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HCCL/MSPCB/21-22/04

Date: 25/10/21

To,

The Member Secretary,

Meghalaya State Pollution Control Board

ARDEN Lumpyngngad

Shillong (Meghalaya) -793014

Subject: Reports on Ambient Air Quality test, Stack Emission test, Fugitive Emission, Waste Water Analysis (STP & ETP) & Noise Level Measurement Test for the month of September 2021 Dear Sir,

Please find enclosed herewith to this letter the reports for the month of **September 2021** for the following test results:

Sl No.	Test Results	Purpose
1	Ambient Air Quality	-
2	Stack Emission	R.A.B.H
3	Stack Emission	Coal Mill
4	Stack Emission	Cooler E.S.P
5	Waste Water Analysis Result (Treated & Raw)	ETP & STP Water Analysis
6	Noise Level Measurement Test	
7	Fugitive Emission Test	

Thanking you,
For Hills Cement Company Ltd
HILLS CEMENT CO. LTD.

Authorised Signatory

Copy To: - The Joint Director (S), Ministry of Environment, Forest & Climate Change NE Regional Office, Lumbatngen, Shillong 793021 for information

HILLS CEMENT COMPANY LIMITED





HCCL/MSPCB/21-22/04

Date: 25.19.41.

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Meghalaya State Pollution Control Board
ARDEN Lumpyngngad
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HILLS CEMENT COMPANY LIMITED



Envirocon Building, I.O.C.L (AOD) New Market P.O.: Digboi, Dist.: Tinsukia, Assam – 786 171 Ph: 03751-264414, 9435008657, 8876028672

E-mail: envirocon@rediffmail.com

ISO 9001:2015 Certified ISO 45001:2018 Certified

Report No.: ENV/HCCL/21-22/AA-09/01

Date : 18/09/2021

Order No.: HCCL/HO/ENV/21-22/01

Date : 08/04/2021

Report Issued To: HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

AMBIENT AIR QUALITY TEST RESULTS

Sl. No.	LOCATION(S)↓	Date of Sampling	P M 2.5 (μg/m³)	PM 10 (μg/m³)	SO ₂ (μg/m³)	NO ₂ (μg/m³)
	LIMIT(S) →		60	100	80	80
01	In-front of Guest House	02.09.2021	19.3	41.6	<5.0	<6.0
02	Near Crusher Area	02.09.2021	27.3	52.1	6.2	7.2
03	In- Front of Compressor House (Cement Mill)	03.09.2021	24.8	47.6	6.5	7.7
04	Near Mines	03.09.2021	31.4	62.4	<5.0	<6.0

Analysis Protocol: IS 5182



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Report No.: ENV/HCCL/21-22/WW-09/01

:18/09/2021

Order No.: Verbal

Date

Report Issued To:

HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

WASTE WATER ANALYSIS RESULTS

Sample Ref. No.

: HCCL/21-22/WW-0409/01

Sample Type/Source

: Waste Water (Raw)/STP Inlet

Sample Collected By

: Representative of ENVIROCON

Sample Collected On

: 04.09.2021

Sample Received On

: 06.09.2021

Analysis Protocol

: IS 3025

Sl. No.	Parameter(s)	Unit(s)	Result(s)	Limit (As Per CPCB Standards)
1.	рН	-	6.46	5.5 - 9.0
3. To	Temperature Total Suspended Solids Biochemical Oxygen Demand	°C mg/l mg/l	27.2 52 48	shall not exceed 5°C above the receiving water temperature
				100
				30
5.	Chemical Oxygen Demand	mg/l	277	250
	Oil & Grease Total Residual Chlorine	mg/l <4.0 mg/l <0.01	<4.0	10
			1.0	
8.	Ammonical Nitrogen (as N)	mg/l	32	50
9.	Total Kjeldahl Nitrogen (as NH ₃)	mg/l	52	100
10.	Free Ammonia (as NH ₃)	mg/l	0.42	5.0



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Report No.: ENV/HCCL/21-22/WW-09/02

Date : 18/09/2021

Order No,: HCCL/HO/ENV/21-22/01

Date : 08/04/2021

Report Issued To: HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

WASTE WATER ANALYSIS RESULTS

Sample Ref. No.

: HCCL/21-22/WW-0409/02

Sample Type/Source

: Waste Water (Treated)/STP Outlet

Sample Collected By

: Representative of ENVIROCON

Sample Collected On Sample Received On

: 04.09.2021 : 06.09.2021

Analysis Protocol

: IS 3025

Sl. No.	Parameter(s)	Unit(s)	Result(s)	Limit (As Per CPCB Standards)
1.	рН	Principle of the Park	6.72	5.5 - 9.0
2.	Temperature °C 27.2 Total Suspended Solids mg/l 13 Biochemical Oxygen Demand mg/l 19 Chemical Oxygen Demand mg/l 106 Oil & Grease mg/l <4.0		13 19 106	shall not exceed 5°C above the receiving water temperature
				100
4.		mg/l		30
5.		Oil & Grease mg/l <4.0		250
6.				10
7.			<0.01	1.0
8.	Ammonical Nitrogen (as N)	mg/l	8,5	50
9.	Total Kjeldahl Nitrogen (as NH ₃)	mg/l	16	100
10.	Free Ammonia (as NH ₃)	mg/l	<0.01	5.0



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Report No.: ENV/HCCL/21-22/WW-09/03

Date : 18/09/2021

Order No.: Verbal

Date

Report Issued To:

HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

WASTE WATER ANALYSIS RESULTS

Sample Ref. No.

: HCCL/21-22/WW-0409/03

Sample Type/Source

: Waste Water (Raw)/ETP Inlet : Representative of ENVIROCON

Sample Collected By Sample Collected On

: 04.09.2021

Sample Received On

: 06.09.2021

Analysis Protocol

: IS 3025

Sl. No.	Parameter(s)	Unit(s)	Result(s)	Limit (As Per CPCB Standards)
1.	рН		6.47	5.5 - 9.0
2.	Temperature	оС	27.2	shall not exceed 5°C above the receiving water temperature
3.	Total Suspended Solids	mg/l	61	100
4.	Biochemical Oxygen Demand Chemical Oxygen Demand Oil & Grease	mg/l mg/l mg/l	41 312 <4.0	30
5.				250
6.				10
7.	Total Residual Chlorine	mg/l	<0.01	1.0
8.	Ammonical Nitrogen (as N)	mg/l	21	50
9.	Total Kjeldahl Nitrogen (as NH ₃)	mg/l	36	100
10.	Free Ammonia (as NH ₃)	mg/l	0.31	5.0



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Report No.: ENV/HCCL/21-22/WW-09/04

Date : 18/09/2021 Order No.: HCCL/HO/ENV/21-22/01

:08/04/2021

Report Issued To: HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

WASTE WATER ANALYSIS RESULTS

Sample Ref. No.

: HCCL/21-22/WW-0409/04

Sample Type/Source

: Waste Water (Treated)/ETP Outlet

Sample Collected By

: Representative of ENVIROCON

Sample Collected On

Analysis Protocol	: IS 3025
Sample Received On	: 06.09.2021
Sample Concetted On	. 04.03.2021

Sl. No.	Parameter(s)	Unit(s)	Result(s)	Limit (As Per CPCB Standards)
1.	рН		6.81	5.5 - 9.0
2.	Temperature Total Suspended Solids Biochemical Oxygen Demand	°C mg/l mg/l	27.2 21 23	shall not exceed 5°C above the receiving water temperature
3. 4.				100
				30
5.	Chemical Oxygen Demand	mg/l	131	250
6. 7. 8.	Oil & Grease	mg/l	mg/l <4.0 mg/l <0.01 mg/l 9.3	10
	Total Residual Chlorine	mg/l		1.0
	Ammonical Nitrogen (as N)	mg/l		50
9.	Total Kjeldahl Nitrogen (as NH ₃)	mg/l	14	100
10.	Free Ammonia (as NH ₃)	mg/l	<0.01	5.0



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Report No.: ENV/HCCL/21-22/SW-09/01

Date : 18/09/2021

Order No.: Verbal

Date :

Report Issued To:

HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

TEST RESULTS

Sample Ref. No.: HCCL/21-22/SW-0409/01

Sample Source: Surface Water Storage Tank

Sample Type: Surface Water

Collected On : 04-09-2021

Received On : 06-09-2021

Collected By: Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)	
1.	Colour, Hazen Units, Max.	11	300	
2.	pH Value	6.71	6.5 - 8.5	
3.	Dissolved Oxygen, mg/l, Min.	5.8	4.0	
4.	Total Dissolved Solids, mg/l, Max.	246	1500	
5.	Biochemical Oxygen Demand, mg/l, Max.	Níl	3.0	
6.	Oil and Grease, mg/l, Max.	<0.01	0.1	
7.	Lead (as Pb), mg/l, Max.	<0.01	0.1	
8.	Copper (as Cu), mg/l, Max.	<0.01	1.5	
9.	Arsenic (as As), mg/l, Max.	<0.01	0.2	
10.	Iron (as Fe), mg/l, Max.	0.026	50	
11.	Zinc (as Zn), mg/l, Max.	<0.01	15	
12.	Fluorides (as F), mg/l, Max.	<0.01	1.5	
13.	Chlorides (as Cl), mg/l, Max.	2.3	600	
14.	Chromium (as C6+), mg/l, Max.	<0.01	0.05	
15.	Cyanides (as CN), mg/l, Max.	<0.01	0.05	
16.	Phenolic Compunds (as C ₆ H ₅ OH), mg/l, Max.	<0.001	0.005	
17.	Sulphates (as SO ₄), mg/l, Max.	20	400	
18.	Nitrates (as NO ₃), mg/l, Max.	1.3	50	
19.	Total Coliform Organisms, MPN/100 ml, Max.	600	5000	

^{*}Limits as per IS 2296:1982

Analysis Protocol: IS 3025



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Report No.: ENV/HCCL/21-22/N-09/01

Date : 18/09/2021

Order No.: HCCL/HO/ENV/21-22/01

Date : 08/04/2021

Report Issued To: HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

NOISE LEVEL MEASUREMENT RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day Time		Night Time	
			L _{eq} (dB-A)	Limit (dB-A)	L _{eq} (dB-A)	Limit (dB-A)
1	In-front of Guest House	02.09.2021	48.2	75	36.8	70
2	Near Crusher Area	02.09.2021	66.9	75	59.4	70
3	In- Front of Compressor House (Cement Mill)	03.09.2021	69.2	75	65.3	70
4	Near Mines	03.09.2021	45.6	75	34.8	70



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Order No.: HCCL/HO/ENV/21-22/01

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Report Issued To: HILLS CEMENT COMPANY LIMITED

Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

STACK EMISSION TEST RESULTS

01	Test Ref. No.	HCCL/21-22/SE-09/01					
02	Date of Sampling		02.09.2021				
03	Material of Construction		M. S.				
04	Stack Attached To		R.A.B.H.				
05	Stack Diameter (Meter)		3.0				
06	Flue Gas Temperature (°C)		179				
07	Exit Velocity of Gas (m/sec)		18.2				
08	Flow Rate (Nm³/hr)		305380				
09	Type of Fuel Used		NA*				
	Analy	sis Results of Flue Gas					
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)			
1.	Particulate Matter	22	22 mg/Nm³				
ii.	Sulphur Dioxide (as SO ₂)	742	742 mg/Nm³ 10				
iii.	Oxides of Nitrogen (as NO _x)	385	mg/Nm³	800			

*NA: Not Applicable



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Report No.: ENV/HCCL/21-22/SE-09/02

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Order No.: HCCL/HO/ENV/21-22/01

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Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

STACK EMISSION TEST RESULTS

01	Test Ref. No.	H	HCCL/21-22/SE-09/02				
02	Date of Sampling		02.09.2021				
03	Material of Construction		M. S.				
04	Stack Attached To		Coal Mill				
05	Stack Diameter (Meter)		1.2				
06	Flue Gas Temperature (°C)		59				
07	Exit Velocity of Gas (m/sec)		14.6				
08	Flow Rate (Nm³/hr)		53363				
09	Type of Fuel Used		Coal				
	Analy	sis Results of Flue Gas		Lagada			
Sl. No.	Parameter(s)	Result(s)	Result(s) Unit(s) Lin				
i.	Particulate Matter	24	24 mg/Nm³				
ii.	Sulphur Dioxide (as SO ₂)	645	645 mg/Nm ³ 1				
iii.	Oxides of Nitrogen (as NO _x)	256	mg/Nm³	800			



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Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

STACK EMISSION TEST RESULTS

01	Test Ref. No.	Н	HCCL/21-22/SE-09/03		
02	Date of Sampling		03.09.2021		
03	Material of Construction	M. S.			
04	Stack Attached To	Cooler E.S.P.			
05	Stack Diameter (Meter)	2.8			
06	Flue Gas Temperature (°C)	216			
07	Exit Velocity of Gas (m/sec)		16.7		
08	Flow Rate (Nm³/hr)	225626			
09	Type of Fuel Used		NA*		
	Analy	sis Results of Flue Gas			
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)	
l.	Particulate Matter	21	mg/Nm³	30	
ii.	Sulphur Dioxide (as SO ₂)	BDL*	mg/Nm³	1000	
III.	Oxides of Nitrogen (as NO _x)	BDL*	mg/Nm³	800	

*NA: Not Applicable

#BDL: Below Detectable Limit



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Village: Mynkree, 116 KM Stone, NH-44, Sub Division: Khliehriat, Dist.: Jaintia Hills, Meghalaya

PROCESS FUGITIVE EMISSION TEST RESULTS

Date	Locations	Fugitive Emission Results for SPM (µg/m³)	Limits (µg/m³)
02.09.2021	Coal Storage Section	794	2000
02.09.2021	Lime Stone Storage Section	2155	5000
03.09.2021	Fly-ash Storage Section	2846	5000
03.09.2021	Cement Packing Section	2946	5000



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