

STAR CEMENT MEGHALAYA LIMITED

Ref: SCML/EHS/LUM/2022-23/26

Dated: 23/01/2023

To,

The Member Secretary
Meghalaya State Pollution Control Board
'ARDEN', Lumpyngngad,
Shillong, Meghalaya – 793014

Subject : Submission of Environmental Monitoring Report for the month of Dec, 2022.

Reference : MPCB/TB-115/2009/Pt-II/2021-2022/113, Dtd: Shillong, the 7th February, 2022.

Dear Sir,

This is in reference to above cited subject, we are hereby submitting the monthly Environmental monitoring reports of Ambient Air Quality monitoring including meteorological data, Stack Emission, Fugitive Emission, Waste monitoring (Surface, STP, ETP) reports of **M/s Star Cement Meghalaya Limited** for the month of **December, 2022.**

This is for your kind information, record and kindly acknowledge receipt of the same.

Thanking You,

Yours truly,
For **STAR CEMENT MEGHALAYA LIMITED**



Laxmaiah Munjala
Unit Head

Enclosed: a/a

- Copy To:** 1) The Deputy Director General of Forest (Central), Ministry of Environment Forest & Climate Change, Govt. of India, Regional Office, Shillong, Meghalaya-793021.
2) The Regional Director, Central Pollution Control Board (CPCB), North Eastern Zonal Office, 'TUMSIR', Lower Motinagar, Shillong, Meghalaya-790314.

Regd. Office & Works: P.O. Lumshnong, East Jaintia Hills District, Meghalaya-793210, E-mail: ehslums@starcement.co.in

Corporate Office: Century House, 2nd Floor, P 15/1, Taratala Road, Kolkata-700088, e-mail: kolkata@starcement.co.in



AN ISO 9001, ISO 14001 & ISO 45001 CERTIFIED COMPANY

CIN : U63090ML2005PLC008011



STAR CEMENT MEGHALAYA LIMITED

Lumshnong, Meghalaya

Date (DD-MM-YYYY)	Pressure (mmHg)	Relative Humidity (%)	Temp. (C)	Wind Direction (deg)	Wind Speed- (m/s)	Manual Rain (mm)
01-12-2022	761.7	95	19.0	319	0	0
02-12-2022	761.5	95.6	19.4	253	0	0
03-12-2022	761.4	95.6	20.0	255	0	0
04-12-2022	761.4	95.5	18.7	250	0	0
05-12-2022	761.9	95.5	23.4	251	0	0
06-12-2022	762.5	95.5	20.8	250	0	0
07-12-2022	763	95.1	21.4	261	0	0
08-12-2022	763.7	81.2	17.2	123	0	0
09-12-2022	764	63.2	21.4	212	0	0
10-12-2022	763.9	59.5	22.2	207	0	0
11-12-2022	763.2	64.2	23.3	180	0.3	0
12-12-2022	762.5	64.5	23.1	212	2	0
13-12-2022	762	63.1	24.1	207	1.8	0
14-12-2022	761.5	61.2	24.1	223	1.9	0
15-12-2022	761.5	65.3	23.1	249	0.5	0
16-12-2022	761.5	67.2	23.0	213	0	0
17-12-2022	761.7	83.2	19.0	359	0	0
18-12-2022	761.9	88.1	17.1	258	0	0
19-12-2022	762.2	91.1	16.3	253	0	0
20-12-2022	762.4	93.4	15.0	250	0	0
21-12-2022	762.4	93.2	15.4	357	0	0
22-12-2022	762.4	94.3	19.7	252	0	0
23-12-2022	762.5	94.0	14.3	274	0	0
24-12-2022	762.4	95.0	14.3	123	0	0
25-12-2022	763.2	95.5	22.2	60	1.07	0
26-12-2022	762.5	95.5	23.3	90	0.72	0
27-12-2022	762	95.5	23.1	180	1.28	7.7
28-12-2022	761.5	95.1	24.1	212	0	0
29-12-2022	761.5	81.2	20.0	207	0	0
30-12-2022	761.5	83.2	18.7	253	0	0
31-12-2022	761.7	88.1	18.6	250	0	0
					Total rain of this month	7.7

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya		Reference No.	SCML/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
		Date of Rev.	01.12.2020	
Reference No.: SCML/ENV/AAQM/MONTHLY/2022-23/09			Month: December'22	
Location of Sampling: Vishwakarma Colony		GPS Coordinate: 25°10'46"N 92°23'17"E 552 m		
Sampling Duration:	24 Hrs.	24 Hrs.	24 Hrs.	24 Hrs.
Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
01.12.2022	46.19	28.42	12.93	15.36
03.12.2022	48.28	33.46	10.65	12.61
06.12.2022	47.90	29.38	12.90	17.71
09.12.2022	49.59	28.42	11.65	14.01
12.12.2022	47.47	30.48	13.97	15.74
14.12.2022	50.54	31.74	10.90	17.00
16.12.2022	50.90	30.09	9.75	13.69
19.12.2022	48.50	29.34	13.33	14.94
NAAQS permissible limits for Rural, Industrial, Residential Area	100 (µg/m ³)	60 (µg/m ³)	80 (µg/m ³)	80 (µg/m ³)
Remarks: All the analyzed parameters are well within the permissible limits of NAAQ Standards , Notification dated 18th November 2009.				
 Analysed by	 Checked by	 Verified By		

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya		Reference No.	SCML/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
		Date of Rev.	01.12.2020	
Reference No.: SCML/ENV/AAQM/MONTHLY/2022-23/09			Month: December'22	
Location of Sampling: Near Pump House		GPS Coordinate: 25°10'42"N 92°23'32"E 919 m		
Sampling Duration:	24 Hrs.	24 Hrs.	24 Hrs.	24 Hrs.
Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
01.12.2022	49.15	32.01	10.35	15.41
03.12.2022	47.88	30.40	13.29	13.60
06.12.2022	48.27	31.76	10.85	14.88
09.12.2022	52.74	28.29	10.63	11.70
12.12.2022	47.90	27.38	9.90	14.63
14.12.2022	49.65	31.84	11.65	15.36
16.12.2022	50.10	30.25	9.17	10.85
19.12.2022	47.40	29.69	12.65	12.94
NAAQS permissible limits for Rural, Industrial, Residential Area	100 (µg/m ³)	60 (µg/m ³)	80 (µg/m ³)	80 (µg/m ³)
Remarks: All the analyzed parameters are well within the permissible limits of NAAQ Standards , Notification dated 18th November 2009.				
 Analysed by  Checked by  Verified By				

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya		Reference No.	SCML/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
		Date of Rev.	01.12.2020	
Reference No.: SCML/ENV/AAQM/MONTHLY/2022-23/09			Month: December'22	
Location of Sampling: Near STP		GPS Coordinate: 25°10'49"N 92°23'58"E 947 m		
Sampling Duration:	24 Hrs.	24 Hrs.	24 Hrs.	24 Hrs.
Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
01.12.2022	30.55	22.51	11.30	17.00
03.12.2022	32.55	21.48	9.86	20.50
06.12.2022	33.87	23.81	9.23	13.23
09.12.2022	38.22	24.97	12.13	15.13
12.12.2022	35.84	23.33	10.32	17.00
14.12.2022	33.54	21.79	12.93	14.79
16.12.2022	37.77	19.32	12.49	15.02
19.12.2022	36.06	17.49	11.11	14.04
NAAQS permissible limits for Rural, Industrial, Residential Area	100 (µg/m ³)	60 (µg/m ³)	80 (µg/m ³)	80 (µg/m ³)
Remarks: All the analyzed parameters are well within the permissible limits of NAAQ Standards , Notification dated 18th November 2009.				
 Analysed by		 Checked by		 Verified By

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya				Reference No.	SCML/Env/F-02
					Issue No.	1
	STACK EMISSION MONITORING ANALYSIS REPORT				Date of Issue	01.05.2019
					Revision No.	5
					Date of Rev.	01.06.2021
Report No: SCML/ENV/STACK/MONTHLY/2022-23/09						Month: December'22
<u>Analysis Result</u>						
A. General Information About Stack						
1	Stack Identification No	S-1	S-2	S-3	S-4	S-5
2	Stack Connected to	LS Crusher	Add Crusher	Kiln/Raw Mill	Coal Mill	Cooler
3	Material of Construction (Stack/Duct)	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel
4	Shape of duct	Circular	Circular	Circular	Circular	Circular
5	Whether duct is provided with permanent platform & ladder	Yes	Yes	Yes	Yes	Yes
B. Physical characteristic of stack						
1	Stack Height from ground level (meter)	24.2	21.0	70.0	59.5	50.0
2	Duct diameter at sampling point (meter)	1.6	1.2	5.8	1.8	4.0
3	Sampling height point from ground level (meter)	-	-	23.15	10.38	-
4	Cross sectional area of Duct/Stack (m ²)	2.01	1.13	26.41	2.54	12.56
C. Pollution Control Device						
1	Details of pollution control device attached to stack	Bag Filter	Bag Filter	Reverse Air Bag House	Bag Filter	ESP
D. Result of Sampling & Analysis of Gaseous Emission						
1	Date of Sampling	10.12.2022	05.12.2022	06.12.2022	06.12.2022	05.12.2022
2	Ambient Temp (°C)	19	22	36	32	35
3	Stack Gas Temp (°C)	28	32	188	69	230
4	Exit Velocity of Gas (m/sec.)	11.46	11.54	10.12	7.47	9.61
5	Flow Rate (Nm ³ / sec.)	21.32	11.83	162.68	15.66	67.76
6	Quantity of Emission (Nm ³ / Hr)	76744.52	42570.17	585658.78	56385.79	243926.68
7	Concentration of PM (mg/Nm ³)	19.41	25.84	15.84	22.23	15.30
8	Concentration of SO ₂ (mg/Nm ³)	-	-	534.7	-	-
9	Concentration of NO _x (mg/Nm ³)	-	-	417.6	-	-
10	Oxygen (O ₂) (%)	9.7	10.4	9.5	9.9	10.2
E. Remarks						
Standard						
PM - 30 mg/Nm ³		SO ₂ - 1000 mg/Nm ³		NO _x - 800 mg/Nm ³		
<i>Particulate Matter (PM), Sulphur di-oxide (SO₂), Oxide of Nitrogen (Nox), Electro Static Precipitator (ESP), Limestone (LS), Additive (Add)</i>						
 Analysis by		 Checked by		 Authorized Signatory		

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya		Document No.	SCML/EHS/Env/F-04
			Date of Issued	01-05-2019
			Revision No.	2
	FUGITIVE EMISSION MONITORING REPORT		Revision Date	01-01-2021
Ref: SCML/ENV/FUGITIVE/MONTHLY/2022-23/009				
Month - December 2022				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
02.12.2022	Coal Storage Section	1527	2000	
02.12.2022	Limestone Storage Section	1834	5000	
02.12.2022	Clinker Loading Section	1565	2000	
 Analyzed By  Checked By  Verified By				

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya				Document No.	SCML/EHS/Env/F-03					
					Effective Date	01-05-2019					
	NOISE LEVEL MONITORING REPORT				Revision No.	04					
					Revision Date	01-01-2021					
Ref: SCML/ENV/NOISE/MONTHLY/2022-23/003											
Date: 05.12.2022											
Month - December 2022											
S. No.	Location	Measured Values dB(A) Day time (6:00am to 10:00pm)			Norms In dB(A)	Measured Values dB(A) Night time (10:00pm to 6:00am)			Norms in dB(A)		
		Min.	Max.	Avg.		Min.	Max.	Avg.			
A.	Plant										
1	Kiln	66.3	73.4	69.9	75	64.6	66.3	65.5	70		
2	Vertical Raw Mill	67.5	74.0	70.7		62.9	68.9	65.9			
3	Raw Mill WF	63.4	75.0	69.2		64.6	67.2	65.9			
4	Coal Mill	66.8	73.7	70.3		62.6	68.7	65.7			
5	Limestone Crusher(Dump Hopper)	66.4	73.5	70.0		65.6	66.1	65.9			
6	Additive Crusher	66.7	75.0	70.8		60.6	68.1	64.4			
B.											
1	CCR	63.6	64.6	64.1		58.5	66.5	62.5			
2	Meeting Room	64.6	69.3	67.0		63.5	59.4	61.5			
3	VP'S Room	57.5	61.7	59.6		51.1	59.5	55.3			
4	Inst. Shift Room	59.8	70.5	65.2		56.0	59.0	57.5			
5	Electrical Office	65.9	71.7	68.8		51.3	63.5	57.4			
6	QC Department	59.5	65.2	62.4		53.9	57.3	55.6			
	a)Chemical Lab	65.6	66.9	66.3		53.7	57.7	55.7			
	b)Physical Lab	64.6	71.6	68.1	53.5	63.6	58.6				
	c)XRF Lab	66.1	69.3	67.7	51.1	56.9	54.0				
	d) Sample Preparation Room	63.5	66.1	64.8	53.7	59.7	56.7				
C.	Residential										
1	450 Quater's	47.6	51.9	49.8	55	39.9	41.9	40.9	45		
2	Worker's Colony	47.0	49.4	48.2		40.0	41.7	40.9			
 Analyzed by  Checked By  Verified By											

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya				Reference No.	SCML/EHS/F-04
					Issue No.	1
	WATER TESTING REPORT				Date of Issue:	24.08.2013
					Revision No.	3
				Date of Rev.	01.06.2019	
Reference No.: SCML/ENV/WATER/MONTHLY/2022-23/09					Date of sample collection: - 06.12.2022	
					Date of Analysis: 06.12.2022 to 09.12.2022	
Sl.No.	Parameter	Unit	STP Inlet	STP Outlet	Standard Norms For Discharge of Environment Pollution (Notification Date: - 19th May 1993) & Consent To Operate vide letter no. MPCB/TB-900 (Pt-II)/2014- 2015/34 - dated Shillong, the 3rd Sep,2014	
1	pH	-	7.1	7.8	5.5 to 9.0	
2	Colour	Hazen	Colourless	Colourless	-	
3	Odour	-	Odourless	Odourless	-	
4	Chloride	mg/L	35	38	-	
5	Total Hardness as CaCO ₃	mg/L	83.0	84.2	-	
6	Suspended Solids	mg/L	65.5	8.7	100	
7	Total Dissolve Solids	mg/L	283	371	-	
8	Chemical Oxygen Demand	mg/L	135	27	250	
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	70	6	30	
10	Oil & Grease	mg/L	9	< 3.0	10	
11	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature	
12	Conductivity	µS/cm	502	672	-	
 Analysis By  Checked By  Verified By						

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya				Reference No.	SCML/EHS/F-04
					Issue No.	1
	WATER TESTING REPORT				Date of Issue:	24.08.2013
					Revision No.	3
				Date of Rev.	01.06.2019	
Reference No.: SCL/ENV/WATER/MONTHLY/2022-23/09						Date of sample collection: - 06.12.2022 Date of Analysis: 06.12.2022 to 09.12.2022
Sl.No.	Parameter	Unit	ETP Inlet	ETP Outlet	Standard Norms For Discharge of Environment Pollution (Notification Date: - 19th May 1993) & Consent To Operate vide letter no. MPCB/TB-900 (Pt-II)/2014- 2015/34 - dated Shillong, the 3rd Sep,2014	
1	pH	-	6.9	7.3	5.5 to 9.0	
2	Suspended Solids	mg/L	80	10.0	100	
3	Total Dissolve Solids	mg/L	307	264	-	
4	Chemical Oxygen Demand	mg/L	372	42	250	
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	90	15	30	
6	Oil & Grease	mg/L	102	< 3.0	10	
7	Dissolved Oxygen	mg/L	4.5	5.2	-	
8	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature	
 Analysis By  Checked By  Verified By						

	STAR CEMENT MEGHALAYA LIMITED Lumshnong, Meghalaya										Reference No.	SCML/EHS/F-04
											Issue No.	1
	WATER TESTING REPORT										Date of Issue:	24.08.2013
											Revision No.	3
										Date of Rev.	01.06.2019	

Reference No.: SCML/ENV/WATER/MONTHLY/2022-23/09 Surface Water Analysis Results Month: December-2022												Date of sample collection: - 12.12.2022 Date of Analysis: 12.12.2022 to 15.12.2022	
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S.No.	Parameter	Unit	Umtyrngai Nallah		Umutha Nallah		Umso Nalah	Seshysmpa	Umbadoh	Tongseng	Lumshnong	Wahiajer	Standards norms as per IS 2296
			Up Stream	Down Stream	Up Stream	Down Stream	Down Stream		Seasonal Spring / Seasonal Nallah				
1	pH	-	7.5	7.4	7.3	7.5	7.8	7.1	7.7	7.8	Water Source not found		6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless			10
3	Odour	-	Unobjectionable										Unobjectionable
4	Chloride	mg/L	42.0	42.9	38.0	38.8	40.0	23.5	21.7	25.4			250
5	Total Hardness as CaCO ₃	mg/L	67.8	70.4	74.1	74.8	78.9	42.6	68.7	38.1			300
6	Suspended Solids	mg/L	9.0	8.7	4.7	6.4	4.2	6.0	6.0	4.4			-
7	Total Dissolve Solids	mg/L	235	237	182	183	195	95.0	157.4	73.4			500
8	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND			2.0
9	Oil & Grease	mg/L	ND	ND	ND	ND	ND	ND	ND	ND			-
10	Temperature	° C	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0			-
11	Conductivity	μS/cm	359	361	280	284	297	140	220	115	-		
12	Flow	L / Min	338.8	395.6	72.3	135.5	212.5	57954.5	-	-	-		

 Analyzed by	 Checked by	 Verified by
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