

STAR CEMENT LIMITED

Ref: SCL/EHS/LUM/2023-24/41

Dated: 19/11/2023

To,

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

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

Reference : MPCB/TB-900/Pt-IV/2023-2024/90, Dated Shillong, the 3rd October, 2023.

Dear Sir,

This is in reference to above cited subject, we are hereby submitting the monthly Environmental monitoring reports of Ambient Air Quality for plant and ESZ including meteorological data, Stack Emission, Fugitive Emission, Surface water & Waste Water (STP) monitoring reports of **Star Cement Limited Line-I** 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 Limited Line-I**



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.



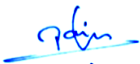
STAR CEMENT LIMITED

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

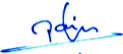
	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
			Date of Rev.	01.12.2020
Reference No.: SCL/ENV/AAQM/MONTHLY/2023-24/08			Month : November	
Location of Sampling: Near Star Club		GPS Coordinate: 25°10'36"N 92°23'16"E 928 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	29.09	21.95	13.28	18.71
04.11.2023	28.10	20.92	13.34	16.87
07.11.2023	29.10	21.63	11.55	18.62
09.11.2023	29.59	22.94	11.34	17.24
11.11.2023	28.09	21.80	12.52	18.61
14.11.2023	29.03	24.64	11.37	16.09
16.11.2023	31.40	23.75	12.13	17.62
20.11.2023	29.96	22.30	12.68	16.84
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 LIMITED Lumshnong, Meghalaya		Reference No.	SCL/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.: SCL/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	16.07	21.49
07.11.2023	58.32	39.32	16.53	19.47
09.11.2023	62.31	37.65	15.98	18.40
11.11.2023	59.64	35.48	14.50	16.07
14.11.2023	61.14	37.85	12.82	16.62
16.11.2023	66.69	42.24	17.56	20.60
20.11.2023	62.80	39.53	16.65	18.44
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 LIMITED Lumshnong, Meghalaya		Reference No.	SCL/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.: SCL/ENV/AAQM/MONTHLY/2023-24/08			Month : November	
Location of Sampling: Near Security Gate - 3		GPS Coordinate: 25°10'27"N 92°23'37"E 944 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	65.67	38.76	16.11	21.62
04.11.2023	60.32	38.24	17.37	21.25
07.11.2023	62.55	38.90	17.33	20.61
09.11.2023	66.54	37.23	18.35	20.02
11.11.2023	63.87	35.06	15.10	18.64
14.11.2023	65.37	37.43	13.69	18.27
16.11.2023	68.68	40.38	17.13	19.43
20.11.2023	64.79	37.67	16.34	17.90
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 LIMITED Lumshnong, Meghalaya		Reference No.	SCL/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.: Tongseng Village /2023-24/08			Month : November	
Location of Sampling: Tongseng Village		GPS Coordinate: 25°10'08"N 92°24'17"E 756 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)
17.11.2023	29.84	15.72	12.15	15.01
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 LIMITED Lumshnong, Meghalaya						Reference No.	SCL/Env/F-02	
							Issue No.	1	
	STACK EMISSION MONITORING ANALYSIS REPORT						Date of Issue	01.05.2019	
							Revision No.	5	
Report No: SCL/ENV/STACK/MONTHLY/2023-24/08						Date of Rev. 01.06.2021			
Analysis Result									
A. General Information About Stack									
1	Stack Identification No	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8
2	Stack Connected to	Kiln/Raw Mill	Coal Mill	Cooler	Roller Press	Cement Mill	Packing Plant	Primary Crusher	Secondary Crusher
3	Material of Construction (Stack/Duct)	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel
4	Shape of duct	Circular	Circular	Circular	Circular	Circular	Circular	Circular	Circular
5	Whether duct is provided with permanent platform & ladder	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B. Physical characteristic of stack									
1	Stack Height from ground level (meter)	45.4	37	30.4	24	30	28	21	17
2	Duct diameter at sampling point (meter)	3	1.2	2.8	1.4	1.5	1.1	1.2	1.0
3	Sampling height point from ground level (meter)	-	-	-	-	-	-	-	-
4	Cross sectional area of Duct/Stack (m ²)	7.07	1.13	6.15	1.54	1.77	0.95	1.13	0.79
C. Pollution Control Device									
1	Details of pollution control device attached to stack	Reverse Air Bag House	Bag Filter	ESP	Bag Filter	Bag Filter	Bag Filter	Bag Filter	Bag Filter
D. Result of Sampling & Analysis of Gaseous Emission									
1	Date of Sampling	25.11.2023	25.11.2023	25.11.2023	14.11.2023	27.11.2023	27.11.2023	14.11.2023	14.11.2023
2	Ambient Temp (°C)	28	23	37	28	26	23	22	24
3	Stack Gas Temp (°C)	160	82	198	40	39	33	30	31
4	Exit Velocity of Gas (m/sec.)	17.59	14.54	11.44	13.65	12.19	12.56	12.97	14.32
5	Flow Rate (Nm ³ / sec.)	81.03	13.05	42.88	18.64	19.24	10.99	13.46	10.41
6	Quantity of Emission (Nm ³ / Hr)	291716.03	46993.67	154352.51	67102.66	69254.47	39573.07	48439.23	37479.03
7	Concentration of PM (mg/Nm ³)	13.0	27.2	16.2	16.0	19.8	19.1	25.6	20.4
8	Concentration of SO ₂ (mg/Nm ³)	310.0	-	-	-	-	-	-	-
9	Concentration of NO _x (mg/Nm ³)	240.0	-	-	-	-	-	-	-
10	Oxygen (O ₂) (%)	9.1	10.3	9.8	9.6	9.2	9.0	9.0	10.0
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 (NO _x), Electro Static Precipitator (ESP)									
 Analysis by  Checked by  Authorized Signatory									

	STAR CEMENT LIMITED Lumshnong, Meghalaya	Document No.	SCL/EHS/Env/F-04
		Date of Issued	01-05-2019
		Revision No.	2
	FUGITIVE EMISSION MONITORING REPORT	Revision Date	01-01-2021
Ref: SCL/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 $\mu\text{g}/\text{m}^3$)
05.11.2023	Coal Storage Section	1232	2000
05.11.2023	Limestone Storage Section	1321	5000
 Analyzed By  Checked by  Verified By			

	STAR CEMENT LIMITED Lumshnong, Meghalaya				Reference No.	SCL/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/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 LIMITED

Lumshnong, Meghalaya

WATER TESTING REPORT

Reference No.	SCL/EHS/F-04
Issue No.	1
Date of Issue:	24.08.2013
Revision No.	3
Date of Rev.	01.06.2019

Reference No.: SCL/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