

STAR CEMENT LIMITED

Ref: SCL/EHS/LUM/2022-23/46

Dated: 21/03/2023

To,

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

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

Reference : Ref. No.: MPCB/CON-900-Pt-IV/2021-2022/76, Dated. Shillong, the 11th Feb, 2022.

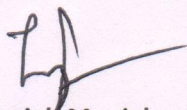
Dear Sir,

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 M/s Star Cement Limited for the month of **February, 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:** 1) The Deputy Director General of Forest (Central), Ministry of Environment Forest & Climate Change, Govt. of India, Regional Office, Shillong, Meghalaya-793021.
- 2) The Regional Director, Central Pollution Control Board (CPCB), North Eastern Zonal Office, 'TUMSIR', Lower Motinagar, Shillong, Meghalaya-790314.
- 3) The Member Secretary, State Environment Impact Assessment Authority (SEIAA), 'Silviculture Building' Lower Lachumiere, Shillong-793001, Meghalaya.

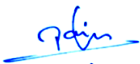


STAR CEMENT LIMITED
Lumshnong, Meghalaya

Date (DD-MM-YYYY)	Pressure (mmHg)	Relative Humidity (%)	Temp. (C)	Manual Rain (mm)
01-02-2023	762.8	38.0	19.0	0
02-02-2023	765.4	38.5	16.0	0
03-02-2023	770.7	38.3	25.0	0
04-02-2023	770.5	39.3	22.0	0
05-02-2023	770	42.3	18.0	0
06-02-2023	769.2	65.0	17.0	0
07-02-2023	768.4	75.0	20.0	0
08-02-2023	767.9	80.4	27.0	0
09-02-2023	770.7	85.0	25.0	0
10-02-2023	770.5	89.4	18.0	0
11-02-2023	770	90.0	22.0	0
12-02-2023	769.2	38.0	23.0	0
13-02-2023	768.4	38.5	17.1	0
14-02-2023	767.9	38.3	15.1	0
15-02-2023	767.7	39.3	23.2	0
16-02-2023	767.9	42.3	23.0	0
17-02-2023	768.2	65.0	17.1	0
18-02-2023	768.5	75.0	15.1	0
19-02-2023	768.9	80.4	23.3	0
20-02-2023	769.2	85.0	23.5	0
21-02-2023	769.7	80.6	18.2	0
22-02-2023	767.7	90.0	10.6	23.6
23-02-2023	767.9	92.0	12.6	20.4
24-02-2023	768.2	39.3	19.2	0
25-02-2023	768.5	42.3	21.1	0
26-02-2023	768.9	39.0	23.3	0
27-02-2023	769.2	38.4	23.5	0
28-02-2023	760.8	35.7	23.0	0
			Total	44

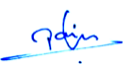
	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
			Date of Rev.	01.12.2020
Reference No.: SCL/ENV/AAQM/MONTHLY/2022-23/11			Month: February	
Location of Sampling: Near Star Club		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)
01.02.2023	33.94	23.10	7.88	13.30
03.02.2023	41.21	24.96	8.88	11.46
06.02.2023	37.01	20.71	10.06	13.21
11.02.2023	33.51	23.10	9.85	11.83
14.02.2023	40.26	21.96	11.03	13.23
16.02.2023	39.90	24.80	7.88	10.73
18.02.2023	37.04	23.91	10.64	12.23
20.02.2023	35.00	23.61	8.59	11.04
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/2022-23/11			Month: February	
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)
01.02.2023	71.16	42.26	18.76	22.79
03.02.2023	65.81	43.14	19.78	23.82
06.02.2023	68.04	43.80	20.24	21.80
11.02.2023	72.03	42.13	19.69	20.73
14.02.2023	69.36	39.96	18.21	19.98
16.02.2023	70.86	42.33	16.53	20.84
18.02.2023	72.61	43.71	18.69	20.82
20.02.2023	68.72	41.00	17.90	18.73
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/2022-23/11			Month: February	
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)
01.02.2023	65.92	36.54	16.97	21.15
03.02.2023	60.57	37.42	17.99	22.18
06.02.2023	62.80	38.08	18.45	20.16
11.02.2023	66.79	36.41	17.90	19.09
14.02.2023	64.12	34.24	16.42	18.34
16.02.2023	65.62	36.61	14.74	19.20
18.02.2023	67.37	37.99	16.90	19.18
20.02.2023	63.48	35.28	16.11	17.09
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 /2022-23/11			Month: February	
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)
17.02.2023	33.25	15.64	8.60	10.25
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/2022-23/11						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	14.02.2023	17.02.2023	20.02.2023	04.02.2023	11.02.2023	11.02.2023	07.02.2023	07.02.2023
2	Ambient Temp (°C)	35	29	40	24	22	21	21	23
3	Stack Gas Temp (°C)	199	89	280	37	26	27	30	35
4	Exit Velocity of Gas (m/sec.)	18.86	11.93	18.74	12.65	12.89	13.36	13.43	13.98
5	Flow Rate (Nm ³ / sec.)	79.47	10.49	59.83	17.52	21.24	11.93	13.96	10.03
6	Quantity of Emission (Nm ³ / Hr)	286099.31	37776.97	215393.17	63073.42	76464.90	42942.56	50238.29	36110.29
7	Concentration of PM (mg/Nm ³)	12.86	17.15	13.20	20.54	12.28	19.16	22.89	19.17
8	Concentration of SO ₂ (mg/Nm ³)	512.7	-	-	-	-	-	-	-
9	Concentration of NO _x (mg/Nm ³)	392.0	-	-	-	-	-	-	-
10	Oxygen (O ₂) (%)	9.7	10.8	7.5	9.9	9.0	9.4	9.5	9.7
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)									
 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/2022-23/11				
Month - February 2023				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
02.02.2023	Coal Storage Section	1472	2000	
02.02.2023	Limestone Storage Section	2054	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/2022-23/11					Date of sample collection: 01.02.2023	
					Date of Analysis: 01.02.2023 to 04.02.2023	
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	-	7.4	7.8	5.5 to 9.0	
2	Colour	Hazen	Colourless	Colourless	-	
3	Odour	-	Odourless	Odourless	-	
4	Chloride	mg/L	35	38	-	
5	Total Hardness as CaCO ₃	mg/L	83	84.0	-	
6	Suspended Solids	mg/L	70	8	100	
7	Total Dissolve Solids	mg/L	288	409	-	
8	Chemical Oxygen Demand	mg/L	120	28	250	
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	54	6.9	30	
10	Oil & Grease	mg/L	9	< 3.0	10	
11	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature	
12	Conductivity	µS/cm	509	723	-	
 Analysis By  Checked By  Verified By						



STAR CEMENT LIMITED
Lumshnong, Meghalaya

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

WATER TESTING REPORT

Reference No.: SCL/ENV/WATER/MONTHLY/2022-23/11

Surface Water Analysis Results

Date of sample collection: 01.02.2023

Month: February

Date of Analysis: 01.02.2023 to 04.02.2023

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	-	7.7	Water Source not found			7.5	7.8	7.9	Water Source not found		6.5 - 8.5
2	Colour	Hazen	Colourless				Colourless	Colourless	Colourless			10
3	Odour	-	Unobjectionable				Unobjectionable					Unobjectionable
4	Chloride	mg/L	41.0				42.3	24.0	26.7			250
5	Total Hardness as CaCO ₃	mg/L	67.1				81.2	70.0	40.2			300
6	Suspended Solids	mg/L	1.5				4.2	6.1	5.0			-
7	Total Dissolve Solids	mg/L	220				215	162	82.0			500
8	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	ND				ND	ND	ND			2.0
9	Oil & Grease	mg/L	ND				ND	ND	ND			-
10	Temperature	° C	25.0				25.0	25.0	25.0			-
11	Conductivity	µS/cm	330				323	243	123			-
12	Flow	L / Min	-				-	-	-			-

Analyzed by

Checked by

Verified by