

STAR CEMENT MEGHALAYA LIMITED

Ref: SCML/EHS/LUM/2023-24/18

Dated: 19/10/2023

To,

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

Subject : Submission of Environmental Monitoring Report for the month of September, 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 **September, 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.



STAR CEMENT MEGHALAYA LIMITED

Lumshnong, Meghalaya

Date (DD-MM-YYYY)	Pressure (mmHg)	Relative Humidity (%)	Temp. (C)	Manual Rain (mm)
01-09-2023	761.0	88.7	29.8	11.0
02-09-2023	763.0	86.9	27.5	36.8
03-09-2023	761.7	79.5	30.4	0.0
04-09-2023	762.0	85.2	30.0	0.0
05-09-2023	761.0	85.0	29.7	0.9
06-09-2023	762.4	87.0	28.4	0.0
07-09-2023	761.8	89.0	27.1	9.6
08-09-2023	762.9	79.0	22.0	92.1
09-09-2023	763.8	86.4	23.0	30.0
10-09-2023	761.4	82.5	22.0	0.0
11-09-2023	761.8	75.8	24.0	16.6
12-09-2023	761.5	72.6	23.0	40.0
13-09-2023	764.0	71.7	22.0	24.6
14-09-2023	761.0	73.6	25.7	4.0
15-09-2023	762.0	80.4	27.9	0.0
16-09-2023	762.0	82.5	29.6	0.0
17-09-2023	761.0	84.0	30.0	0.0
18-09-2023	763.0	69.5	31.0	0.0
19-09-2023	764.0	67.5	27.8	2.0
20-09-2023	762.0	67.5	22.0	55.0
21-09-2023	761.0	74.9	23.0	14.4
22-09-2023	763.0	73.4	25.0	14.2
23-09-2023	762.2	78.1	26.0	4.8
24-09-2023	762.0	76.5	30.0	0.0
25-09-2023	763.5	73.4	29.5	0.0
26-09-2023	762.4	69.8	28.7	0.0
27-09-2023	762.8	89.4	29.4	0.0
28-09-2023	761.4	75.6	28.7	0.0
29-09-2023	761.7	71.4	26.4	0.0
30-09-2023	762.4	78.6	30.1	0.0
			Total	356.0

	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/2023-24/06			Month : September	
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)
04.09.2023	24.64	18.23	15.86	19.37
06.09.2023	26.81	18.09	14.91	17.94
11.09.2023	22.61	16.77	15.89	18.87
14.09.2023	28.94	16.23	15.09	18.24
16.09.2023	27.64	15.09	14.87	16.07
19.09.2023	25.50	17.93	13.82	18.04
22.09.2023	24.63	17.04	13.50	17.26
25.09.2023	27.64	16.74	13.90	16.87
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/2023-24/06			Month : September	
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)
04.09.2023	60.96	38.28	15.10	19.96
06.09.2023	55.61	39.16	15.86	19.09
11.09.2023	57.84	39.82	16.32	17.07
14.09.2023	61.83	38.15	15.77	16.00
16.09.2023	59.16	35.98	14.29	15.25
19.09.2023	60.66	38.35	12.61	16.11
22.09.2023	66.21	42.74	12.61	16.11
25.09.2023	62.32	40.03	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.				
 Analyse 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/2023-24/06			Month : September	
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)
04.09.2023	24.95	19.91	15.59	20.88
06.09.2023	26.95	18.88	16.79	24.38
11.09.2023	28.27	21.21	14.11	17.01
14.09.2023	32.62	22.37	14.73	19.01
16.09.2023	30.24	20.73	15.41	20.88
19.09.2023	27.94	19.19	16.13	18.67
22.09.2023	32.17	16.72	15.41	19.91
25.09.2023	30.46	14.89	14.46	17.92
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/2023-24/06					Month: September	
<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	16.09.2023	16.09.2023	18.09.2023	18.09.2023	18.09.2023
2	Ambient Temp (°C)	22	25	25	23	35
3	Stack Gas Temp (°C)	26	32	149	72	129
4	Exit Velocity of Gas (m/sec.)	12.89	11.54	8.37	13.65	9.15
5	Flow Rate (Nm ³ / sec.)	24.31	11.89	146.82	29.56	80.84
6	Quantity of Emission (Nm ³ / Hr)	87527.80	42811.57	528542.00	106409.76	291025.55
7	Concentration of PM (mg/Nm ³)	14.53	17.14	12.56	21.70	14.85
8	Concentration of SO ₂ (mg/Nm ³)	-	-	210	-	-
9	Concentration of NOx (mg/Nm ³)	-	-	98	-	-
10	Oxygen (O ₂) (%)	10.0	9.1	11.0	9.6	8.0
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/2023-24/06				
Month - September				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
07.09.2023	Coal Storage Section	1098	2000	
07.09.2023	Limestone Storage Section	1185	5000	
07.09.2023	Clinker Loading Section	1484	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/2023-24/006 Date: 11.09.2023									
Month - September									
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				75				70
1	Kiln	67.8	74.9	71.4		66.1	67.8	67.0	
2	Vertical Raw Mill	69.0	75.5	72.2		64.4	70.4	67.4	
3	Raw Mill WF	64.9	76.5	70.7		66.1	68.7	67.4	
4	Coal Mill	68.3	75.2	71.8		64.1	70.2	67.2	
5	Limestone Crusher(Dump Hopper)	67.9	75.0	71.5		67.1	67.6	67.4	
6	Additive Crusher	68.2	76.5	72.3		62.1	69.6	65.9	
B.									
1	CCR	65.1	66.1	65.6		60.0	68.0	64.0	
2	Meeting Room	64.6	70.8	67.7		60.4	60.9	60.7	
3	VP'S Room	59.0	63.2	61.1		52.6	61.0	56.8	
4	Inst. Shift Room	61.3	72.0	66.7		57.5	60.5	59.0	
5	Electrical Office	67.4	73.2	70.3		52.8	65.0	58.9	
6	QC Department	61.0	66.7	63.9		55.4	58.8	57.1	
	a)Chemical Lab	69.2	68.4	68.8		55.2	59.2	57.2	
	b)Physical Lab	66.1	73.1	69.6		55.0	65.1	60.1	
	c)XRF Lab	67.6	70.8	69.2		52.6	58.4	55.5	
	d) Sample Preparation Room	65.0	67.6	66.3		55.2	61.2	58.2	
C.	Residential				55				45
1	450 Quater's	49.1	53.4	51.3		44.3	43.4	43.9	
2	Worker's Colony	48.5	50.9	49.7	43.5	43.2	43.4		
 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/2023-24/06

Date of sample collection: 11.09.2023
 Date of Analysis: 11.09.2023 to 14.09.2023

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	7.5	5.5 to 9.0
2	Colour	Hazen	Colourless	Colourless	-
3	Odour	-	Odourless	Odourless	-
4	Chloride	mg/L	70.9	72.7	-
5	Total Hardness as CaCO ₃	mg/L	48.2	50.0	-
6	Suspended Solids	mg/L	70	15	100
7	Total Dissolve Solids	mg/L	277	283	-
8	Chemical Oxygen Demand	mg/L	133	38	250
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	71	18	30
10	Oil & Grease	mg/L	0.2	< 3.0	10
11	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature
12	Conductivity	µS/cm	507	532	-



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/2023-24/06

Date of sample collection: 11.09.2023

Date of Analysis: 11.09.2023 to 14.09.2023

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	-	6.8	7.2	5.5 to 9.0
2	Suspended Solids	mg/L	98	47	100
3	Total Dissolve Solids	mg/L	412	302	-
4	Chemical Oxygen Demand	mg/L	312	50	250
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	97	25	30
6	Oil & Grease	mg/L	5.4	< 3.0	10
7	Dissolved Oxygen	mg/L	5.2	5.5	-
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
	WATER TESTING REPORT											Revision No.	3
											Date of Rev.	01.06.2019	

Reference No.: SCML/ENV/WATER/MONTHLY/2023-24/06

Surface Water Analysis Results

Date of sample collection:22.09.2023

Date of Analysis: 22.09.2023 to 25.09.2023

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	8.0	7.7	8.4	8.2	7.7	8.2	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	21.3	26.6	23.0	24.8	27.3	22.7	30.1	23.0	24.8	23.0	250
5	Total Hardness as CaCO ₃	mg/L	4.4	64.4	72.6	78.2	80.0	45.4	18.0	20.0	25.8	42.0	300
6	Suspended Solids	mg/L	6.2	17.3	13.0	44.1	50.2	12.5	8.3	8.2	10.7	10.4	-
7	Total Dissolve Solids	mg/L	275.1	282.5	232.6	291.9	308.1	101.8	174.0	26.9	36.8	178.8	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	437.5	452.6	376.8	470.1	491.0	162.2	284.3	44.6	58.2	289.9	-
12	Flow	L / Min	54740.0	92496.5	10253.8	26101.8	11112.9	317815.0			396.2		-



Analyzed by



Checked by



Verified by