

STAR CEMENT LIMITED

Ref: SCL/EHS/LUM/2023-24/44

Dated: 29/01/2024

To,

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

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

Regd. Office & Works: P.O. Lumshnong, East Jaintia Hills District, Meghalaya-793210, E-mail: ehslums@starcement.co.in

Corporate Office: Century House, 2nd Floor, P 15/1, Taratala Road, Kolkata-700088, e-mail: kolkata@starcement.co.in



AN ISO 9001, ISO 14001 & ISO 45001 CERTIFIED COMPANY

CIN NO. L26942ML2001PLC006663



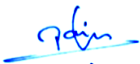
STAR CEMENT LIMITED

Lumshnong, Meghalaya

Date (DD-MM-YYYY)	Pressure (mmHg)	Relative Humidity (%)	Temp. (C)	Manual Rain (mm)
01-12-2023	722.8	70.2	22.7	0.0
02-12-2023	720.2	69.0	22.0	0.0
03-12-2023	719.9	69.8	22.9	0.0
04-12-2023	726.1	68.1	22.7	0.0
05-12-2023	723.4	67.9	22.6	0.0
06-12-2023	729.2	69.2	22.0	0.0
07-12-2023	723.8	68.0	20.0	13.4
08-12-2023	726.5	67.8	19.0	16.0
09-12-2023	728.1	68.0	22.5	0.0
10-12-2023	725.8	69.1	22.9	0.0
11-12-2023	723.8	72.3	23.0	0.0
12-12-2023	723.3	71.4	24.7	0.0
13-12-2023	723.7	75.6	22.8	0.0
14-12-2023	726.5	72.7	22.9	0.0
15-12-2023	726.7	72.9	23.8	0.0
16-12-2023	726.1	70.1	23.4	0.0
17-12-2023	724.5	76.4	20.6	0.0
18-12-2023	722.9	75.6	19.2	0.0
19-12-2023	720.5	68.6	20.9	0.0
20-12-2023	726.1	61.6	20.8	0.0
21-12-2023	726.6	64.6	22.3	0.0
22-12-2023	724.3	69.4	22.6	0.0
23-12-2023	726.5	68.9	22.7	0.0
24-12-2023	728.1	66.8	23.9	0.0
25-12-2023	726.5	69.5	22.7	0.0
26-12-2023	721.3	66.2	21.9	0.0
27-12-2023	728.0	69.1	22.4	0.0
28-12-2023	725.8	70.5	22.9	0.0
29-12-2023	724.6	72.6	19.6	0.0
30-12-2023	725.4	71.4	22.0	0.0
31-12-2023	725.8	70.5	22.9	0.0
			Total	29.4

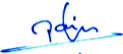
	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
			Date of Rev.	01.12.2020
Reference No.: SCL/ENV/AAQM/MONTHLY/2023-24/09			Month : December	
Location of Sampling: Near Star Club		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)
01.12.2023	32.04	24.34	11.89	16.12
04.12.2023	31.05	23.31	11.95	14.28
09.12.2023	32.05	24.02	10.16	16.03
13.12.2023	32.54	25.33	9.95	14.65
15.12.2023	31.04	24.19	11.13	16.02
18.12.2023	31.98	27.03	9.98	13.50
20.12.2023	34.35	26.14	10.74	15.03
28.12.2023	32.91	24.69	11.29	14.25
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 – 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/2023-24/09			Month : December	
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)
01.12.2023	64.39	40.17	13.66	17.87
04.12.2023	59.04	41.05	14.68	18.90
09.12.2023	61.27	41.71	15.14	16.88
13.12.2023	65.26	40.04	14.59	15.81
15.12.2023	62.59	37.87	13.11	13.48
18.12.2023	64.09	40.24	11.43	14.03
20.12.2023	69.64	44.63	16.17	18.01
28.12.2023	65.75	41.92	15.26	15.85
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/2023-24/09			Month : December	
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)
01.12.2023	68.62	41.15	14.72	19.03
04.12.2023	63.27	40.63	15.98	18.66
09.12.2023	65.50	41.29	15.94	18.02
13.12.2023	69.49	39.62	16.96	17.43
15.12.2023	66.82	37.45	13.71	16.05
18.12.2023	68.32	39.82	12.30	15.68
20.12.2023	71.63	42.77	15.74	16.84
28.12.2023	67.74	40.06	14.95	15.31
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 /2023-24/09			Month : December	
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)
29.12.2023	32.79	18.11	10.76	12.42
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/2023-24/09						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 (m²)	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	12.12.2023	12.12.2023	12.12.2023	16.12.2023	13.12.2023	13.12.2023	16.12.2023	16.12.2023
2	Ambient Temp (°C)	27	27	30	27	25	25	21	22
3	Stack Gas Temp (°C)	145	70	106	38	35	30	28	30
4	Exit Velocity of Gas (m/sec.)	16.29	12.78	8.93	14.05	12.39	13.43	11.97	13.43
5	Flow Rate (Nm³/ sec.)	77.70	11.89	41.19	18.40	19.81	11.87	12.50	9.80
6	Quantity of Emission (Nm³/ Hr)	279731.30	42808.29	148267.74	69482.03	71321.56	42735.01	44996.93	35262.08
7	Concentration of PM (mg/Nm³)	15.8	28.4	17.9	18.4	22.5	21.0	23.8	22.1
8	Concentration of SO₂ (mg/Nm³)	325.0	-	-	-	-	-	-	-
9	Concentration of NOx (mg/Nm³)	277.0	-	-	-	-	-	-	-
10	Oxygen (O₂) (%)	9.1	10.3	9.8	9.6	9.2	9.0	9.0	10.0
E. Remarks									
Standard									
PM - 30 mg/Nm³			SO₂ - 1000 mg/Nm³			NOx - 800 mg/Nm³			
Particulate Matter (PM), Sulphur di-oxide (SO₂), 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/2023-24/09			
Month - December			
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline
			Limit
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)
06.12.2023	Coal Storage Section	1246	2000
06.12.2023	Limestone Storage Section	1349	5000
 Analyzed By  Checked by  Verified By			

	STAR CEMENT LIMITED Lumshnong, Meghalaya				Document No.	SCL/EHS/Env/F-03			
					Effective Date	01-05-2019			
					Revision No.	04			
	NOISE LEVEL MONITORING REPORT					Revision Date	01-01-2021		

Ref: SCL/ENV/NOISE/MONTHLY/2023-24/009 Date: 13.12.2023

Month - December

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	55.8	63.6	59.7	75	53.2	61.0	57.1	70
2	Raw Mill	53.6	63.1	58.4		51.0	60.5	55.8	
3	Raw Mill WF	56.8	64.2	60.5		54.2	61.6	57.9	
4	Coal Mill	55.1	62.4	58.8		52.5	59.8	56.2	
5	Cement Mill	55.5	62.2	58.9		52.9	59.6	56.3	
6	Cement Mill WF	57.1	63.7	60.4		54.5	61.1	57.8	
7	Primary Crusher (Dump Hopper)	53.6	62.6	58.1		51.0	60.0	55.5	
8	Primary Crusher (Near BC-1)	56.1	64.4	60.3		53.5	61.8	57.7	
9	Secondary Crusher	53.6	64.8	59.2		51.0	62.2	56.6	
B.	DG House								
1	Control Room	53.1	65.8	59.5	75	50.5	63.2	56.9	70
2	Office	54.6	53.6	54.1		52.0	51.0	51.5	
C.	Offices								
1	CCR	43.6	54.1	48.9	75	44.5	55.0	49.8	70
2	Meeting Room	45.1	53.7	49.4		46.0	54.6	50.3	
3	VP'S Room	38.9	43.3	41.1		39.8	44.2	42.0	
4	Inst. Shift Room	44.1	46.9	45.5		45.0	47.8	46.4	
5	Drawing Office	43.6	53.1	48.4		44.5	54.0	49.3	
6	QC Department								
	a) Chemical Lab	54.7	56.8	55.7		50.0	52.1	51.0	
	b) Physical Lab	53.7	58.2	56.0		49.0	53.5	51.3	
	c) Shift Lab	48.9	53.6	51.3		44.2	48.9	46.6	
	d) Sample Preparation Room	46.0	53.5	49.7	41.3	48.8	45.0		
D.	Residential								
1	Bachelor Hostel	38.6	43.3	41.0	55	36.0	40.7	38.4	45
2	HOD'S Quater's	34.6	45.6	40.1		32.0	43.0	37.5	
3	650 Quater's	36.5	45.3	40.9		33.9	42.7	38.3	
4	250 Quater's	36.9	43.6	40.3		34.3	41.0	37.7	
5	Hut	35.9	44.0	40.0		33.3	41.4	37.4	
E.	Dispensary	35.6	42.6	39.1		33.0	40.0	36.5	


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/2023-24/09					Date of sample collection: 18.12.2023	
					Date of Analysis: 18.12.2023 to 21.12.2023	
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	-	7.5	7.9	5.5 to 9.0	
2	Colour	Hazen	Yellowish	Colourless	-	
3	Odour	-	Odourless	Odourless	-	
4	Chloride	mg/L	79.8	81.5	-	
5	Total Hardness as CaCO ₃	mg/L	55.8	57.0	-	
6	Suspended Solids	mg/L	78	20.0	100	
7	Total Dissolve Solids	mg/L	313	322	-	
8	Chemical Oxygen Demand	mg/L	124	41	250	
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	84	9.0	30	
10	Oil & Grease	mg/L	1.1	< 3.0	10	
11	Temperature	° C	25	25	Shall not exceed 5.0°C above the receiving water temperature	
12	Conductivity	µS/cm	483	492	-	
 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
	WATER TESTING REPORT											Date of Rev.	01.06.2019

Reference No.: SCL/ENV/WATER/MONTHLY/2023-24/09											Date of sample collection: 20.12.2023	
Surface Water Analysis Results											Date of Analysis: 20.12.2023 to 23.12.2023	

S.No.	Parameter	Unit	Umtyrngai Nallah		Umutha Nallah		Umso Nalah	Lunar	Lukha	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	-	7.7	7.5	7.8	8.1	8.2	6.9	7.1	7.3	Water source not found				7.6	6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	Colourless	Yellowish	Colourless	Colourless					Colourless	10
3	Odour	-	Unobjectionable												Unobjectionable	Unobjectionable
4	Chloride	mg/L	24.8	29.2	27.5	27.9	30.1	45.2	20.0	24.8					24.8	250
5	Total Hardness as CaCO ₃	mg/L	52.8	68.0	76.0	84.0	88.0	125.0	24.0	49.2					47.2	300
6	Suspended Solids	mg/L	1.0	1.5	2.1	8.96	10.0	23.0	3.9	1.4					2.0	-
7	Total Dissolve Solids	mg/L	254.0	188.0	266.7	326.0	342.2	224.1	69.2	135.9					240.0	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	25.0	25.0	25.0					25.0	-
11	Conductivity	µS/cm	447.0	329.0	433.2	526.5	547.4	353.4	107.2	218.6					424.0	-
12	Flow	L / Min	2528.8	3026.0	367.9	1119.6	3060.0	10683.7	6247.5	132005.0					-	

 Analyzed by	 Checked by	 Verified by
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