

STAR CEMENT MEGHALAYA LIMITED

Ref: SCML/EHS/LUM/2024-25/22

Dated: 14/06/2024

To,

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

Subject : Submission of Environmental Monitoring Report for the month of May, 2024.

Reference : MPCB/ONLINE/RCTO(R-I)/EJHD/2021/2024-2025/51-A, Dtd: Shillong, the 24th April, 2024.

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 **May, 2024**.

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)
01-05-2024	716.2	73.4	20.2	45.8
02-05-2024	718.5	73.5	20.4	97.0
03-05-2024	721.3	73.6	20.6	0.0
04-05-2024	720.4	73.7	20.8	6.2
05-05-2024	720.6	73.8	21.0	27.4
06-05-2024	720.8	73.9	21.2	16.2
07-05-2024	721.0	74.0	21.4	0.0
08-05-2024	721.2	72.5	21.6	0.0
09-05-2024	721.4	72.1	21.8	0.0
10-05-2024	721.6	74.6	22.0	0.0
11-05-2024	721.8	75.1	22.2	8.2
12-05-2024	722.0	76.2	21.5	0.0
13-05-2024	722.2	74.5	22.1	0.0
14-05-2024	722.4	74.3	22.6	0.0
15-05-2024	722.6	71.2	21.3	0.0
16-05-2024	718.2	70.7	20.2	0.0
17-05-2024	716.1	70.1	20.4	0.0
18-05-2024	714.0	69.6	19.8	6.2
19-05-2024	716.5	69.0	19.7	0.0
20-05-2024	717.6	70.2	19.5	0.0
21-05-2024	718.7	70.5	19.3	0.0
22-05-2024	719.8	70.8	19.1	0.0
23-05-2024	720.9	71.1	18.9	0.0
24-05-2024	722.0	71.4	18.7	0.0
25-05-2024	723.1	71.7	21.3	0.0
26-05-2024	724.2	72.0	22.4	12.6
27-05-2024	725.3	72.3	23.5	55.0
28-05-2024	726.4	72.6	24.6	148.2
29-05-2024	723.6	72.9	25.7	155.0
30-05-2024	721.4	73.2	24.3	198.3
31-05-2024	719.2	73.5	22.9	43.8
			Total	819.9

	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/2024-25/14			May-24	
Location of Sampling: Near Worker Colony		GPS Coordinate: 25°10'46"N 92°23'17"E		
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)
03.05.2024	34.0	10.7	2.6	10.4
07.05.2024	31.0	10.2	2.8	10.8
10.05.2024	29.5	10.9	2.7	10.8
14.05.2024	27.9	12.1	2.8	8.8
15.05.2024	25.9	13.5	3.1	7.0
18.05.2024	25.4	14.6	3.1	9.6
20.05.2024	26.2	14.5	3.2	8.1
25.05.2024	26.3	13.2	3.1	7.6
NAAQMS 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/2024-25/14			May-24	
Location of Sampling: Near Pump House		GPS Coordinate: 25°10'42"N 92°23'32"E		
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)
03.05.2024	40.36	29.47	6.47	15.47
07.05.2024	42.46	22.62	6.28	14.36
10.05.2024	46.18	30.47	7.61	15.74
14.05.2024	35.14	32.10	6.61	16.27
15.05.2024	37.68	33.73	7.06	19.54
18.05.2024	40.22	35.36	7.12	15.49
20.05.2024	42.76	36.99	7.18	13.47
25.05.2024	45.30	28.54	7.24	15.68
NAAQMS 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/2024-25/14			May-24	
Location of Sampling: Near STP		GPS Coordinate: 25°10'49"N 92°23'58"E		
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)
03.05.2024	34.61	22.04	5.47	12.47
07.05.2024	33.15	22.13	8.40	16.74
10.05.2024	36.88	31.47	9.41	24.67
14.05.2024	42.07	33.47	11.27	23.15
15.05.2024	43.21	31.61	7.11	27.69
18.05.2024	36.81	32.32	4.37	21.46
20.05.2024	36.41	32.39	5.22	20.47
25.05.2024	37.05	32.46	6.44	24.62
NAAQMS 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/2024-25/07			May-24	
Location of Sampling: Near Raw Mill Hopper		GPS Coordinate: 25°10'45"N 92°23'26.65"E		
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)
03.05.2024	63.15	25.14	13.24	22.41
07.05.2024	65.48	26.47	15.48	24.28
10.05.2024	67.81	31.47	15.04	26.48
14.05.2024	70.14	35.49	16.35	22.36
15.05.2024	72.47	32.57	17.69	20.15
18.05.2024	76.14	39.05	15.02	22.64
20.05.2024	73.64	45.53	12.08	24.15
25.05.2024	78.10	42.67	16.67	26.34
NAAQMS 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/2024-25/07			May-24	
Location of Sampling: Near Water Reservoir		GPS Coordinate: 25°10'45"N 92°23'54"E		
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)
03.05.2024	35.15	30.14	10.47	11.05
07.05.2024	36.48	21.48	11.68	18.52
10.05.2024	34.25	27.49	7.49	17.20
14.05.2024	32.57	25.47	7.22	12.36
15.05.2024	28.46	23.45	8.41	12.41
18.05.2024	25.97	21.43	8.05	11.11
20.05.2024	23.08	19.41	4.41	9.16
25.05.2024	27.68	17.39	5.47	10.47
NAAQMS 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/2024-25/14						Month: May
<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	10.05.2024	13.05.2024	15.05.2024	16.05.2024	17.05.2024
2	Ambient Temp (°C)	24	23	25	24	32
3	Stack Gas Temp (°C)	25	28	125	75	122
4	Exit Velocity of Gas (m/sec.)	13.02	13.24	10.02	11.05	7.21
5	Flow Rate (Nm ³ / sec.)	25.30	14.25	178.20	19.50	68.40
6	Quantity of Emission (Nm ³ / Hr)	87824.60	48804.26	651412.22	67924.05	255415.30
7	Concentration of PM (mg/Nm ³)	16.4	15.7	15.6	26.3	16.4
8	Concentration of SO ₂ (mg/Nm ³)	-	-	512	-	-
9	Concentration of NO _x (mg/Nm ³)	-	-	320	-	-
10	Oxygen (O ₂) (%)	9.8	9.1	10.2	9.6	8.2
E. Remarks						
Standard						
PM - 30 mg/Nm ³		SO ₂ - 1000 mg/Nm ³			NO _x - 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/2024-25/14				
Month - May				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
12.05.2024	Coal Storage Section	1350	2000	
12.05.2024	Limestone Storage Section	1405	5000	
12.05.2024	Clinker Loading Section	1780	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/2024-25/14					Date: 30.05.2024				
Month - May									
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	71.2	73.4	72.3		67.4	68.1	67.4	
2	Vertical Raw Mill	70.4	72.2	71.3		65.2	66.4	65.2	
3	Raw Mill WF	71.2	72.6	71.9		67.1	69.0	67.1	
4	Coal Mill	70.1	72.1	71.1		62.0	60.0	61.0	
5	Limestone Crusher(Dump Hopper)	64.3	65.2	64.8		69.0	67.2	68.1	
6	Additive Crusher	69.4	70.1	69.8		65.4	68.6	67.0	
B.									
1	CCR	68.4	70.2	69.3		65.1	67.4	66.3	
2	Meeting Room	65.4	68.2	66.8		66.2	68.7	67.5	
3	VP'S Room	51.0	55.0	53.0		63.2	65.4	64.3	
4	Inst. Shift Room	62.0	67.2	64.6		62.4	64.9	63.7	
5	Electrical Office	67.0	69.2	68.1		60.7	63.4	62.1	
6	QC Department	56.1	58.3	57.2		63.3	65.7	64.5	
	a)Chemical Lab	62.0	65.1	63.6		62.4	63.6	63.0	
	b)Physical Lab	59.0	62.1	60.6		58.4	60.4	59.4	
	c)XRF Lab	58.3	62.4	60.4		59.8	60.7	60.3	
	d) Sample Preparation Room	55.8	59.7	57.7		60.2	61.2	60.7	
C.	Residential				55				45
1	450 Quater's	42.1	44.6	43.4		36.8	38.5	37.6	
2	Worker's Colony	40.5	43.6	42.1	35.2	37.4	36.3		
 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/2024-25/14					Date of sample collection: 10.05.2024	
					Date of Analysis: 11.05.2024 to 14.05.2024	
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	-	7.0	7.4	5.5 to 9.0	
2	Colour	Hazen	Yellowish	Colourless	-	
3	Odour	-	Odourless	Odourless	-	
4	Chloride	mg/L	76.5	80.4	-	
5	Total Hardness as CaCO ₃	mg/L	58.6	51.2	-	
6	Suspended Solids	mg/L	70	26.0	100	
7	Total Dissolve Solids	mg/L	360	296	-	
8	Chemical Oxygen Demand	mg/L	120	43	250	
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	75	12.0	30	
10	Oil & Grease	mg/L	2.1	<2	10	
11	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature	
12	Conductivity	µS/cm	450	480	-	
 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/2024-25/14

Date of sample collection: 10.05.2024

Date of Analysis: 11.05.2024 to 14.05.2024

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	120	42	100
3	Total Dissolve Solids	mg/L	450	260	-
4	Chemical Oxygen Demand	mg/L	324	36	250
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	90	22	30
6	Oil & Grease	mg/L	5.3	<2	10
7	Dissolved Oxygen	mg/L	5.6	6.2	-
8	Temperature	° C	22	23	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/2024-25/14												
Surface Water Analysis Results												
Date of sample collection: 15.05.2024												
Date of Analysis: 16.05.2024 to 20.05.2024												
S.No.	Parameter	Unit	Umtyrngai Nallah		Umutha Nallah		Umso Nalah	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	-	7.1	7.2	7.2	7.2	7.8	7.2	7.3	7.5	7.6	6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	10
3	Odour	-	Unobjectionable								Unobjectionable	Unobjectionable
4	Chloride	mg/L	26.1	27.3	26.4	26.9	27.1	27.2	27.4	27.5	27.7	250
5	Total Hardness as CaCO ₃	mg/L	52.3	53.1	53.9	54.7	55.5	65.1	80.2	82.3	45.2	300
6	Suspended Solids	mg/L	5.3	8.4	2.5	5.4	14.0	6.0	8.0	11.2	2.8	-
7	Total Dissolve Solids	mg/L	300.1	245.4	265.0	298.0	315.0	300.0	323.0	350.0	225.0	500
8	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	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	-
10	Temperature	° C	25.0	25.0	25.0	25.0	25.0	25.9	25.9	25.9	25.0	-
11	Conductivity	µS/cm	395.0	310.0	440.0	480.0	505.0	380.0	460.0	490.0	350.0	-
12	Flow	L / Min	6504.5	16525.2	7132.4	6625.3	15690.4	-	-	520.1	-	-
Analized by Checked by Verified by												