OilTemp	Test_Time
No. Of K	Kval	MinRpm		5.7	54.0	09.56:52AM
1	2.02	745	2272		54.0	09:56:57AM
	2.04	795	2129	5.4		09:57:02AM
	2.02	796	2269	5.0	54.0	09:57:07AM
3	2 03	715	2329	5.2	55.0	1
	2.028	715	2349	4.5	55.0	09:57:12AN
6	- 2.020		-	L	· · · · · · · · · · · · · · · · · · ·	+
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8	-	-	•			
9		-	-		+	<del></del>
10		·	-	+	4	+
K Avg	2 0276		1	1	1	!
HSU	57.68		an and HSU%	L value con	forms to the	

Certified that this vehicle's K-Mean and HSU% value conforms to the standards prescribed under Rule 115(2) of CMV Rules 1989, the certificate is valid for 6 months.

Validity: 6 Months

Name of Authorised Signator With Signature

Seal of Testing Center

Grade : A

SI. No. UTION UNDER CONTROLLINGER CANERU 8108 989 UTION UNDER CONTROL ROL POLLUTION UNDER CONTROL ROL POLLUTION UNDER CONTROL LLUTION UNDER CONT AS01EC8463 POLLUTION UNDER CONTROL GLI STION UNDER CONT RO DILUTION UNDER CONT DER CONTRO Time on: 02:09:04 PM 26/Sep/2019 IL UTION UNDE 27/Mar/201 IDER CONTRO Date on : 27/Mar/2019 LIUTION UNDE NOER CONTRO NDER CONTRO NOER CONTRO UNDEPolition Jevel CHIEDICE UNDER POLLUTION UNDER CONTRO TRANSPORT DEPT. GOVT OF ASSAM AUTHORISED BY MOBILE AUTO EMISSION TESTING STATION . 8638443173 GUWAHATI, Test Fee (Rs): 130.00 AS01EC8463 Vehicle Registration No.: Diesel Fuel: 2013 Reg. Year: Speedometer Reading(kms): 0 11272 TATA Engine Number: Vehicle Make: 01652 Vehicle Model: 3118 Chasis Number: X **OTHERS** Driver: Vehicle Color: S.V.L.L. D02001226 Owner I.D. Number: 2:09:04 PM Time: True Date: Flushing Cycle Mean: RPM min: 710 RPM max: 3550 HSU % OTP C K/m RPM max RPM min S.No. 63.00 20.4 0.53 3500 740 64.00 20.0 0.51 3500 720 2 64.00 20.0 0.51 3640 740 3 66.00 20.0 0.51 3750 730 4 64.25 20.1

Certified that this vehicle's Smoke Density confirm to the standards prescribed under Rule 115(2) of CMV Rules, 1989

3598

733

6 months Validity: Valid UpTo 26/Sep

Grade A

0.52

Seal Of Testing

Mean

Name of Authorised Signatory With Signature

POLLUTION UNDER CONTROL CERTIFICATE (Veter de TRIPURA MOTOR VEHICLES RULES 1991) chicle Registration No : TR01U 1819 Valid Upto 18 May 2019 Date of Issue : 19 Nov 2018 Test Results: HSU 37.15% Licence No and Seal NO.F.1(1)/DTO/DLI/ABS/2016/1158-61 VEHICLE PASSED PLEASE rificate Issued By: RITTIKA ANTOMOBILES EXHAUST TESTING CENTERE A.O.C. PARA, POLLUTION UNDER CONTROL CERTIFICATE (Under the TRIPUTA MOTOR VEHICLES RULES 1991) MANUGHAT. TEMMERORT RITTIKA AUTOMOBILES EXHAUST T. CENTERE SEAL CO MANU GHAT, DHALAI, TRIPURA, PH-9862870689 Licence No NO.F.1(1)/DTO/DLI/ABSTatt Statistic Code Type Of Vehicle: Othersheeler TR00120181404 PUCC No: Type Of Engine: 4 Stroke TR01U 1819 Vehicle No: Make: Year Of Reg: 2012 Model: LPT 3118 TC Odomtr Reading: 00 Engine No: -----5198 Chassis No : -----0264 Fuel : Diesel Customer Name MR SUJIT DEBNATH 19 Nov 2018 Date: SOUTH BAGADI Address: 09:22:25 AM Time : NARSINGARH AIRPORT Flush | Flush-Max Rpm Mean Idle Rpm 3354 0987 Max Rpm | k Val Hsu Oil Temp Idle Rpm Trial 1015 3488 1.89 55.63 92 1034 3370 2.16 60.50 90 3503 1.10 37.69 92 1018 1.03 35.78 93 1016 3393 37.95 93 992 3511 1.11 1.08 37.15 95 1004 3464 Testing Fees: 80 Rs Grade: Valid Upto: 18 May 2019 RESULT = PASSED 1.03 37.15 RITTINK Vehicle meet And ton Standards Prescribed under Rule 11500) EXHAUST TESTING CENTER Motor Vehicle Rules 1989. Seat OF Testing Station PHALA Authorised Signatory

MARS SM-05

OLIVION UNDER CONTROL UNDER CONTROL POLLUTION UNDER COLLUTION UNDER CONTROL POLLUTION UNDER COLLUTION UNDE 28/Sop/2019 OLLUTION UNDE NOER CONTRO NOER CONTRO UNDER

31. No. 2991

Time on: 01:58:13 PM Date on : 27/Mar/2019

AUTHORISED BY

TRANSPORT DEPT. GOVT OF ASSAM

MOBILE AUTO EMISSION TESTING STATION .

GUWAHATI,

8638443173

Vehicle Registration No.;

AS01EC8466

Test Fee (Rs):

130.00

Diesel

Reg. Year.

2013

Fuel:

Speedometer Reading(kms): 0\_

Engine Number:

07615

Vehicle Make:

TATA

Chasis Number:

00321

Vehicle Model:

3118

Vehicle Color:

OTHERS D02001224 Driver:

X

I.D. Number:

1:56:13 PM

Owner

S.V.L.L.

Time; 🐇 Date:

True

min: 710 RPM max: 3550

ASSESSMENT OF THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER,	CIE MES	11.	RPM max	K/m	HSU %	OTPC
5.No.	RPM IT			0.53	20.4	63.00
E CONTRACTOR	1	740	3500	0.51	20.0	64.00
	2	720	0216	0.51	20.0	64.00
	3	740		0.51	20.0	
	4	730			20.1	
Mean		733	3598	0.52	20.,	
23. 4-13	in region to	And the said				
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Certified that this vehicle's Smoke Density confirm to the standards prescribed under Rule 115(2) of CMV Rules, 1989

Validity: 6 months

Valid UpTo 26/Sep/2019

Grade A

Seal Of Testing

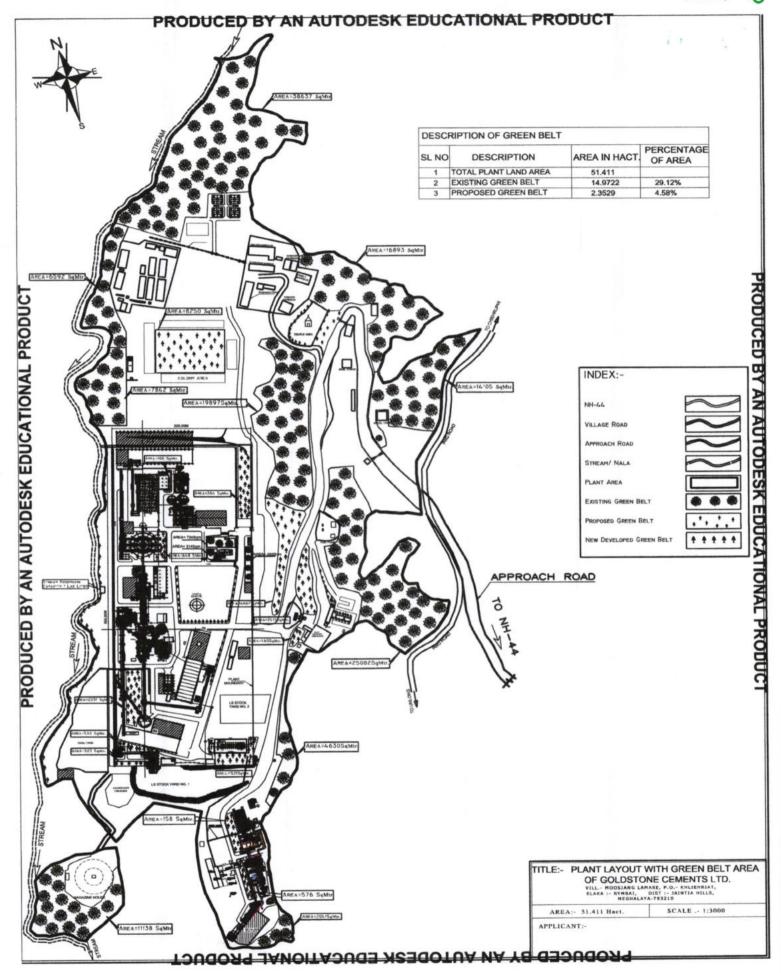
ame of Authorised Signatory With Signature





4mness 4a





Proceeding of the Public hearing held on the 27<sup>th</sup> November 2009 Proposed Cement plant
(Clinker 1.65 MTPA, Cement plant 2.54 MTPA) along with captive power plant (2 X 20 MW)
at Musiang Lamare Village in Jainta Hills District, Meghalaya by M/s. Goldstone Cements Limited.

The following are the list of persons present at the hearing and their comments/suggestions/remarks.

SI No	Name	Comments/Suggestions	Compliance
1	Headman, Musiang Lamare (Old)	Appreciated the efforts of the company and extends his support to the proposed project.	Agreed
2	Mr. Batskhem Lyngdoh, Dalloi Rymbai	Informed that as a Elaka they collectively agreed to grant consent to the proposed project and appealed to the NGOs to extend their support as well. He appealed to the residents of Elaka Rymbai present to stand up as show of support to the project.	Agreed
3	Mr. D.R. Ksih,Treasure, Elaka Rymbai	Extends his support to the proposed project.	Agreed
4	Shri KerHeadman Kairangson Bareh,	Supports the proposed project and urged the company to keep the promises made to the Elaka. He requested the NGOs to work collectively in the interest of the village.	Agreed GSCL has compiled each condition as per promises made to the Elaka.
5	Shri Lat Talang, Gen. Secy. Elaka Rymbai	Extends his support to the project.	Agreed
6	Shri. Emonlang Dkhar, Asst Secy. Elaka Rymbai	Appealed to the Company to maintain the ecology and environment of the area and extends his support to the project.	Agreed
7	Shri. H. Nongtdu, C.E.M. JHADC	Stated that industrialization brings about ecological change and urged the company to take care that the locals are not affected.	GSCL has taken all required pollution control measures.
8	Shri. Lait Sing Shylla, E.M., KHADC	Appealed to the company to maintain the green belt of the area and ensure that the health of the people of the area is not affected.	Green belt is developed. GSCL is providing the free medical services and free ambulance services in the nearby vicinity.
9	Shri.Kor Sympli, Byndihati	Welcomed the proposed project in the interest of development of the area and urged the company to fulfill the terms and conditions specified by the Elaka.	Agreed
10	Shri. Darwis Rymbai, President, Jaintia Hills People Indigenous Conference	Expressed his support to the proposed project.	Agreed
11	Shri. S.S. Kashanga	Stated that the locals aspire that with the coming up the company it will improve the welfare of the area. However, he is concern about the future generation. Educational and health aspects are primary areas that need attention. He urged the company to give priority to these issues.	GSCL is providing the free medical services and free ambulance services in the nearby vicinity.
12	Shri. Rinal Pala, Umulong	Extends his support and urged the company to ensure that water bodies and the environment are protected.	GSCL has taken all required pollution control measures.

13	Shri. Rimiki Suting, N.E. India Environment, Jainta Hills Unit	Is concern about the deforestation in the area. He extends his support to the company.	Agreed
14	Shri. Jwatmon Pariat, Moodymmai.	Extends his support to the proposal of M/S Goldstone Cements Ltd.	Agreed
15	Shri. Simeon Laloo, Farmer.	Feels it's a blessing that the company is setting up a cement unit in the area as it will benefit the farmers the unemployed youths and will also improve the education and health of the people.	GSCL has provided direct and indirect employment to the local to improve the standard of living.
16	Shri. R.L. Rymbai	Hopes that with the coming up of the company it will open up employment opportunities to the local people.	GSCL has provided direct and indirect employment to the local to improve the standard of living.
17	Shri. Nightstar Pariat, Moodymmai	Extents his support to the proposed project	Agreed
18	Shri. H.Lamin, MDC, KHADC.	Stated that due to low yield in the agricultural fields the local people have restored to migration to the urban areas to earn however, he feels that with the coming up of the company it will open up employment opportunities. He warned the company to fulfill its commitments. He extends his support to the unit.	Agreed
19	Shri. Spin Dkhar, Lumshnong	Extents his support to the proposed project. However, he regrets to state that the present cement units that have come up have failed to fulfill the commitments made to the local people.	Agreed
20	Shri. Ram Singh Lamare, Umulong	Extends his support to the project and urged the local Durbar to follow up the implementation of commitments made.	Agreed
21	Shri. Basterwell Bareh, Khliehriat	Stated that as the local Durbar has given its consent to the company, he supports the same.	Agreed
22	Shri. Fridolin Rymbai	Supports the proposed project and urged the Elaka not to issue NOCs to new applications for setting up Cement Units.	Agreed
23	Shri Daio Lapasam, Chehruphi	Extends his support to the proposed project and urged the company to ensure drinking water is available, environment is protected and employment opportunities open up for the locals.	GSCL has provided direct and indirect employment to the local to improve the standard of living. GSCL has taken all required pollution control measures.
24	Shri. Simon Siangshai	Expressed his happiness that the company is willing to invest in the area and supports the proposed project.	Agreed
25	Shri. Patrick Pala, Headman Byndihati	Extends the support of the local people and request the Dalloi's and Headmen to follow up the implementation of the agreement made.	Agreed
26	Shri. Bruno Shylla, Byndihati	Supports the proposed project and urged the company to fulfil its promises.	Agreed
27	Shri. Justine Dkhar, Deputy Headman, Khliehriat West.	Extends his support and appealed to the M.D. of the company to implement the presentation made.	Agreed

28	Shri. Alphon Dkhar, Khliehriat	Extends his support to the proposed project and urged the Company not to harass the locals when they seek employment in the factory.	Agreed GSCL has provided direct and indirect employment to the local to improve the standard of living.
29	Shri. Bindro Sympli, Diengshynrum.	Is in agreement with the support of the Elaka to the proposed project and express his gratitude to the company for investing in the area.	Agreed
30	Shri. Sherli SUna, Chehruphi	Supports the proposed project and urged the MSPCB to grant the required.	Agreed
31	Shri. Alphon Lyngdoh, Diengshynrum.	Supports the proposed cement unit and power project.	Agreed
32	Shri. Micheal Skhar, Diengshynrum.	Extents his support to the proposed project.	Agreed
33	Shri. S.K. Rai, Secy. Jainta Cement Association	Supports the proposed project.	Agreed
34	Shri. Shibun Lyngdoh, Khliehriat.	Supports the proposal and urged the company to implement modern technology so as to protect the environment and to take care of the welfare of the people.	GSCL has installed modern technology pollution control equipments to protect the environment. Company is providing free water facility. Free medical and ambulance facilities, free cements and subsidized cements to construct school, church, roads, cultural activities.

#### Goldstone Cements Limited, Musiang Lamare (old)

#### **CSR Expences**

il. No.	Name of Company	EC Stipulation	Fund Allocation by the Agency (Rs.) Year Wise	List of Activities	Expenditure (Rs.)	Unspent Amount (Rs.) (Year Wise)
			FY			
			FY 2014-15 Project not commissioned. Amount spent on CSR Rs. 886,088/- (upto FY 2014-15)		886,088	NA
	(SC-XVI): At least 5% of the total cost of the project shall be earmarked towards the Corporate Social Responsibility and item wise details alonwith time bound action plan shall be prepared and submitted to the Ministry's Regional Office, Shillong. Implementation of such program shall be ensured accordongly in a time bound manner.	FY 2015-16 Project not commissioned. Amount spent on CSR Rs. 330,000/-	Village and Elaka Development, Welfare activities of Villagers and local residents, Assistance for Education, Assistance in village road construction, Assistance for	330,000	NA	
1		(851/2008-IA II(I) dated submitted to the Ministry's Regional Office, Shillong. Implementation of such program shall be ensured accordongly in a time bound manner.	FY 2016-17 Phase -1 of Project Commissioned. Proportionate Project Cost of Phase I - Rs. 161,14,71,212/-, 5% of Project Cost of Phase -1 - Rs. 8,05,73,560/- Loss Incurred in Rs. 49.70 Cr.	celebration of festivals in local village, Assistance to Individual House Building undertaken by village and elaka residents, Assistance in construction of village market, Provision of safe drinking water in near by villages, repair of school building, donation of Hand	280,733	79,076,739
			FY 2017-18 Loss Incurred Rs. 31.35 Cr. Amount Spent on CSR Rs. 23,06,318/-	Carts.	2,306,318	76,770,421
*			FY 2018-19 Amount Spent on CSR Rs. 62,76,150/-		62,76,150	65,395,901

#### Goldstone Cements Ltd. Musiang Lamare (Old)

## **Investment Sheet of Pollution Equipments**

SI.No	Particulars	Supplier	Equipment	Mechanical	Civil	Electrical & Instrument	Transportation (Equipment, steel, Electricals, misscellaneous)	Total
1	Crusher Bag Filter	Larsen &Tourbo, Kansbahal	4396200					
2	Raw Mill Bag House							
3	Clinker Cooler ESP							
4	Bag Filter	Thermax	60683388					
5	Auxillaries	15000000000000000000000000000000000000						
6	Ancillaries					W. W. L W. L. W.		
7	Cement Mill Bag House	Rieco	13878650	40000000	52500000	21000000	10000000	0.0000000000000000000000000000000000000
8	Packing House Bag house	Flsmidth	3982307	40000000	32300000	21000000	10000000	
9	Bag Filter + Fans	Thyssenkrupp	2294403		at least 1.5 most			
10	Fans for : (i) Raw Mill Bag House (ii) Cement Mill Bag House (iii) Clinker cooler ESP	Flaktindia	5131605					
11	Missellaneous + Others	Flexocon/L&T	2280695			ST LOCALISM		United by the second
12	SOX/NOX analyser and opacity meters etc		3348688					
13	DATA NORAMALISATION, DATA CONTROLLER, TEMPERETURE SENSOR, PRESSURE AND FLOW METER	NEVCO ENGINEERS PVT LTD.	500497					
	STACK MONITORING KIT	Envirotech	124490					
14	Commissioning/Supervision		4000000					
	Total		100620923	40000000	52500000	21000000	10000000	224120923
0.57				(APPROX)	(APPROX)	(APPROX)	(APPROX)	(APPROX)

- A TOTAL INVESTMENT IN POLLUTION CONTROL EQUIPMENT 100620923/-
- B TOTAL INVESTMENT IN CIVIL/MECHANICAL/TRANSPORTATION OF POLLUTION CONTROL EQUIPMENT 123500000/- (APPROX)

TOTAL A+B

224120923

# Goldstone Cements Limited Recurring Pollution Control Expenditure for 2018-19

upto Date: 31.03.	.20	1
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SI No	Date	Particulars	Purchase Order Number	Quantity	Amount
1	04.05.2018	Bag Filter 149MM dia X 7060 MM LG	PGMS/00058/18-19	1000 bags	5510410
2	19.06.2018	Bag Filter 160MM dia X 4550 MM LG	DCMS/00338/18 10	200 bags	002700
3	19.06.2018	Filter Bags-149MM DIA X 4265 MM LG	PGMS/00228/18-19	400 bags	863760
4	12.07.2018	Bag Filter 149MM dia X 7060 MM LG	PGMS/00294/18-19	1000 bags	5510410
5	20.07.2018	Solenoid Valve spare kit for Cement mill, Coal Mill,Raw Mill bag Filter	PGKS/00109/19-19	1300	124519.5
6	07.08.2018	Filter Bags-149MM DIA X 4265 MM LG	PGMS/00354/18-19	700 bags	892080
7	11.08.2018	Filter Bags Cage	PGMS/00369/18-19	700 bags	1342132
8	22.08.2018	Bag Filter 160MM dia X 4550 MM LG	PGMS/00400/18-19	350 bags	584080
9	29.06.2018	Sox Nox Analyser spare parts	PGKS/00100/18-19		444187
10	22.09.2018	Opacity Monitor and spare parts	PGKS/00140/18-19		1117342
11	25.10.2018	ESP Spare parts	PGKS/00157/18-19		1033416
12	31.03.2019	Greenbelt Development	2.0		27000
13	31.03.2019	Third party environmental monitoring			751660
14	31.03.2019	Salaries and wages for Environmental activities			1149000
15	31.03.2019	Construction of Concrete road			775336
		Toal			20125332.5

# GOLDS TONE CEMENTS LIMITED. Musiang Lamare (Old) ENVIRONMETAL INFORMATION BOARD Ambient Air Quality, Stack Emission, Noise & Water Analysis Data

Locations Permissible Limils

(A8b)	_	99		09	99	25	b9 × 1	amil thein	
(ARA)		17		19	27	179	01 /	Day Time	
· TIM	200	СРР	T MILL	CEMEN	COALMILL	BULLDING	NAW MILL	7 4.	
ANDER	IS	<b>NEAR</b>	N AI	NEW	MEAR	NIMOA RABNI	Result	And Instruction (A	
				ATA		SION +			
				Seci	-30	2.5		Nagnesium (mak)	
000	2(	242	gnikos	Cement F	GL-	560		7. Calcium (ms/1)	
				Sect	44	0.26	(4)	6-Tolal Alkalınıly (	
000	20	9871	ageno12 s	Limeston	500	8.5		5-Total Handness (mg/1)	
				Section	SZU	3.2		4. Chloride (mg/1)	
000	20	<b>02PI</b>	Sur	CoalStor	-0.2			3- RFC (ms/1)	
								(1/pm) spilos	
				Section	005 >	991		2. Total Dissolve	
000	V PEAN	2374	92671012	FlyAsh !	5.8-5.9	Z.7		Hd	
	100	m/gu)		EWIZZ	(Nom) slimil	Water (Results)	Monitoring		
etim		erluesA	The state of the s	FUGIT	aldizzimns	DEINKING	to sted	3. WATER Quality	no.
002	009	0.5	2246	ILLU		S. CPP			
	-		708	BDF	7.82	4. Cement Mill			4
	-		708	805	517	3. Cooler ESP			4
	-		144.8	8.948	7.82	2. Coal Mill			
-								M/pm InU	
Q09	000	30	201.4	393.5	19.2	1. Raw Mill			
*ON	105	Wd	×ON	105	Md				
, u	N/D	w)					Monitoring		
slimi	sible	simnaf	silusa	Average R	Monthly	Localions	Date of	S'STACK EMISSION	
. 4	1/brro	18	8.42	6.82	3.85	43.2		D. Mitrogen Dioxide 110	
in in	/biro	8>	8.21	2.61	21.4	1.97		(c) Sulphur Dioxide-59,	
	2.5							(01<)	17
w/	br 00	1>	2.88	876	4.26	6.86		B) Particulate matter	15
								(5.53)	100
· w/	bryos	1>	2.09	6.23	8.26	8.95		A) Particulate matter	
The second second	-	Reside							
8 P	nl Js	Kur		pays	Critines		61-20-21		
nd stimi.			Temple	FIY	Secondary		pninolino		
		Manay	Near	Near	Near	Near CPP	to stal	The state of the s	
nik Insid	mA la	- t-IA	N N	N				(m/6m) ALINYNÖ	
		Townson !			SHOWBOOM		Myluot	TAMBIEN I MIK	



Ref No: GSCL/EHS/2018-19/08

Dated: 30.11.2018

To The Ministry of Environment & Forests & Climate Change North Eastern Regional Office (NEZ) Law-u-sib, Lumbatngen, Near MTC Workshop Near NTC Workshop, Shillong-793021

Sub: Six monthly compliance of environment clearance letter of M/s Goldstone cements Ltd, Vill: Musiang Lamare (old), Khliehriat, East Jaintia Hills, and Meghalaya-793200

Ref: Environment Clearance letter No:-J-11011/851/2008-IA II(I) dated 30.09.2010

Dear Sir,

With the matter as cited in the subject, we would like to submit the Half Yearly Compliance report for the period 01.04.2018 to 30.09.2018 on Environmental Stipulations for our Cement Plant along with Captive Thermal Power plant located at Vill Musiang Lamare (old), Khliehriat, Dist :East Jaintia Hills, Meghalaya -793200.

Thanking You,

Yours faithfully

For Goldstone Cements Ltd

CC: 1. Regional Director, Central Pollution Control Board, Regional Directorate-North East, Lower Motinagar, Shillong-793014.

2. Member Secretary, Meghalaya State pollution Control Board, "ARDEN" Lumpyngngad, Shillong-793014, Meghalaya.

Enc:-

1. Environmental Monitoring Report for the period 01.04.2018-30.09.2018 Central Pollution Control Board

2. Environmental Statement (Form V) for the Period 01.04.2017-31.03.2 किया निदेशालय उत्तर पूर्व शिलांग - ७९३०१४

Regional Directorate - North East, Shillong - 793014 पर्यावरण, बन एवं जलकयु परिवर्तन मंत्रालय, भारत सरकार Ministry of Environment, Forest & Climate Change, Govt. of In-

RECEIPT NO ....

Goldstone Cements Limited

CIN No.: U26940ML2007PLC008298 DATED

Corporate Office 510, 5th Floor, Diamond Heritage 16, Strand Road, Kolkata - 700001 P +91-33-66079604

**Factory Office** Village Musiang Lamare(Old), Khliehriat, East Jaintia Hills, Meghalaya - 793200

Sales & Marketing Office 5A, 5th Floor, Shine Towers, 57 Sati Jaymati Road Arya Chowk, Rehabari, Guwahati, Assam 781008 P +91-361-2607071/72

SL.	MW) AT VILL MUSIANG LAMARE (OLD) POKHLIEUD	2018 to 30 <sup>th</sup> Sept 2018. ON ENVIRONMENTAL STIPULATIONS FOI MTPA) ALONG WITH CAPTIVE THERMAL POWER PLANT (2 x 2 MAT, DIST. EAST JAINTIA HILLS, MEGHALAYA OF M/S GOLDSTONI MOEF LETTER NO. J-11011/851/2008-IA II (I), DATED 30.09.2010.
NO	CONDITIONS	COMPLIANCE
i	A. SPECIFIC CONDITIONS  Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After expansion, limit of SPM shall be controlled within 50 mg/Nm³ by installing adequate air pollution Control system. Electrostatic precipitators (ESP) to clinker cooler, bag house raw mill/kiln and bag filters to coal mill and cement mill. Low NOx burners should be provided to control NOx emissions.	The Continuous Stack Monitor (Opacity Meters) is in working condition and online data transferred to CPCB & MSPCB.  ESP (Electrostatic Precipitators) for Clinker cooler, Bag house/Bag filters fo Raw Mill / Coal Mill & other pollution control equipments were already installed in plant to keep SPM below 30 mg/Nm3 in Cement Plant stacks and 50 mg/Nm3 in Captive Power Plant stack as per our consent guideline.
ii	Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB). A feasibility report shall be prepared and submitted to the ministry and its Regional office at Shillong within 03 months from the date of issue of the letter.	Hot gases generated from kiln are required for drying out moisture in Raw Mill and Fuel. Hence Kiln waste heat is being utilized partially in Raw Mill and partially in Coal Mill to meet our operational requirement. Some heat is lost in clinker cooler. We have explored the Cement plant in the Vicinity and none of them have installed Waste Heat Recovery Plant. In Cement Plants, Hot Gas generation takes place only from Kiln Section. In our case the installed capacity of kiln is only 1700 TPD and after utilization of Hot Gases in Raw Mill and Coal Mill, it becomes uneconomical to justify one WHRB in view of its capital cost.
iii	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 <sup>th</sup> November 2009 shall be followed.	The same is being followed during operation of plant. Ambient air quality monitoring is being done through Third party (Recognized laboratory).  Ambient air quality parameters are found to be within the limit for all the parameters.  (Details attached as per Annexure-I)
	Secondary fugitive emission shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of practice issued by the CPCB in this regard should be followed.	All material transfer points are provided with Bag filters to control fugitive emission.  Guideline / Code of practice issued by the CPCB is being followed during operation of plant. Regular monitoring for control of secondary fugitive emission
v	Effort shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be over loaded. The company shall have separate truck parking area. Vehicular emissions should be regular producted.	Raw Material and end products are transported keeping in consideration that surrounding environment and agriculture land is protected. There is separate designated parking space for truck parking.

vi	Total water requirement for cement and captive power plant shall not exceed 2,370 m <sup>3</sup> / day. All the treated wastewater shall be recycled and reused in the process and / or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'Zero' discharge should be adopted.	Total water requirement is much below the stipulated limit of 2,370 m <sup>3</sup> / day as our Plant has been designed as per close circuit arrangements for cooling water
vii	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	We have constructed a reservoir of 1 lac liters capacity in the west side; however 14 lac liters capacity reservoir is planned.
viii	described under the E(P) Act whichever are more stringent.  Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional office at Shillong, SPCB and CPCB.	We are not generating any process effluent as the process water required for the cooling of bearing in cement plant is given treatment of cooling and sedimentation and entirely recycled.  Effluent from DM plant is treated in a neutralization pit and treated water is reused entirely for dust suppression on haul roads.
ix	All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.	All the dust collected through pollution control equipment is either raw material or cement dust. Those are collected and recycled in a closed loop.
х	All the fly ash shall be utilized as per fly ash Notification, 1999 subsequently amended in 2003. Effort shall be made to use fly ash maximum in making Pozzolana Portland Cement (PPC).	Fly ash generated in our captive power plant is completely used in-house in manufacturing of Pozzolana Portland Cement (PPC)
ĸi	Effort shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.	Low grade limestone / Dolomite Stones are blended with high quality grade lime time. Fly ash generated in CPP is used in-house in manufacturing of Pozzolana Portland Cement (PPC). We are manufacturing around 80% PPC with blend of fly ash and around 20% OPC (approximately).
cii	accordingly.	We are exploring regular availability of hazardous waste and accordingly necessary provisions for its utilization would be worked out.
dii	As proposed, green belt shall be developed in at least 33% area in around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with the PFO.	The green belt plan to achieve 33 % area coverage is already finalized. Coverage in major area has been in place. Plantation in balance area is under progress. Plantation of Native species is being done in consultation of DFO.

-	All the recommendations and to the China	T
xiv	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants should be implemented.	All recommendations were considered during the design of plant and machineries and as such all the issues in this regard are complied with.
xv	All the commitments made to the public during the Public Hearing / Public consultation meeting held on 27 <sup>th</sup> November 2009 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional office at Shillong.	Being implemented.
xvi	At least 5% of the total cost of the project shall be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional office at Shillong. Implementation of such program shall be ensured accordingly in a time bound manner.	providing free medicines ambulance service to local community
xvi i	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Company has already constructed workers accommodations with all necessary infrastructure and facilities such as Fuel for cooking, Toilets & Bathrooms, safe drinking water, medical health care etc.
	B. GENERAL CONDITIONS	
i	The project authorities must strictly adhere to the stipulations made by the Meghalaya State Pollution Control Board and the State Government.	Stipulations mandated in the CTE and CTO are being adhered to.
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	There will be no expansion or modifications beyond permissions already granted without prior approval of MoEF.
ili	The gaseous emissions from various process units shall confirm to the load / mass based standards notified by this Ministry on 19 <sup>th</sup> May, 1993 and standards prescribed from time to time. The State Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Our newly commissioned unit with more sophisticated technologies is able to meet with the new standards of emission for cement industries, including load based standards.

iv	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional office at Shillong and the SPCB/CPCB once in six month.	help of recognized laboratory.  Online emission monitoring system is installed in all the major stacks.  Compiled data are submitted to MOEF&CC, CPCB and MSPCB once in six months. We have also started to submit the Environment Monitoring reports once in every month to MOEF&CC, CPCB and MSPCB.
v	Industrial wastewater shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	Treated wastewater from DM plant is used entirely in dust suppression measures. Process water requires for cooling of bearing in the cement plant are cooled, treated and recycled fully.
vi	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Care has been taken during project planning and ordering of equipment. Noise level is monitored and being found within the prescribed limit.  (Details attached as per Annexure-I)
vii		The health care centre is already available in our Plant Campus. Trained and Staff and Visiting Doctor appointed with essential medicine for health surveillance regular basis.
viii	recharging the ground water table	A catchment reservoir to collect over flowing stream water has been constructed. More such systems are being explored and planned.
ix	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	We are working on the implementation of the conditions given in EIA/EMP.  We are sponsoring for community development programmes. We are providing the drinking water facility in nearby village.  We are providing free medicines, free ambulance services to local community.
	towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of environment & Forests as well as the state government. An implementing all the conditions stipulated herein shall be submitted to the Paris	We have expended necessary amount towards capital cost for environment pollution control measures to implement the conditions stipulated by the Ministry of environment & Forests as well as the state government. We are also expending necessary amount towards recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of environment & Forests as well as the state government.

Page 4 of 6

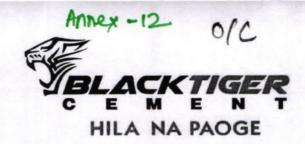
	Ti-	
Xi	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Has been implemented. Copy was already submitted to the MOEF &CC.
xii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Shillong. The respective Zonal office of CPCB and the SPCB. The criteria pollutant levels namely; PM 10, SO <sub>2</sub> , NOx (ambient levels as well as stack emissions) or critical sectoral parameters. Indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Six monthly monitoring data are being Submitted to MoEF&CC, CPCB and MSPCB periodically.
	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional office of MOEF, the respective Zonal office of CPCB and the SPCB. The Regional office of this Ministry at Shillong / CPCB /SPCB shall monitor the stipulated conditions.	Noted and being followed.
	prescribed under the Environment (Protection) Rules, 1986, as	Environmental Statement (Form V) for the year 2017-18 has been Submitted to Regional office of the State Pollution Control Board, MoEF and CPCB.  Details attached as per Annexure-II)  The process shall be followed for each FY.
	ONE CEMEN	

xv	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local news papers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Shillong.	Has been implemented.
xvi	Drotoot outhouties - L. II ' C	to the completed accordingly.

For Goldstone cements Ltd.

Authorized Signatory





Ref: GSCL/EHS/2018-19/05

Dated14.10.2018

To The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong-793014.



Sub: Submission for Environmental Statement (Form-V)

Sir.

With reference to the subject as cited above, we would like to submit Environmental Statement (Form-V) for the period 01.04.2017 to 31.03.2018. We have enclosed Monthly Environmental Monitoring Report for your reference.

We request you to acknowledge the receipt.

Thanking You,

Yours faithfully For Goldstone Cements Ltd

Authorised Signatory

Central Pollution Control Board क्षेत्रीब निदेशालय उत्तर पूर्व शिलांग - ७९३०१४ Regional Directorate - North East, Shillong - 793014 पर्यावरण, बन एवं जलकायु परिवर्तन मंत्र्यलय, भारत सरकार Ministry of Environment, Forest & Climate Change, Govt. of India

RECEIPT NO .....

DATED 16/10/18

Encl: Monthly Environmental Monitoring Report.

CC: 1. Regional Director, Central Pollution Control Board, Regional Directorate-North East.

2. Ministry of Environment Forest & Regional office, Shillong.

Goldstone Cements Limited

CIN No.: U26940ML2007PLC008298

Annex -12

#### **ENVIRONMENTAL STATEMENT (FORM -V)**

Of

#### M/S GOLDSTONE CEMENTS LTD.

Vill - Musiang Lamare (old), Khliehriat, Dist - East Jaintia Hills, Meghalaya (1st April 2017 - 31st March 2018)

#### PART-A

 Name and address of the owner/ Occupier of the Industry operation Or process

Shri M K Ghosh Plant Head

M/S Goldstone Cements Ltd.

Vill Musiang Lamare (old), Khliehriat Dist- East Jaintia Hills, Meghalaya

Industry Category
 Primary (S. T. C. Code)
 Secondary (S. T.C. Code)

Red Category

3. Production Capacity

0.88 Million Ton Cement 0.56 Million Ton Clinker 10 MW Captive Power Plant

4. Year of establishment

2010. Commercial Production on 02.07.2016

Date of the Last Environmental Statement Report Submitted

04.11.2017

#### PART-B Water and Raw Material Consumption

#### I. Water Consumption m³/d:

Process

: 250 m3 /day

Cooling, re circulation and dust suppression

: 60 m3/day

Domestic

: 150 m3/day

Name of Product	Process Water consumption per Unit of Product Output				
Traine of Froduct	During Previous Financial Year (16-17)	During Current Financial Year (17-18)			
Cement	0.15 m3/ton	Nil			
Power		1.05 m3/thousand Kwh			

#### II. Raw Material Consumption

		-1		erial		
Name of Raw Material		Name of Product	During Previous Financial Year (16- 17)(MT)	During Current Financial Year (17-18) (MT)	Consumption of raw material per Unit of output	
1.	Lime stone & Dolomatic Stone	Cement	2,06,606.14	5,62,751.61	1.41	
2.	Additives	1 [	26,831.838	72,112.607	0.18	
3.	Fly ash	] [	139.000	45,134.159	0.23	
4.	Gypsum		20.600	555.841	0.00	

PART- C

Pollution Discharged to Environment/Unit of Out Put:

SI. No	Pollutants	Quantity of Pollutants Discharged (Mass/day)	Concentration of Pollutants in Discharge (Mass/Volume)	Percentage of Variation from prescribed standard with reason
a)	Water	N.A.	N.A.	As plant is being operated on dry process technology, no liquid effluent is generated from the cement plant process. Domestic water generated from residential colony, office toilets and mess is disposed off in soak pit via septic tank. We have installed Effluent Treatment Plant / Sewage Treatment Plant.
b)	Air	Please refer Annexure- I,	II, III & IV	

#### PART -D

#### **Hazardous Waste**

All the quantity of used oil & used grease come out as reject from different gear application and bearings are sold to authorized recycler & used in in-house.

		Total Quantity (Liters/Kgs)		
	Hazardous Waste	During Previous Financial Year (2016-17)	During Current Financial Year (2017-18)	
a)	Used oil & Grease	15,000 Lits/Year.	11470 Lits	
b)	Fly Ash	3632890 Kgs	13768046 Kgs	
c)	Chemical Container	Shift or all access	198 Nos	
d)	Turbine Oil		104 Ltrs	
e)	Gear Oil		560 Ltrs	

#### PART-E

#### Solid Waste

SI.		Total Qu	antity in MT
No.	Solid Waste	During Previous Financial Year (16-17)	During Current Financial Year (17- 18)
a)	From Process	NIL	NIL
b)	From Pollution Control Facility	Dust Collected in ESPs, Bag House into the System.	es and Bag Filters are recycled back
c)	Quantity recycled or re- utilized within the unit	100%	100%
	2) Sold	NIL	NIL
	3)Disposed (Fly ash generated from CPP & consumed into Cement Plant)	Fly Ash- 3632.89 MT	Fly Ash - 13768.046 MT
d	Iron Scrap	NIL	20.24 MT
e	Old & Used I.T. Materials	NIL	0.015 MT

#### PART-F

Please Specify the Characterization (in terms of composition and quantum) of Hazardous as well as Solid waste and indicate disposal practice adopted for both these categories of wastes.

#### Hazardous Waste:-

Description of Hazardous Waste	Qty. of waste generated during the year (17-18)	Disposal Method
a) Used oil & Grease	11470 Lits/Year.	300 Ltr used oil used in lubrication of DPC Chain 2140 Kg Grease used in lubrication of Kiln seal Remaining are kept in central store and may be sold to authorized recycler.
b) Fly Ash	13768046 Kgs	consumed in cement plant
c) Chemical Container	198 Nos	Kept at central Store in designated place and may be sent to seller for refilling
d) Turbine Oil	104 Ltrs	Kept at central Store and may be used after filtration.
e) Gear Oil	560 Ltrs	Kept at central Store in designated place

#### Solid Waste:-

Other Solid Waste	Qty. of waste generated during the year (17-18)	Disposal Method
a) Iron Scrap	20.24 MT	17.73 MT sold to authorized vendor. Remaining are kept in central store in scrap yard.
<li>b) Old &amp; used I.T. materials</li>	0.015 MT	Kept at central Store in prescribed place

#### PART-G

## Impact of the pollution control measure on Conservation of natural resources and consequently on the cost of production

M/s Goldstone Cement Ltd is making continuous efforts to conserve natural resources with environmentally Sound and green technology.

Adopted dry process technology, where there is no water consumption also makes zero effluent discharge from the plant. The advantage of dry process is also in fuel economy. The stack emissions from the plant are controlled by equipment like ESPs, and Bag Houses.

Designed to control the emission (SPM) level within permissible Limits.

The dust is collected in the above mentioned dust catchers. This dust is recycled to the system, so as to convert finally to the product. These ways the natural resources are conserved in the system.

The Pollution abatement practices adopted by us save precious raw material/ product and greatly help in conserving valuable natural resources. Ultimately reducing the manufacturing cost.

Total 5 nos. of opacity monitor already installed in Raw Mill & Kiln Stack, Coal Mill Stack, Cooler ESP stack, Cement Mill Stack & CPP stack and real time data are being transferred to CPCB, New Delhi.

Bag filters are installed in each transfer points to reduce the fugitive emissions. The material collected in the hoppers of pollution control equipment, recycled back into process, neutralize the cost of operation of pollution control equipment. Hence no cost impact on the production cost.

#### PART- H

## Additional measures/ investment proposal for environmental protection including abatement of pollution

Development of greenbelt in & around the plant & colony.

Planting trees is ongoing process. Around 2012 nos. of sapling of different native species was planted during the FY 2017-2018. The said program will continue for coming year also.

Water tanker is used for spraying in the plant area as well as the nearby regularly for dust suppression.

Suitable interlocks have been provided for Gear box & Girth Gear Cooling fans to avoid idle running of these fans.

# PART- I Any other particulars for improving the quality of the environment

- Continuous monitoring of stack emission, ambient air, and noise and water quality is done. Necessary action plan is prepared and implemented accordingly.
- 2. Scheduled maintenance of all the pollution control devices is done on regular basis.
- More number of Plantation will be done in the coming future.
- 4. Water sprinkling on the unpaved surface for dust suppression.
- 5. Development of greenbelt in & around the plant & colony. The tree species planted are Neem, Khokon, Champa, Agarwood, Mahagony, Bokul, Mango, Litchi, Black Jamun, Almond, Cycus, Green Hedge, Coloured Hedge, Fycus, Royal Plam, Areca Plam, Thuja, Red Bottle Brush, Ashoka, Gulmohor, Golden Bottle Brush, Chinese Plam, Night Jasmine, Ceylon, Tahiti, Aclypha, Hibiscus, yucca Aloifolia, Phonix, Furcraea, Budhist Bamboo, Bougenvelia, Draceena, Calendula, Crysenthemum, Phlox, Merigold, , Primola, Rananculus, Statics, Cosmos, Dianthus, Dhalia, Gazania, Poppy, Petunia, Lily, Anthurium, Bolsom, Verbena, Salvia, Vinka, Exora, Celosia etc. Rate of survival 93%.
- 6. Proper lubrication and housekeeping to avoid excessive noise generation.

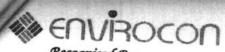
To substantiate above statement, latest emission monitoring report is enclosed herewith.

Annexure- II : Ambient air quality report
Annexure- III : Fugitive Emission report
Annexure- III : Stack Emission level report

Annexure- IV : Ambient Noise quality report.

M/S Goldstone Cements Ltd

Authorized Stgnatory, 0/18



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Report No.: ENV/GSCL/AAQ/SEPT/18-19/01 :01/10/2018

Date

GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya- 793200

# AMBIENT AIR QUALITY TEST RESULTS

SL. No.		Date of	PM 2.5 (μg/m³)	PM 10 (μg/m³)	NO <sub>2</sub>	SO <sub>2</sub>
	Limit(s)	Sampling	60	100	(μg/m³)	(μg/m³)
	-	-	(24 Hrs. Av.)	(24 Hrs. Av.)	80 (24 Hrs. Av.)	80 (24 Hrs. Av.)
1.	Near CPP	20.09.2018		65.2	12.8	
		21.09.2018	30.2		12.8	5.8
2.	Name	20.09.2018		-		
٠.	Near Secondary Crusher			69.8	9.6	5.1
		21.09.2018	26.1			-
3.	Near Fly Ash Shed	20.09.2018		73.9		
_		21.09.2018	34.6	-	8.4	ND
.	No. 7	20.09.2018	01.0	-		-
	Near Temple			51.8	5.2	ND
		21.09.2018	19.2			

ND: Not Detected

Analysis Protocol: IS 5182

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

NOTE:

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Report No.: ENV/GSCL/FE/SEPT/18-19/01

Date : 01/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### PROCESS FUGITIVE EMISSION TEST RESULTS

Date	Locations	Fugitive Emission Results for SPM (μg/m³)	Limits (µg/m³)
22.09.2018	Fly-ash Storage Section	2413	5000
21.09.2018	Coal Storage Section	924	2000
21.09.2018	Limestone Storage Section	1846	5000
22.09.2018	Cement Packing Section	2761	5000

Sampled & Analysed by: ENVIROCON, Digboi



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/SEPT/18-19/04

Date

:01/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

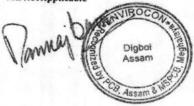
Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSG	GSCL/SE/SEPT/18-19/04		
02	Date of Sampling		21.09.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Cement Mill		
05	Flue Gas Temperature (°C)		65		
06	Exit Velocity of Gas (m/sec)		12,2		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	28.2	mg/Nm³	30	
ű	Sulphur Dioxide (as SO <sub>2</sub> )	BDL	mg/Nm³	1000	
111.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL	mg/Nm³	800	

**BDL: Below Detection Limit** 

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/SE/SEPT/18-19/05

:01/10/2018

#### GOLDSTONE CEMENTS LIMITED

Village- Musiang Lamare (Old) P. O .:- Khliehriat Meghalaya-793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL	GSCL/SE/SEPT/18-19/05		
02	Date of Sampling		21.09.2018		
03	Material of Construction		Refractory Brick		
04	Stack Attached To	Capti	Captive Power Plant (CPP)		
05	Flue Gas Temperature (°C)		89		
06	Exit Velocity of Gas (m/sec)		8.5		
07	Type of Fuel Used		Coal		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	· Unit(s)	Limit(s)	
i.	PM- Particulate Matter	33.9	mg/Nm³	50	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	534.3	mg/Nm³	600	
III.	Oxides of Nitrogen (as NO <sub>x</sub> )	200.5	mg/Nm³	300	



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Report No.: ENV/GSCL/SE/SEPT/18-19/03

Date : 01/10/2018

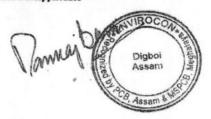
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Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSC	GSCL/SE/SEPT/18-19/03		
02	Date of Sampling		21.09.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Cooler E. S. P.		
05	Flue Gas Temperature (°C)		219		
06	Exit Velocity of Gas (m/sec)		13.1		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
í.	PM- Particulate Matter	25.3	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	175.2	mg/Nm³	1000	
III.	Oxides of Nitrogen (as NO <sub>x</sub> )	79.2	mg/Nm³	800	

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/SEPT/18-19/02

Date : 01/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSCL	GSCL/SE/SEPT/18-19/02		
02	Date of Sampling		20.09.2018		
03	Material of Construction		M. S.		
04	Stack Attached To		Coal Mill		
05	Flue Gas Temperature (°C)		59		
06	Exit Velocity of Gas (m/sec)		8.3		
07	Type of Fuel Used		NA*		
08	Analysi	s Results of Flue Gas	11.20		
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
i.	PM- Particulate Matter	26.8	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	349.8	mg/Nm³	1000	
III.	Oxides of Nitrogen (as NO <sub>x</sub> )	194.7	mg/Nm³	800	

\*NA: Not Applicable



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Report No.: ENV/GSCL/SE/SEPT/18-19/01

Date : 01/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### STACK EMISSION TEST RESULTS

01	Stack Emission Test Ref. No.	GSG	GSCL/SE/SEPT/18-19/01				
02	Date of Sampling		20.09.2018				
03	Material of Construction	M. S.					
04	Stack Attached To		R. A. B. H.				
05	Flue Gas Temperature (°C)		177				
06	Exit Velocity of Gas (m/sec)		12.4				
07	Type of Fuel Used		Kiln Coal				
08	Analysis Results of Flue Gas						
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s			
i.	PM- Particulate Matter	21.4	mg/Nm³	30			
II.	Sulphur Dioxide (as SO <sub>2</sub> )	720.8	mg/Nm³	1000			
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	329.3	mg/Nm³	800			



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/GSCL/NLM/SEPT/18-19/01

Date : 01/10/2018

#### **GOLDSTONE CEMENTS LIMITED**

Village- Musiang Lamare (Old) P. O.:- Khliehriat Meghalaya- 793200

#### NOISE LEVEL MEASUREMENT RESULTS

Measurement Date: 28.08.2018

Sl. No.	Location(s)	Day time		Night Time	
		Result(s) (dB - A)	Limit(s) (dB - A)	Result(s) (dB - A)	Limit(s) (dB - A)
1	Near Coal Mill	71	75	62	70
2	Near CPP Area	68	75	59	70
3	Near Limestone Storage Yard	63	75	48	70
4	Near Coal Storage Yard	62	75	53	70
5	Near R. A. B. H.	73	75	60	70
6	Near Cement Mill	69	75	62	70
7	Near Administrative Building	61	75	46	70
8	Power House	74	75	68	70



Checked By: Mr. Pankaj Baroi, ENVIROCON

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