

STAR CEMENT MEGHALAYA LIMITED

Ref: SCML/EHS/LUM/2024-25/18

Dated: 12/07/2024

To,

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

Subject : Submission of Environmental Monitoring Report for the month of June, 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 **June, 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)
01-06-2024	719.9	72.3	18.6	0.0
02-06-2024	717.3	71.1	17.9	11.7
03-06-2024	717.0	71.9	18.8	13.2
04-06-2024	723.2	70.2	18.6	48.8
05-06-2024	720.5	70.0	18.5	5.0
06-06-2024	726.3	71.3	17.9	4.8
07-06-2024	720.9	70.1	20.0	0.0
08-06-2024	723.6	69.9	19.0	0.0
09-06-2024	725.2	70.1	18.4	0.0
10-06-2024	722.9	71.2	18.8	24.2
11-06-2024	720.9	74.4	18.9	0.0
12-06-2024	720.4	73.5	20.6	23.6
13-06-2024	720.8	77.7	18.7	47.4
14-06-2024	723.6	74.8	18.8	9.4
15-06-2024	723.8	75.0	19.7	165.4
16-06-2024	723.2	72.2	19.3	74.6
17-06-2024	721.6	78.5	16.5	118.2
18-06-2024	720.0	77.7	15.1	142.0
19-06-2024	717.6	70.7	16.8	27.8
20-06-2024	723.2	63.7	16.7	0.0
21-06-2024	723.7	66.7	18.2	0.0
22-06-2024	721.4	71.5	18.5	6.8
23-06-2024	723.6	71.0	18.6	0.0
24-06-2024	725.2	68.9	19.8	9.4
25-06-2024	723.6	71.6	18.6	5.2
26-06-2024	718.4	68.3	17.8	0.0
27-06-2024	725.1	71.2	18.3	4.0
28-06-2024	722.9	72.6	18.8	5.4
29-06-2024	721.7	74.7	15.5	57.3
30-06-2024	723.6	71.6	18.6	65.7
			Total	869.9

	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/2024-25/15			Month : June	
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)
01.06.2024	42.57	30.93	16.80	21.28
08.06.2024	44.74	30.79	15.85	19.85
20.06.2024	40.54	29.47	16.83	20.78
Heavy Rainfall				
Heavy Rainfall	Rainfall Data Attached			
Heavy Rainfall				
Heavy Rainfall				
Heavy Rainfall				
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/2024-25/15			Month : June	
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)
01.06.2024	78.89	50.98	16.04	21.87
08.06.2024	73.54	51.86	15.86	19.09
20.06.2024	75.77	52.52	16.32	17.07
Heavy Rainfall				
Heavy Rainfall	Rainfall Data Attached			
Heavy Rainfall				
Heavy Rainfall				
Heavy Rainfall				
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/2024-25/15			Month : June	
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)
01.06.2024	42.88	32.61	16.53	22.79
08.06.2024	44.88	31.58	17.73	26.29
20.06.2024	46.20	33.91	15.05	18.92
Heavy Rainfall				
Heavy Rainfall	Rainfall Data Attached			
Heavy Rainfall				
Heavy Rainfall				
Heavy Rainfall				
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/2024-25/15			Month : June	
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)
01.06.2024	75.02	45.76	16.21	21.20
08.06.2024	78.29	46.95	16.27	19.36
20.06.2024	70.65	43.12	14.48	21.11
Heavy Rainfall				
Heavy Rainfall	Rainfall Data Attached			
Heavy Rainfall				
Heavy Rainfall				
Heavy Rainfall				
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/2024-25/15			Month : June	
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)
01.06.2024	57.63	41.34	16.27	20.13
08.06.2024	64.90	43.20	16.33	18.29
20.06.2024	60.70	43.34	14.54	20.04
Heavy Rainfall				
Heavy Rainfall	Rainfall Data Attached			
Heavy Rainfall				
Heavy Rainfall				
Heavy Rainfall				
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/2024-25/15 Month: June						
Analysis Result						
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	20.06.2024	01.06.2024	21.06.2024	21.06.2024	26.06.2024
2	Ambient Temp (°C)	23	22	24	26	35
3	Stack Gas Temp (°C)	26	28	132	78	125
4	Exit Velocity of Gas (m/sec.)	12.72	12.93	9.82	9.14	7.95
5	Flow Rate (Nm ³ / sec.)	24.28	13.51	179.59	18.76	70.94
6	Quantity of Emission (Nm ³ / Hr)	87402.67	48625.85	646535.55	67531.16	255373.70
7	Concentration of PM (mg/Nm ³)	19.5	17.0	13.8	27.3	17.6
8	Concentration of SO ₂ (mg/Nm ³)	-	-	537	-	-
9	Concentration of NO _x (mg/Nm ³)	-	-	385	-	-
10	Oxygen (O ₂) (%)	9.0	9.4	10.2	10.1	8.9
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/2024-25/15				
Month - June				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
11.06.2024	Coal Storage Section	1337	2000	
11.06.2024	Limestone Storage Section	1451	5000	
11.06.2024	Clinker Loading Section	1878	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/2024-25/015					Date: 11.06.2024				
Month - June									
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	61.9	69.0	65.5	75	59.1	60.8	60.0	70
2	Vertical Raw Mill	63.0	69.6	66.3		57.4	63.4	60.4	
3	Raw Mill WF	59.0	70.6	64.8		59.1	61.7	60.4	
4	Coal Mill	62.4	69.3	65.9		57.1	63.2	60.2	
5	Limestone Crusher(Dump Hopper)	62.0	69.1	65.6		60.1	60.6	60.4	
6	Additive Crusher	62.3	70.6	66.4		55.1	62.6	58.9	
B.									
1	CCR	59.2	60.2	59.7		53.0	61.0	57.0	
2	Meeting Room	58.7	64.9	61.8		53.4	53.9	53.7	
3	VP'S Room	53.1	57.3	55.2		45.6	54.0	49.8	
4	Inst. Shift Room	55.4	66.1	60.8		50.5	53.5	52.0	
5	Electrical Office	61.5	67.3	64.4		45.8	58.0	51.9	
6	QC Department								
	a)Chemical Lab	63.3	62.5	62.9		48.2	52.2	50.2	
	b)Physical Lab	60.2	67.2	63.7	48.0	58.1	53.1		
	c)XRF Lab	61.7	64.9	63.3	45.6	51.4	48.5		
	d) Sample Preparation Room	59.1	61.7	60.4	48.2	54.2	51.2		
C.	Residential								
1	450 Quater's	43.2	47.5	45.4	55	37.3	36.4	36.9	45
2	Worker's Colony	42.6	45.0	43.8		36.5	36.2	36.4	
 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/2024-25/15					Date of sample collection: 12.06.2024 Date of Analysis: 12.06.2024 to 14.06.2024	
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	-	7.4	7.5	5.5 to 9.0	
2	Suspended Solids	mg/L	98	38	100	
3	Total Dissolve Solids	mg/L	402	310	-	
4	Chemical Oxygen Demand	mg/L	425	46	250	
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	97	26	30	
6	Oil & Grease	mg/L	6.5	< 3.0	10	
7	Dissolved Oxygen	mg/L	6.0	5.1	-	
8	Temperature	° C	28	27	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/2024-25/15

Date of sample collection: 12.06.2024
 Date of Analysis: 12.06.2024 to 14.06.2024

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	-	7.6	7.5	5.5 to 9.0
2	Colour	Hazen	Yellowish	Colourless	-
3	Odour	-	Odourless	Odourless	-
4	Chloride	mg/L	82.0	67.5	-
5	Total Hardness as CaCO ₃	mg/L	56.1	53.4	-
6	Suspended Solids	mg/L	80	40.0	100
7	Total Dissolve Solids	mg/L	314	312	-
8	Chemical Oxygen Demand	mg/L	224	45	250
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	80	10.3	30
10	Oil & Grease	mg/L	5.6	< 3.0	10
11	Temperature	° C	26	25	Shall not exceed 5.0°C above the receiving water temperature
12	Conductivity	µS/cm	526	510	-



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/2024-25/15												Date of sample collection: 20.06.2024			
Surface Water Analysis Results												Date of Analysis: 20.06.2024 to 22.06.2024			
S.No.	Parameter	Unit	Umtyrngai Nallah		Umutha Nallah		Umso Nalah	Seshympa	Lunar	Lukha	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	-	7.6	7.7	7.2	7.3	7.8	7.6	7.8	7.8	7.6	7.7	7.8	7.7	6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Yellowish	Colourless	Yellowish	Yellowish	Yellowish	Yellowish	10
3	Odour	-	Unobjectionable												
4	Chloride	mg/L	28.4	32.2	33.4	30.4	33.5	30.5	45.7	22.5	23.5	24.8	26.4	25.9	250
5	Total Hardness as CaCO ₃	mg/L	56.5	65.4	77.7	76.5	72.1	69.9	67.1	64.3	61.5	46.5	47.6	42.1	300
6	Suspended Solids	mg/L	1.2	1.1	1.3	1.5	1.8	2.0	1.8	2.6	2.1	1.5	1.6	1.4	-
7	Total Dissolve Solids	mg/L	204.5	214.0	226.5	387.4	356.5	150.4	187.6	80.4	85.2	70.2	66.4	215.3	500
8	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	ND	ND	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	ND	ND	-
10	Temperature	° C	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	-
11	Conductivity	µS/cm	180.5	210.5	315.3	440.0	351.2	254.6	287.6	115.7	148.6	124.6	110.3	452.4	-
12	Flow	L / Min	1452.3	1878.6	356.4	665.4	1025.6	7845.6	484857.0	3641582.0	321458.0	284587.0	356895.0	-	
Analized by Checked by Verified by															