

STAR CEMENT LIMITED

Ref: SCL/EHS/LUM/2022-23/28

Dated: 27/10/2022

To,

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

Subject : Submission of Environmental Monitoring Report for the month of Sept, 2022.

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

Dear Sir,

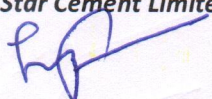
This is in reference to above cited subject, we are hereby submitting the monthly Environmental monitoring reports of Ambient Air Quality for plant and ESZ including meteorological data, Stack Emission, Fugitive Emission, Surface water & Waste Water (STP) monitoring reports of M/s Star Cement Limited for the month of **Sept, 2022**.

This is for your kind information, record and kindly acknowledge receipt of the same.

Thanking you,

Yours truly,

For **Star Cement Limited**



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.

STARCEMENT
Solid Setting

Regd. Office & Works : Lumshnong, P.O. - Khallehriat, Dist.- East Jaintia Hills, Meghalaya - 793 210, Ph: 03655-278215/16/18, Fax: 03655-278217, e-mail: lumshnong@starcement.co.in
Works : Gopinath Bordoloi Road, Village - Chamatapathar, Distract - Kamrup (M), Guwahati - 782 402, Assam, e-mail: ggu@starcement.co.in
Guwahati Office : Mayur Garden, 2nd Floor, Opp. Rajiv Bhawan, G.S. Road, Guwahati - 781 005, Assam, Ph: 0361-2462215/16, Fax: 0361 - 2462217, e-mail: guwahati@starcement.co.in
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Durgapur Office : C/o - Ma Chandhi Durga Cements Ltd., Bamunara Industrial Area, P.O. - Bamunara, P.S. - Kanksha, Dist. Burdwan, West Bengal - 713 212
Siliguri Office : Village - Kartowa, P.O. - Mohanvita, District - Jalpaiguri, West Bengal - 735 135 / Top Plaza, 3rd Floor, Near City Plaza, Sevoke Road, Siliguri - 734 001, Ph: 0353 - 2643611/12
Bankura Office : Purandar Pur, District - Bankura, West Bengal - 722 155

AN ISO 9001, ISO 14001 & OHSAS 18001 CERTIFIED COMPANY
CIN NO. U26942ML2001PLC006663

Quack



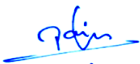
STAR CEMENT LIMITED

Lumshnong, Meghalaya

Date (DD-MM-YYYY)	Pressure (mmHg)	Relative Humidity (%)	Temp. (C)	Wind Direction (deg)	Wind Speed- (m/s)	Manual Rain (mm)
01-09-2022	958.04	80.09	27.78	180.42	1.53	2.6
02-09-2022	957.9	83.89	26.91	209.91	1.32	3.5
03-09-2022	958.14	89.78	25.6	220.21	1.06	60.2
04-09-2022	958.4	95.29	24.08	270.01	0.83	29.4
05-09-2022	958.91	96.41	23.98	308.46	1.01	18.0
06-09-2022	959.78	96.47	23.76	272.12	0.87	65.0
07-09-2022	960.4	97.86	23.6	283.88	0.7	30.0
08-09-2022	962.96	99.11	23.28	152.09	1.24	0.0
09-09-2022	963	99.19	23.34	150.25	0.77	0.0
10-09-2022	961.52	83.42	27.69	158.32	1.33	6.0
11-09-2022	960.52	74.81	29.34	133.39	1.81	14.0
12-09-2022	960.3	76.08	29.4	104.41	2.87	7.0
13-09-2022	961.3	96.91	23.47	317.25	0.77	15.0
14-09-2022	962.52	69.98	30.97	145.46	1.34	30.0
15-09-2022	961.99	61.42	33.5	154.44	0.68	28.0
16-09-2022	961.51	60.25	34.21	82.61	1.71	40.0
17-09-2022	958.24	70.24	29.31	347.05	5.13	0.0
18-09-2022	957.91	71.48	29.9	247.63	1.28	2.1
19-09-2022	959.47	82.07	27.26	249.74	0.71	26.6
20-09-2022	962.91	95.86	23.48	269.57	3.22	30.0
21-09-2022	963.23	96.89	23.71	202.09	1.07	33.0
22-09-2022	962.5	98.37	23.3	130.42	0.72	20.0
23-09-2022	963.22	67.35	32.29	172.25	0.93	6.0
24-09-2022	962.51	50.84	35.06	193.15	1.53	0.0
25-09-2022	961.8	49.95	35.07	178.3	1.91	0.0
26-09-2022	960.64	49.32	36.08	202.26	1.61	0.0
27-09-2022	959.5	48.69	35.68	131.51	1.68	0.0
28-09-2022	958.99	46.2	35.81	148.8	2.06	0.0
29-09-2022	958.89	69.95	30.57	319.17	2.58	0.0
30-09-2022	959.4	74.53	29.55	302.38	3.62	0.0
					Total rain of this month	466.4

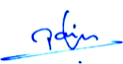
	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/Env/F – 01
			Issue No.	1
	AMBIENT AIR QUALITY MONITORING REPORT		Date of Issue:	24.08.2013
			Revision No.	5
			Date of Rev.	01.12.2020
Reference No.: SCL/ENV/AAQM/MONTHLY/2022-23/15			Month: September'22	
Location of Sampling: Near Star Club		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)
01.09.2022	39.80	22.77	7.10	14.18
08.09.2022	41.65	24.63	8.46	12.34
10.09.2022	37.45	20.38	9.88	14.09
12.09.2022	44.30	22.77	8.92	12.71
17.09.2022	40.70	21.63	8.03	14.11
23.09.2022	40.34	24.47	8.18	11.61
26.09.2022	42.08	23.58	9.95	13.11
28.09.2022	44.67	23.28	8.13	11.92
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/2022-23/16			Month: September'22	
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)
01.09.2022	48.05	32.30	10.38	14.41
08.09.2022	46.78	30.69	13.32	12.60
10.09.2022	47.17	32.05	10.88	13.88
12.09.2022	51.64	28.58	10.66	10.70
17.09.2022	46.80	27.67	9.93	13.63
23.09.2022	48.55	32.13	11.68	14.36
26.09.2022	49.00	30.54	9.20	10.86
28.09.2022	46.30	29.98	12.68	11.94
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/2022-23/17			Month: September'22	
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)
01.09.2022	71.60	41.93	19.23	23.67
08.09.2022	66.25	37.13	20.25	24.70
10.09.2022	68.48	43.47	20.71	22.68
12.09.2022	72.47	41.80	20.16	21.61
17.09.2022	69.80	39.63	18.68	20.86
23.09.2022	71.30	42.00	17.00	21.72
26.09.2022	73.05	43.38	19.16	21.70
28.09.2022	69.16	40.67	18.25	19.61
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 /2022-23/18			Month: September'22	
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)
27.08.2022	39.49	17.35	7.93	10.05
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/2022-23/06						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	14.09.2022	16.09.2022	16.09.2022	12.09.2022	15.09.2022	12.09.2022	13.09.2022	13.09.2022
2	Ambient Temp (°C)	30	35	45	22	21	25	21	22
3	Stack Gas Temp (°C)	153	87	385	30	26	34	32	29
4	Exit Velocity of Gas (m/sec.)	14.37	12.71	20.01	13.57	13.77	12.96	13.91	13.63
5	Flow Rate (Nm ³ /sec.)	67.04	11.24	53.65	19.19	22.64	11.31	14.25	9.97
6	Quantity of Emission (Nm ³ / Hr)	241336.66	40470.55	193138.15	69090.62	81486.77	40721.31	51316.11	35901.22
7	Concentration of PM (mg/Nm ³)	21.07	17.00	12.45	19.06	23.14	25.23	22.95	22.21
8	Concentration of SO ₂ (mg/Nm ³)	547.0	-	-	-	-	-	-	-
9	Concentration of NO _x (mg/Nm ³)	232.0	-	-	-	-	-	-	-
10	Oxygen (O ₂) (%)	9.5	9.7	9.0	10.5	10.8	9.6	10.8	11.6
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
	FUGITIVE EMISSION MONITORING REPORT		Revision No.	2
			Revision Date	01-01-2021
Ref: SCL/ENV/FUGITIVE/MONTHLY/2022-23/006				
Month - September 2022				
Date	Location	Fugitive Emission Results	As per CPCB/BIS Guideline	
			Limit	
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)	
02.09.2022	Coal Storage Section	1325	2000	
02.09.2022	Limestone Storage Section	1504	5000	
 Analyzed By  Checked by  Verified By				

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

Ref: SCL(LM)/ENV/NOISE/MONTHLY/2022-23/002										Date: 05.09.2022	
Month - September 2022											
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	64.3	72.1	68.2	75	62.3	70.1	66.2	70		
2	Raw Mill	62.1	71.6	66.9		60.1	69.6	64.9			
3	Raw Mill WF	65.3	72.7	69.0		63.3	70.7	67.0			
4	Coal Mill	63.6	70.9	67.3		61.6	68.9	65.3			
5	Cement Mill	64.0	70.7	67.4		62.0	68.7	65.4			
6	Cement Mill WF	65.6	72.2	68.9		63.6	70.2	66.9			
7	Primary Crusher (Dump Hopper)	62.1	71.1	66.6		60.1	69.1	64.6			
8	Primary Crusher (Near BC-1)	64.6	72.9	68.8		62.6	70.9	66.8			
9	Secondary Crusher	62.1	73.3	67.7		60.1	71.3	65.7			
B.	DG House										
1	Control Room	61.6	74.3	68.0	75	59.6	72.3	66.0	70		
2	Office	63.1	62.1	62.6		61.1	60.1	60.6			
C.	Offices										
1	CCR	52.1	62.6	57.4	75	50.1	60.6	55.4	70		
2	Meeting Room	53.6	62.2	57.9		51.6	60.2	55.9			
3	VP'S Room	47.4	51.8	49.6		45.4	49.8	47.6			
4	Inst. Shift Room	52.6	55.4	54.0		50.6	53.4	52.0			
5	Drawing Office	52.1	61.6	56.9		50.1	59.6	54.9			
6	QC Department										
	a) Chemical Lab	63.2	65.3	64.2		61.2	63.3	62.2			
	b) Physical Lab	62.2	66.7	64.5		60.2	64.7	62.5			
	c) Shift Lab	57.4	62.1	59.8		55.4	60.1	57.8			
	d) Sample Preparation Room	54.5	62.0	58.2	52.5	60.0	56.2				
D.	Residential										
1	Bachelor Hostel	47.1	51.8	49.5	55	45.1	49.8	47.5	45		
2	HOD'S Quater's	43.1	54.1	48.6		41.1	52.1	46.6			
3	650 Quater's	45.0	53.8	49.4		43.0	51.8	47.4			
4	250 Quater's	45.4	52.1	48.8		43.4	50.1	46.8			
5	Hut	44.4	52.5	48.5		42.4	50.5	46.5			
E.	Dispensary	44.1	51.1	47.6		42.1	49.1	45.6			

 Analyzed by	 Checked By	 Verified By
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	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/2022-23/06

Date of sample collection: - 27.09.2022
Date of Analysis: 27.09.2022 to 30.09.2022

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	Colourless	Colourless	-
3	Odour	-	Odourless	Odourless	-
4	Chloride	mg/L	38.0	41.8	-
5	Total Hardness as CaCO ₃	mg/L	84.0	88.0	-
6	Suspended Solids	mg/L	65.0	4.5	100
7	Total Dissolve Solids	mg/L	295	288	-
8	Chemical Oxygen Demand	mg/L	158	28.0	250
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	67.0	5.9	30
10	Oil & Grease	mg/L	7.9	< 3.0	10
11	Temperature	° C	25.0	25.0	Shall not exceed 5.0°C above the receiving water temperature
12	Conductivity	µS/cm	524.0	517	-


 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/2022-23/06 Surface Water Analysis Results Month: September-2022										Date of sample collection: - 05.09.2022 Date of Analysis: 05.09.2022 to 08.09.2022				
S.No.	Parameter	Unit	Umtyrngai Nallah		Umutha Nallah		Umso Nalah	Lunar River	Lukha River	Lumshnong	Umbadoh	Tongseng	Wahiajer	Standards norms as per IS 2296
			Up Stream	Down Stream	Up Stream	Down Stream	Down Stream			Seasonal Spring / Seasonal Nallah				
1	pH	-	7.70	7.40	7.65	7.48	7.42	8.1	8.25	7.2	8.4	7.3	7.5	6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	Colourless	Slightly Yellowish	Colourless	Colourless	Colourless	Colourless	Colourless	10
3	Odour	-	Unobjectionable											Unobjectionable
4	Chloride	mg/L	42.5	46.5	35.5	37.2	55.6	21.3	39.0	21.8	17.7	28.4	24.8	250
5	Total Hardness as CaCO ₃	mg/L	70.0	78.0	74.0	80.0	83.0	38.0	34.0	27.0	80.0	36.0	52.0	300
6	Suspended Solids	mg/L	15.0	56.0	18.0	27.0	45.0	66.0	4.0	4.7	7.9	1.9	11.0	-
7	Total Dissolve Solids	mg/L	225	237	176	185	200	94.0	61.0	50.0	174.0	76.0	143.0	500
8	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	2.0
9	Oil & Grease	mg/L	ND	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	25.0	-
11	Conductivity	µS/cm	387.0	395.0	290.0	301.0	335.0	172.8	117.0	85.0	338.0	112.0	330.0	-
12	Flow	L / Min	25947.50	105276.70	24250.20	45371.60	66304.86	93279.90	79732.10	2262.95	-	-	-	-
 Analyzed by  Checked by  Verified by														