

STAR CEMENT MEGHALAYA LIMITED

Ref: SCML/EHS/LUM/2023-24/23

Dated: 27/12/2023

To,

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

Subject : Submission of Environmental Monitoring Report for the month of November, 2023.

Reference : MPCB/TB-115/2009/Pt-II/2022-2023/119, Dtd: Shillong, the 23rd February, 2023.

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 **Star Cement Meghalaya Limited** for the month of **November, 2023**.

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: 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)	Manual Rain (mm)
01-11-2023	723.1	80.2	24.7	0.0
02-11-2023	720.5	79.0	24.0	0.0
03-11-2023	720.2	79.8	24.9	0.0
04-11-2023	726.4	78.1	24.7	0.0
05-11-2023	723.7	77.9	24.6	0.0
06-11-2023	729.5	79.2	24.0	0.0
07-11-2023	724.1	78.0	24.1	0.0
08-11-2023	726.8	77.8	24.6	0.0
09-11-2023	728.4	78.0	24.5	0.0
10-11-2023	726.1	79.1	24.9	0.0
11-11-2023	724.1	82.3	25.0	0.0
12-11-2023	723.6	81.4	26.7	0.0
13-11-2023	724.0	85.6	24.8	0.0
14-11-2023	726.8	82.7	24.9	0.0
15-11-2023	727.0	82.9	25.8	0.0
16-11-2023	726.4	80.1	25.4	0.0
17-11-2023	724.8	86.4	22.6	8.0
18-11-2023	723.2	85.6	21.2	2.0
19-11-2023	720.8	78.6	22.9	0.0
20-11-2023	726.4	71.6	22.8	0.0
21-11-2023	726.9	74.6	24.3	0.0
22-11-2023	724.6	79.4	24.6	0.0
23-11-2023	726.8	78.9	24.7	0.0
24-11-2023	728.4	76.8	25.9	0.0
25-11-2023	726.8	79.5	24.7	0.0
26-11-2023	721.6	76.2	23.9	0.0
27-11-2023	728.3	79.1	24.4	0.0
28-11-2023	726.1	80.5	24.9	0.0
29-11-2023	724.9	82.6	21.6	0.0
30-11-2023	725.7	81.4	24.0	0.0
			Total	10.0

	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/2023-24/08			Month : November	
Location of Sampling: Near Worker 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)
02.11.2023	25.12	17.73	15.81	19.87
04.11.2023	27.29	17.59	14.86	18.44
07.11.2023	23.09	16.27	15.84	19.37
09.11.2023	29.42	15.73	15.04	18.74
11.11.2023	28.12	14.59	14.82	16.57
14.11.2023	25.98	17.43	15.64	18.54
16.11.2023	25.11	16.54	15.33	17.76
20.11.2023	28.12	16.24	13.85	17.37
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/2023-24/08			Month : November	
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)
02.11.2023	61.44	37.78	15.05	20.46
04.11.2023	56.09	38.66	15.86	19.09
07.11.2023	58.32	39.32	16.32	17.07
09.11.2023	62.31	37.65	15.77	16.00
11.11.2023	59.64	35.48	14.29	15.25
14.11.2023	61.14	37.85	12.61	16.11
16.11.2023	66.69	42.24	12.61	16.11
20.11.2023	62.80	39.53	12.61	16.11
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/2023-24/08			Month : November	
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)
02.11.2023	25.43	19.41	15.54	21.38
04.11.2023	27.43	18.38	16.74	24.88
07.11.2023	28.75	20.71	14.06	17.51
09.11.2023	33.10	21.87	14.68	19.51
11.11.2023	30.72	20.23	15.36	21.38
14.11.2023	28.42	18.69	16.08	19.17
16.11.2023	32.65	16.22	15.36	20.41
20.11.2023	30.94	14.39	14.41	18.42
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
			Date of Issue:	24.08.2013
	AMBIENT AIR QUALITY MONITORING REPORT		Revision No.	5
			Date of Rev.	01.12.2020
Reference No.: SCML/ENV/AAQM/MONTHLY/2023-24/01			Month : November	
Location of Sampling: Near Raw Mill Hopper		GPS Coordinate: 25°10'45"N 92°23'26.65"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)
02.11.2023	34.16	23.36	11.94	13.85
04.11.2023	41.43	25.22	12.00	12.01
07.11.2023	37.23	25.36	10.21	13.76
09.11.2023	33.73	23.36	10.00	12.38
11.11.2023	40.48	22.22	11.18	13.78
14.11.2023	40.12	25.06	10.03	11.28
16.11.2023	37.26	24.17	10.79	12.78
20.11.2023	35.22	22.72	11.34	11.59
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
			Date of Issue:	24.08.2013
	AMBIENT AIR QUALITY MONITORING REPORT		Revision No.	5
			Date of Rev.	01.12.2020
Reference No.: SCML/ENV/AAQM/MONTHLY/2023-24/01			Month : November	
Location of Sampling: Near Water Reservoir		GPS Coordinate: 25°10'45"N 92°23'54"E 410 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)
02.11.2023	33.34	23.58	12.00	12.78
04.11.2023	40.61	25.44	12.06	10.94
07.11.2023	36.41	25.58	10.27	12.69
09.11.2023	32.91	23.58	10.06	11.31
11.11.2023	39.66	22.44	11.24	12.71
14.11.2023	39.30	25.28	10.09	10.21
16.11.2023	36.44	24.39	10.85	11.71
20.11.2023	34.40	22.94	11.40	10.52
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/2023-24/08					Month: November	
<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	23.11.2023	24.11.2023	24.11.2023	24.11.2023	20.10.2023
2	Ambient Temp (°C)	25	24	30	23	39
3	Stack Gas Temp (°C)	30	28	140	69	127
4	Exit Velocity of Gas (m/sec.)	12.97	11.46	9.05	14.74	7.97
5	Flow Rate (Nm ³ / sec.)	24.14	11.97	162.32	32.21	70.77
6	Quantity of Emission (Nm ³ / Hr)	86899.51	43075.27	584352.39	115966.94	254761.86
7	Concentration of PM (mg/Nm ³)	16.7	19.2	16.2	26.7	18.8
8	Concentration of SO ₂ (mg/Nm ³)	-	-	414	-	-
9	Concentration of NOx (mg/Nm ³)	-	-	396	-	-
10	Oxygen (O ₂) (%)	9.3	9.7	9.5	10.0	8.2
E.	Remarks					
Standard						
PM - 30 mg/Nm ³		SO ₂ - 1000 mg/Nm ³		NOx - 800 mg/Nm ³		
Particulate Matter (PM), Sulphur di-oxide (SO ₂), Oxide of Nitrogen (Nox), Electro Static Precipitator (ESP), Limestone (LS), Additive (Add)						
 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/2023-24/08				
Month - November				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
09.11.2023	Coal Storage Section	1198	2000	
09.11.2023	Limestone Storage Section	1296	5000	
09.11.2023	Clinker Loading Section	1593	2000	
 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/2023-24/08

Date of sample collection: 11.11.2023
 Date of Analysis: 11.11.2023 to 14.11.2023

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	-	7.3	7.7	5.5 to 9.0
2	Colour	Hazen	Colourless	Colourless	-
3	Odour	-	Odourless	Odourless	-
4	Chloride	mg/L	76.2	78.0	-
5	Total Hardness as CaCO ₃	mg/L	53.4	54.6	-
6	Suspended Solids	mg/L	63	19.0	100
7	Total Dissolve Solids	mg/L	280	289	-
8	Chemical Oxygen Demand	mg/L	187	57	250
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	83	8.6	30
10	Oil & Grease	mg/L	0.5	< 3.0	10
11	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature
12	Conductivity	µS/cm	510	545	-



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/2023-24/08

Date of sample collection: 11.11.2023

Date of Analysis: 11.11.2023 to 14.11.2023

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	-	7.3	7.8	5.5 to 9.0
2	Suspended Solids	mg/L	92.2	47	100
3	Total Dissolve Solids	mg/L	423	302	-
4	Chemical Oxygen Demand	mg/L	310	45	250
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	93	21	30
6	Oil & Grease	mg/L	4.7	< 3.0	10
7	Dissolved Oxygen	mg/L	5.2	5.7	-
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
												Date of Issue:	24.08.2013
												Revision No.	3
WATER TESTING REPORT											Date of Rev.	01.06.2019	
Reference No.: SCML/ENV/WATER/MONTHLY/2023-24/08 Surface Water Analysis Results Date of sample collection: 22.11.2023 Date of Analysis: 22.11.2023 to 25.11.2023													
S.No.	Parameter	Unit	Umtyrngai Nallah		Umutha Nallah		Umso Nalah	Seshympa	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	-	7.8	8.1	7.9	8.3	8.4	7.5	7.7	7.8	7.4	7.8	6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	10
3	Odour	-	Unobjectionable										Unobjectionable
4	Chloride	mg/L	23.0	28.4	26.6	26.8	29.2	24.6	31.9	24.6	26.8	24.5	250
5	Total Hardness as CaCO ₃	mg/L	52.0	67.6	75.6	80.0	86.0	48.0	26.0	29.0	28.6	46.8	300
6	Suspended Solids	mg/L	6.0	11.6	9.2	10.0	11.0	2.4	3.0	4.0	2.5	3.0	-
7	Total Dissolve Solids	mg/L	300.2	307.6	257.7	317.0	333.2	126.9	199.1	52.0	61.9	203.9	500
8	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0
9	Oil & Grease	mg/L	ND	ND	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	25.0	25.0	-
11	Conductivity	µS/cm	481.9	497.0	421.2	514.5	535.4	206.6	328.7	89.0	102.6	334.3	-
12	Flow	L / Min	5415.3	6318.3	858.5	1453.5	6129.3	185111.1			177.4		-
 Analyzed by  Checked by  Verified by													