

	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/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.: SCL/ENV/AAQM/MONTHLY/2021-22/29			Month: Nov'21		
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)	
02-11-2021	45.71	30.74	11.04	16.94	
04-11-2021	47.23	31.75	11.30	17.35	
08-11-2021	41.78	28.14	9.89	15.07	
11-11-2021	43.41	29.22	12.66	19.54	
16-11-2021	41.88	28.20	11.24	17.25	
18-11-2021	46.54	31.22	10.97	16.96	
22-11-2021	41.15	27.65	9.57	14.71	
25-11-2021	41.23	27.69	10.89	16.85	
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



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	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/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.: SCL/ENV/AAQM/MONTHLY/2021-22/30			Month: Nov'21		
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)	
02-11-2021	54.20	36.12	15.35	18.91	
04-11-2021	54.62	36.39	16.10	19.03	
08-11-2021	51.68	34.46	13.69	18.68	
11-11-2021	53.53	35.68	12.36	16.72	
16-11-2021	55.44	36.93	14.97	17.82	
18-11-2021	53.98	35.94	15.84	18.75	
22-11-2021	51.07	34.02	13.46	18.40	
25-11-2021	52.90	35.23	12.15	16.46	
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.



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	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.		SCL/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.: SCL/ENV/AAQM/MONTHLY/2021-22/31			Month: Nov'21		
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)	
02-11-2021	55.92	35.79	21.13	30.35	
04-11-2021	53.76	33.27	17.90	26.27	
08-11-2021	55.89	36.81	18.78	27.39	
11-11-2021	52.00	31.78	19.94	28.85	
16-11-2021	55.91	35.25	20.16	29.13	
18-11-2021	53.10	32.81	17.57	25.89	
22-11-2021	55.21	36.32	18.44	26.99	
25-11-2021	51.36	31.34	19.58	28.43	
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.



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	STAR CEMENT LIMITED Lumshnong, Meghalaya		Reference No.	SCL/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.: Tongseng Village V/2021-22/004			Month: Nov'21	
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)
20.11.2021	43.46	27.66	5.92	8.87
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.



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	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
					Date of Rev.	01.06.2021	
Report No: SCL/Env/Stack/Monthly/2021-22/50							Month: November'21
<u>Analysis Result</u>							
A. General Information About Stack							
1	Stack Identification No	S-1	S-2	S-3	S-4	S-5	S-6
2	Stack Connected to	Kiln/Raw Mill	Coal Mill	Cooler	Roller Press	Cement Mill	Packing Plant
3	Material of Construction (Stack/Duct)	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel	Mild Steel
4	Shape of duct	Circular	Circular	Circular	Circular	Circular	Circular
5	Whether duct is provided with permanent platform & ladder	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
2	Duct diameter at sampling point (meter)	3	1.2	2.8	1.4	1.5	1.1
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
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
D. Result of Sampling & Analysis of Gaseous Emission							
1	Date of Sampling	09-11-2021	26-11-2021	12-11-2021	15-11-2021	17-11-2021	23-11-2021
2	Ambient Temp (°C)	25.0°C	25.0°C	25.0°C	25.0°C	25.0°C	25.0°C
3	Stack Gas Temp (°C)	200	69	298	43	113	50
4	Exit Velocity of Gas (m/sec.)	17.26	12.93	17.12	11.67	12.62	11.49
5	Flow Rate (Nm ³ / sec.)	0.30	0.26	0.26	0.28	0.25	0.30
6	Quantity of Emission (Nm ³ / Hr)	255771.37	41589.46	181991.79	56508.58	57261.94	33740.56
7	Concentration of PM (mg/Nm ³)	23.12	17.64	20.98	19.52	18.90	16.05
8	Concentration of SO ₂ (mg/Nm ³)	242.20	-	-	-	-	-
9	Concentration of NO _x (mg/Nm ³)	549.50	-	-	-	-	-
10	Oxygen (O ₂) (%)	8.75	8.33	10.00	8.00	9.21	8.12
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)</i>							
 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/2021-22/008

Month - Nov'21

Date	Location	Fugitive Emission Results	Limit
		(in $\mu\text{g}/\text{m}^3$)	(in $\mu\text{g}/\text{m}^3$)
10.11.2021	Coal Storage Section	1598	2000
10.11.2021	Limestone Storage Section	1655	5000
10.11.2021	Cement Packing Plant	1817	5000



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	STAR CEMENT LIMITED	Reference No.	SCL/EHS/F-04
		Issue No.	1
	Lumshnong, Meghalaya	Date of Issue:	24.08.2013
	WATER TESTING REPORT	Revision No.	3
		Date of Rev.	01.06.2019

Report No. - 08	Date of sample collection: - 06.11.2021
	Date of Analysis: 06.11.2021 to 09.11.2021

Sr.No.	Parameter	Unit	STP Inlet	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	-	7.70	-
2	Colour	Hazen	Colourless	-
3	Odour	-	Odourless	-
4	Chloride	mg/L	54.34	-
5	Total Hardness as CaCO ₃	mg/L	145.15	-
6	Suspended Solids	mg/L	75.12	-
7	Total Dissolve Solids	mg/L	253	-
8	Chemical Oxygen Demand	mg/L	256	-
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	138.2	-
10	Oil & Grease	mg/L	7.4	-
11	Temperature	° C	24.3	-
12	Conductivity	μS/cm	420.67	-



Analysis By



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	STAR CEMENT LIMITED		Reference No.	SCL/EHS/F-04
			Issue No.	1
	Lumshnong, Meghalaya		Date of Issue:	24.08.2013
	WATER TESTING REPORT		Revision No.	3
			Date of Rev.	01.06.2019

Report No. - 08	Date of sample collection: - 06.11.2021
	Date of Analysis: 06.11.2021 to 09.11.2021

Sr.No.	Parameter	Unit	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	-	7.81	5.5 to 9.0
2	Colour	Hazen	Colourless	-
3	Odour	-	Odourless	-
4	Chloride	mg/L	53.00	-
5	Total Hardness as CaCO ₃	mg/L	148.50	-
6	Suspended Solids	mg/L	8.3	100
7	Total Dissolve Solids	mg/L	252	-
8	Chemical Oxygen Demand	mg/L	37.1	250
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	8.8	30
10	Oil & Grease	mg/L	< 3.0	10
11	Temperature	° C	26.5	Shall not exceed 5.0°C above the receiving water temperature
12	Conductivity	μS/cm	415.2	-


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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

Report No. - 03

Date of sample collection: - 06.11.2021

Date of Analysis: 06.11.2021 to 09.11.2021

Sr.No.	Parameter	Unit	ETP Inlet	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	-	7.12	-
2	Suspended Solids	mg/L	75	-
3	Total Dissolve Solids	mg/L	758	-
4	Chemical Oxygen Demand	mg/L	761.0	-
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	59.0	-
6	Oil & Grease	mg/L	124.0	-
7	Dissolved Oxygen	mg/L	2.7	-
8	Temperature	° C	23.0	-


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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

Report No. - 08				Date of sample collection: - 06.11.2021
				Date of Analysis: 06.11.2021 to 09.11.2021
Sr.No.	Parameter	Unit	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	-	7.6	5.5 to 9.0
2	Suspended Solids	mg/L	16	100
3	Total Dissolve Solids	mg/L	732	-
4	Chemical Oxygen Demand	mg/L	27.1	250
5	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	3.8	30
6	Oil & Grease	mg/L	2.0	10
7	Dissolved Oxygen	mg/L	6.1	-
8	Temperature	° C	26.4	Shall not exceed 5.0°C above the receiving water temperature


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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

Report No. -08

Date of sample collection: - 10.11.2021

Date of Analysis: 10.11.2021 to 13.11.2021

Sr.No.	Parameter	Unit	Nala Inlet	Nala Outlet	Standards norms as per IS 2296
1	pH	-	7.96	7.73	6.5 - 8.5
2	Colour	Hazen	Colourless	Colourless	300
3	Odour	-	Unobjectionable	Unobjectionable	Unobjectionable
4	Chloride	mg/L	5.43	5.98	-
5	Total Hardness as CaCO ₃	mg/L	145.11	147.71	300
6	Suspended Solids	mg/L	12.0	11.3	-
7	Total Dissolve Solids	mg/L	84	78.9	500
8	Chemical Oxygen Demand	mg/L	ND	ND	-
9	Biochemical Oxygen Demand (For 3 days at 27 °C)	mg/L	ND	ND	2.0
10	Oil & Grease	mg/L	ND	ND	-
11	Temperature	° C	25.32	26.28	-
12	Conductivity	μS/cm	323.62	324	-


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