



cement! sugar! refractories! power!

DCBL/ENV-ES/23-24/

Date: 24.09.2024

To,

**The Member Secretary,
Jharkhand State Pollution Control Board,
T.A Division Building (Ground Floor)
HEC Campus, Dhurwa, Ranchi- 834004**

Subject: Submission of Environment Statement Report (Form-V) of Bokaro Cement Manufacturing Works (Unit of Dalmia Cement Bharat Limited) for the financial year ending the 31st March'2024

Dear Sir,

We are submitting herewith Environment Statement Report (Form-V) of Bokaro Cement Manufacturing Works (Unit of Dalmia Cement (Bharat) Limited, Bokaro) Jharkhand for the period of financial year April' 2023 – March'2024 for your kind perusal and record please.

Thanking you.

Yours faithfully
For Dalmia Cement (Bharat) Limited

Priya Ranjan
Authorized Signatory

Encl: Environment Statement Report (Form-V)

CC: Environmental Officer
Regional Office, JSPCB, Dhanbad
H.I.G-1, Sardar Patel Nagar, Hirapur,
Dhanbad-826001, Jharkhand

Bokaro Cement Manufacturing Works
(A unit of Dalmia Cement Bharat Limited)

Plot No. IV/A-7(P)4, Bokaro Industrial Area, Bulidih, Bokaro Steel City, Bokaro - 827014, Jharkhand, India
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www.dalmiacement.com CIN: U65191TN1996PLC035963

Registered Office: Dalmiapuram, District Tiruchirappalli, Tamil Nadu - 621651, India.
A Dalmia Bharat Group company, www.dalmiabharat.com

ENVIRONMENT STATEMENT
(FORM-V)
Financial Year 2023-2024



**BOKARO CEMENT MANUFACTURING WORKS
(UNIT OF DALMIA CEMENT (BHARAT) LIMITED)**

**Plot No. IV/A-7(P)-4 Bokaro Industrial Area, Balidih,
Bokaro Steel City (827014), Jharkhand, India**

INTRODUCTION

Founded by Mr Jaidayal Dalmia in 1939, Dalmia Cement is one of India's pioneering homegrown cement companies. Headquartered in New Delhi, the company operates as Dalmia Cement (Bharat) Ltd, which is a 100% subsidiary of Dalmia Bharat Ltd and is listed on the National Stock Exchange and the Bombay Stock Exchange.

The company operates a manufacturing capacity of 46.6 MnT per annum (MTPA), across 15 cement plants and grinding units which are spread across 10 states. With over 38,000 dealers and sub-dealers, the company presently services more than 22 states and is among the leading players in every region where it is present in. To scale the business as well as venture into new geographies, both, acquisitions and greenfield expansions have been key for the company. Dalmia Cement is the only company with at least one plant in each of the four key eastern states of West Bengal, Bihar, Jharkhand and Odisha.

The company offers a range of cement variants through its brand portfolio of three marquee brands: Dalmia Cement, Dalmia DSP and Konark Cement. These brands are available as Portland Pozzolana Cement, Portland Slag Cement, Composite Cement and Ordinary Portland Cement in select markets. Dalmia Cement is India's largest manufacturer of slag cement and is a category leader in super-speciality cement used for oil wells, railway sleepers, and airstrips. Dalmia Cement works with engineers and technocrats around the country to develop a wide variety of customised cement which is manufactured for specific engineering and construction needs.

For nearly eight decades, Dalmia Cement has delivered value-added products and reliable post-sale services. It has played a catalytic role in India's infrastructural growth.

As a prominent Indian cement manufacturer and thought leader, Dalmia Cement continues to aspire to enhance value in a sustainable way for all its stakeholders. Dalmia Cement is 14 times water positive and will be 20 times water positive by 2025. The company's commitment towards environmental protection reflects in its achievements. The company has the lowest carbon footprint in the cement world globally. It has also been ranked No. 1 in the global cement manufacturing sector by the Carbon Disclosure Project (CDP) for business readiness of lowest carbon transition.

Bokaro Cement (Bharat) Limited (A Unit of Dalmia Cement Bharat Limited), situated in Bokaro Industrial Area, Balidih, Bokaro, Jharkhand. The unit has obtained Environment Clearance, CTE & CTO for manufacturing of 3.1 MTPA for the manufacturing of Cement PSC/PCC/PPC. The unit is spread over an area of 6.374 Hectare (15.75 Acre) land under Bokaro Industrial Area Development Authority (BIADA).

“FORM – V”

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING WITH
31st MARCH 2024**

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry operation or Process	Priya Ranjan (Unit Head) Bokaro Cement Manufacturing Works. (Unit of Dalmia Cement (Bharat) Limited) Plot No. IV/A-7(P)-4, Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India.
(II)	Industry Category Primary (STC CODE) Secondary (SIC CODE)	Cement Grinding Unit, (Red Category)
(III)	Production Capacity	3.1 Million Tons Per Annum
(IV)	Year of Establishment	2023
(V)	Date of last Environmental Statement Submitted	18.09.2023

PART – B

Water & Raw Material Consumption

A. Water

(i) Water Consumption (M³/day):

Process & Cooling	-	24
Domestic	-	14

(ii) Consumption per unit of production:

Name of the Product	Cooling Water Consumption per unit of Product Output	
	During the Previous Financial Year (2022-23)	During the Current Financial Year (2023-24)
	Plant was under construction	0.013

B. Raw Material Consumption

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output (MT/MT CEMENT)			
		During the Previous Financial Year (2022-23)		During the Current Financial Year (2023-24)	
	-			PSC	PCC
Solid Fuel (coal)	Cement PSC/PCC/ PPC	Plant was under construction		0.02	0.02
Clinker				0.37	0.42
Gypsum				0.02	0.02
Slag				0.61	0.31
Fly Ash				0.00	0.23

Total Production

Production	During the Previous Financial Year (MT) (2022-23)	During the Current Financial Year (MT) (2023-24)	Remarks
Cement (PSC/CC/PPC)	Plant was under construction phase	PSC - 475521 MT PCC – 318835 MT	Total Cement Production: (2023-24) 794356 MT

PART - C**Pollutant Discharged To Environment / Unit of Output**

(Parameters as specified in the consent issued)

S. No.	Pollutants	Quantity of Pollutants Discharged (Mass / day)	Concentrations of Pollutants in discharged (Mass / Volume)	Percentage of variation from prescribed standard with reasons
(a)	Water			
(i)	Domestic	Zero Discharge	-	-
(ii)	Industrial	Zero Discharge	-	-
(b)	Air			
	Stack Emission	Tone /Day	mg/Nm ³	%
	Cement Mill (Bag House Outlet)	0.18	13.1	-56%

PART-D

(As specified under Hazardous waste / Management and Handling rules, 1989 as Amended -2008)

Hazardous Waste		Total Quantity (KL)	
		During the Previous Financial Year (2022-23)	During the Current Financial Year (2023-24)
(a)	From Process (Used Oil-5.1 category)	Plant was under construction phase	Nil
(b)	From Pollution Control Facilities	Plant was under construction phase	Nil

PART – E

Solid Wastes

Solid Waste		Total Quantity	
		During the Previous Financial Year (2022-23)	During the Current Financial Year (2023-24)
(a)	From Process	Nil	No solid waste is generated from the cement grinding process.
(b)	From Pollution Control Equipment's	Nil	1. Dust collected in Bag filters is recycled back into the system. 2. Dust collected in main Bag House of Cement mill is the product (cement) only and being transported to Cement Silo through closed circuit consisting of Air slides and Bucket elevator.

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES

Hazardous Waste: Bokaro Cement Manufacturing Works A unit of Dalmia Cement (Bharat) Limited is based on Dry Process Cement Manufacturing process. No Hazardous wastes will be generated during process except used Lubricating and Hydraulic Oil. This Used oil will be collected in empty barrels/drums and kept in Hazardous Waste store room for its further disposal to the authorized recycler as per Hazardous Waste (Management, Handling & Transboundary Movement) Rule, 2008.

Solid Waste:

There is no Solid waste will be generated in our cement manufacturing process.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

Bokaro Cement manufacturing Works Unit of Dalmia Cement Bharat Limited is a Cement Grinding Unit based on cost effective and environmentally clean technology.

- We are conserving natural resources by utilizing solid wastes from other industries in our cement making process. For cement manufacturing, we are utilizing slag as one of the raw materials which is one of the solid wastes generate from steel plant by Bokaro Steel Limited (BSL). We have consumed 417230 MT of slag, fly ash consumed 84751 MT which is waste material of power plant & 4064.68 MT chemical gypsum consumed which is waste material of fertilizer industry in our cement making process in the year of 2023-2024.
- Rain water harvesting system implemented in our plant. We have also renovated wells near surrounding village area for the water conservation.
- 15 KLD STP constructed and maintained for the treatment of domestic waste water. treated water is being used in dust suppression and greenbelt development.
- We have the highly efficient Air Pollution Control Devices to bring down the point source emission as per the prescribed standard below 30 mg/Nm³. All our APCS devices are designed to restrict particulate matter emission level within CPCB norms. They have been installed at circuit of the production line and various material transfer points to clean the process and arrest the fugitive emissions. The particulate matter collected in the pollution control equipment's is recycled in process, reducing the cost of operation of pollution control equipment's.

LIST OF MAJOR AIR POLLUTION CONTROL DEVICES

BOKARO CEMENT MANUFACTURING WORKS, (A unit of DALMIA CEMENT BHARAT LIMITED)

LIST OF POLLUTION CONTROL EQUIPMENTS

S. No.	Location	Description	Application	Design dust Emission (mg/Nm3)	Volume of bag filter (m3/h)	Fan Volume	Outlet dust Emission (mg/Nm3)
Bag House							
1.	Cement Mill Venting	Bag House 563BF4	Cement	10	1030000	1150000	≤ 30
LIST of Nuisance Dust Collectors							
1	TT-1 492 BF1	Belt conveyor from WT to clinker silo new & existing (492 BC1) at TT-1/Clinker	Clinker	10	10000	11500	≤ 30
2	TT-2 492 BF2	Belt conveyor 492BC1 discharging to 492BC2 & BC4 at TT-2/Clinker	Clinker	10	10000	11500	≤ 30
3	TT-3 492BF4	Bag filter 492 BF3 for conveyor 492BC3 discharging to 492 BC4	Clinker	10	10000	11500	≤ 30
4	492BF5	492 BC3 discharge and clinker silo top/ Clinker	Clinker	10	15000	17250	≤ 30
5	TT-4 512BF1	Belt conveyor 512BC1 discharge to 512BC3 at TT-4/ Clinker	Clinker	10	12500	14375	≤ 30
6	TT-5	Belt conveyor 512BC2 discharge to 512BC3 at TT-5/ Clinker	Clinker	10	10000	11500	≤ 30
7	TT-6 512 BF3	Belt conveyor 512BC3 discharge to 512BC4 at TT-6/ Clinker	Clinker	10	7500	8625	≤ 30
8	512 BF4	Belt conveyor 512BC4 discharge to 512BE1 at TT-3 bottom/ Clinker	Clinker	10	5000	5750	≤ 30
9	CMH Top 533 BF1	Cement mill hopper top/ Clinker & Gypsum	Clinker & Gypsum	10	10000	11500	≤ 30
10	533 BF3	CMH extraction	Clinker & Gypsum	10	15000	17250	≤ 30
11	533 BF2	Mill feed conveyor	Clinker & Gypsum	10	10000	11500	≤ 30
12	563 BF1	Cement Mill BE feed/ Reject Material	Cement	10	12500	14375	≤ 30

**BOKARO CEMENT MANUFACTURING WORKS,
(A unit of DALMIA CEMENT BHARAT LIMITED)**

LIST OF POLLUTION CONTROL EQUIPMENTS

S. No.	Location	Description	Application	Design dust Emission (mg/Nm ³)	Volume of bag filter (m ³ /h)	Fan Volume	Outlet dust Emission (mg/Nm ³)
13	563 BF2	Cement Mill BE Top/ Reject Material	Cement	10	10000	11500	≤ 30
14	563 BF3	Cement Mill reject BC/ Reject Material	Cement	10	10000	11500	≤ 30
15	594 BF1	Baghouse Extraction/ Cement	Cement	10	5000	5750	≤ 30
16	594 BF2	Baghouse Extraction/ Cement	Cement	10	5000	5750	≤ 30
17	BRU K12BF1	K12 BF1 for BRU 1 & 2 (With pneumatic dampers)	Coal	10	30000	34500	≤ 30
18	TT9 K12 BF2	K12 BF2 for TT9 (Coal Handling)	Coal	10	12500	14375	≤ 30
19	FBC Hopper K12 BF3	K12 BF3 for FBC (Coal Handling)	Coal	10	7500	8625	≤ 30
20	492 BF3	492 BF3 (492BC2 to 492BC3) TT14	Clinker	10	10000	11500	≤ 30
21	232BF2	Air slide venting	Fly ash	10	4000	4600	≤ 30
22	614BF1	Cement silo cone	Cement	10	4000	4600	≤ 30
23	613BF1,	Cement silo cone	Cement	10	4000	4600	≤ 30
24	595BF1	Cement silo top	Cement	10	7500	8625	≤ 30
25	594BF3	Cement silo top	Cement	10	7500	8625	≤ 30
26	613BF2	Airslide venting	Cement	10	5000	5750	≤ 30
27	613BF3	Airslide venting	Cement	10	6000	6900	≤ 30
28	646BF1	Packing Plant	Cement	10	15000	17250	≤ 30
29	647BF1	Packing Plant	Cement	10	15000	17250	≤ 30
30	646BF2	Packing Plant	Cement	10	35000	40250	≤ 30

**BOKARO CEMENT MANUFACTURING WORKS,
(A unit of DALMIA CEMENT BHARAT LIMITED)**

LIST OF POLLUTION CONTROL EQUIPMENTS

S. No.	Location	Description	Application	Design dust Emission (mg/Nm3)	Volume of bag filter (m3/h)	Fan Volume	Outlet dust Emission (mg/Nm3)
31	647BF2	Packing Plant	Cement	10	35000	40250	≤ 30

PART-H

ADDITIONAL MEASURES/INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION

1. Extensive plantation in and around the plant

We have accrued total 15.75 Acre lands. In which, we have been developed 33 % of green belt area of total land i.e. 5.2 Acres. Tree plantation is an integral part to the environment management plan at DCBL. The plantation drive is being carried out throughout the year.

YEAR WISE TREE PLANTATION DETAILS GIVEN AS FOLLOWS

SL. No	Year	Number of plants	Area (in Acres)
1	1st (2022-2023)	600	0.5
2	2 nd (2023-2024)	700	0.6

S.N	Year	Name of Species tree planted
1	2022-2023	Neem, Mihigini, shisham, Ashoka, Teak,
2	2023-2024	Neem, Mihigini, shisham, Ashoka, Teak, Palm

2. Control of Fugitive dust emission

Following measures have been taken for the control fugitive dust emission of in Bokaro Cement Manufacturing Works Unit of Dalmia Cement (Bharat) Limited: -

a. Raw material storage

Clinker: Clinker is being stored in a closed RCC silo for which closed transportation system to take clinker into the silo has been made.

Gypsum: Stored in covered shed

Coal: Stored in covered shed

Slag: Stored in covered shed

Covered Hood on Belt conveyor system

The Belt conveyor system has been arranged for transportation of Slag (Raw material) directly from Bokaro Steel Plant to our Plant. It is covered throughout the length with GI hood. Similarly, all the belt conveyors within the plant are also covered with local hoods.

b. Regular Water sprinkling

Regular sprinkling of water is being carried out at all places where raw materials are handled inside the plant with the help of water tankers. water spray tanker sprinklers are installed in vacant non-concreted areas.

c. Wagon Tippler

Large size of bag filter with capacity 200000 m³/hr. Installed at wagon tippler for minimizes fugitive dust generation from unloading the Clinker/Gypsum from wagon.

d. Scheduled maintenance and monitoring of Pollution Control Devices

All Pollution Control Devices are being maintained as per scheduled maintenance by dedicated environmental management team which comprises of mechanical, electrical and environment engineers. Monitoring of all these devices are done regularly as per JSPCB Norms.

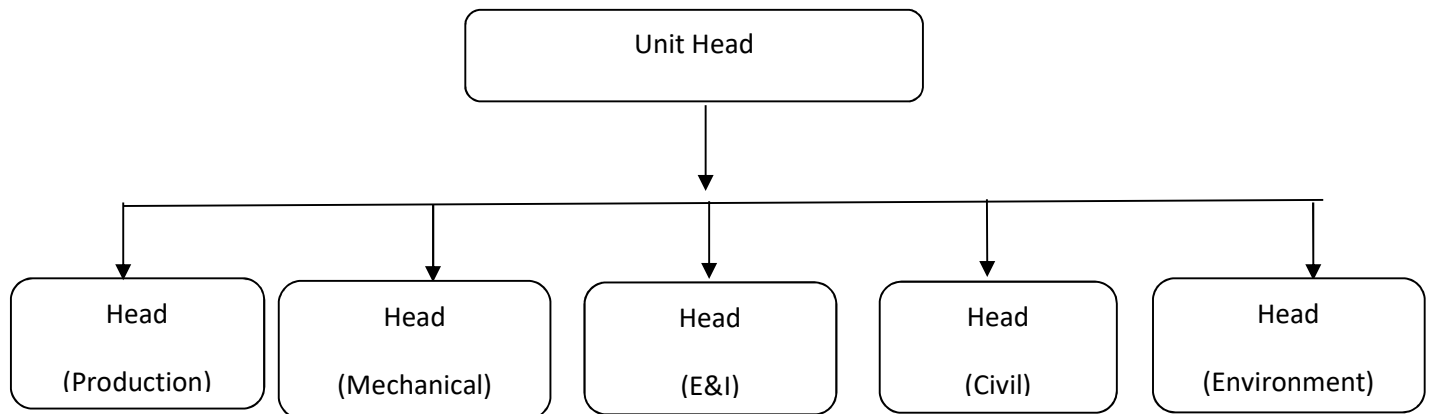
e. Roads and work place areas are fully concreted. all areas cleaned by vacuum road swapping machine

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

Bokaro Cement Manufacturing Work (Unit of Dalmia Cement (Bharat) Limited), Bokaro having Environmental Management Cell which is controlled by Unit Head by adequate team of technically qualified personnel apart from the operative staff of skilled, semi-skilled, unskilled and other categories for fulfil the following objectives:

ENVIRONMENT MANAGMENT CELL ORGANIZATION CHART



1. Preparation & submission of fresh consent application, Hazardous waste authorization application, and renewal of all consent.
2. Timely submission of Statutory reports (Monthly, half-yearly and annually to JSPCB, CPCB, MoEF.
3. Ambient air quality monitoring (PM₁₀, PM_{2.5}, and fugitive emission in Cement Plant.
4. Measurement of both work place & ambient noise level in various locations in plant.
5. Assessments of water consumption Industrial and Domestic.
6. Keeping Plant clean through Housekeeping initiatives.
7. Performance evaluation of air pollution control system.

The Environment management cell is responsible for pollution monitoring activities in DCBL Bokaro. Ambient air quality monitoring, Stack monitoring, water and effluent quality checking, and checking of noise level in plant, following pollution monitoring equipment are available in Environment cell.

DCBL Environment Monitoring Equipment's Details

S. N.	Name of Equipment's	No. of Equipments
A.	Ambient Air Quality Monitoring	
1.	Respirable Dust Sampler (RDS) PM-10	04
2.	Respirable Dust Sampler PM10-2.5	04
3..	Portable DG Sets	01
4.	Continuous Ambient Air Monitoring System (CAAQMS)	01
B.	Stack Monitoring	
5.	Stack Monitoring Kit	01
6	Continuous Stack Emission System (CEMS)	01
C.	Workplace Monitoring	
8.	Sound Level Meter	01
9.	Personal Sampler APM 800	01
D.	Water Quality Monitoring	
10.	Spectrophotometer-Model DR/2700 (Hach-USA)	01
11.	Turbidity Meter	01
E.	Others	
12.	Hot Air Oven	01

In case the monitoring result of environment pollution found to exceed the allowable limits, the Environmental cell will suggest remedial action and get these suggestions implemented through the concerned authorities.

The Environmental Management cell will also co-ordinate all the related activities such as checking of performance of pollution control equipment installed in plant, Sewage treatment plant, and green belt development in DCBL Bokaro.

Significant energy saving & other measures implemented

- (i) 2.nos Electric vehicle purchased for plant internal transportation work.
- (ii) Installed solar light and LED Lamps in street light replacing with CFL lamps
- (iii) Replacement of conventional lights with LED to save energy.
- (iv) Road swapping machine provided for cleaning of roads and other concreated area.

- (v) Top soils conservation during excavation and utilized the soil for nursery development and tree plantation.
- (vi) Regular maintenance of vehicles to control of vehicles emission & noise.
- (vii) Acoustic enclosures are provided at noise generating area to control of noise pollution
- (viii) Use of personal protective Equipment: All employees are provided with personal protective Equipment's (PPEs), as per the requirement, such as workers working in plant area are provided with dust masks and in noise pollution areas with Ear plugs/Ear muff, safety boots gloves welding goggles, Goggles and safety helmet are also being provided as per the requirement.

ENVIRONMENT MONITORING REPORTS FOR THE YEAR 2023-2024
AMBIENT AIR QUALITY MONITORING REPORT

BOKARO CEMENT MANUFACTURING WORKS
UNIT OF DALMIA CEMENT (BHARAT) LIMITED, BOKARO

Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India

Ambient Air quality monitoring report (2023-24)

Near Project office

Date	PM-10 µg/m3	PM-2.5 µg/m3	SO2 µg/m3	NO2 µg/m3
23.06.2023	61.3	27.4	14.14	26.24
15.09.2023	57.4	23.3	9.8	19.6
05.01.2024	59.7	25.7	10.5	21.4
07.03.2024	53.1	29.4	11.1	24.9
Min.	53.1	25.7	9.8	19.6
Max.	61.3	29.4	14.1	26.2
Avg.	57.9	27.5	11.4	23.0

Khutri village

Date	PM-10 µg/m3	PM-2.5 µg/m3	SO2 µg/m3	NO2 µg/m3
23.06.2023	55.7	38.5	17.9	32.8
15.09.2023	54.9	31.4	8.6	22.0
05.01.2024	50.7	28.8	12.3	23.7
07.03.2024	52.1	25.4	11.3	25.4
Min.	50.7	25.4	8.6	22.0
Max.	55.7	38.5	17.9	32.8
Avg.	53.4	31.0	12.5	26.0

BOKARO CEMENT MANUFACTURING WORKS
UNIT OF DALMIA CEMENT (BHARAT) LIMITED, BOKARO

Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India

Ambient Air quality monitoring report (2023-24)

Thakurtand Village				
Date	PM-10 µg/m3	PM-2.5 µg/m3	SO2 µg/m3	NO2 µg/m3
23.06.2023	55.8	29.3	21.7	28.9
15.09.2023	54.1	19.5	12.3	21.0
05.01.2024	51.4	20.7	13.5	23.7
07.03.2024	56.8	22.9	15.2	29.8
Min.	51.4	19.5	12.3	21.0
Max.	56.8	29.3	21.7	29.8
Avg.	54.5	23.1	15.7	25.8

Gorabali Near Temple				
Date	PM-10 µg/m3	PM-2.5 µg/m3	SO2 µg/m3	NO2 µg/m3
23.06.2023	53.7	34.4	16.8	27.8
15.09.2023	50.2	22.6	8.2	19
05.01.2024	57.6	23.7	10.7	16.4
07.03.2024	55.7	24.2	12.4	24.3
Min.	50.2	22.6	8.2	16.4
Max.	57.6	34.4	16.8	27.8
Avg.	54.3	26.2	12.0	21.8

STACK EMISSION REPORT FOR THE YEAR 2023-24

BCMW DALMIA CEMENT (BHARAT) LIMITED (Unit OF Dalmia Cement (Bharat) Limited)				
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India				
Stack Emission report (2023-24) (Manual)				
Month	Min.	Max.	Avg.	JSPCB Norms
	mg/Nm ³	mg/Nm ³	mg/Nm ³	mg/Nm ³
May-23	11.3	22.7	17.7	30 mg/Nm ³
Jun-23	9.3	19.4	14.0	
Jul-23	8.2	14.5	11.1	
Aug-23	6.7	13.3	9.5	
Sep-23	8.7	16.9	12.1	
Oct-23	10.2	17.9	13.6	
Nov-23	16.7	18.9	17.7	
Dec-23	8.1	15.8	12.6	
Jan-24	6.3	14.6	11.3	
Feb-24	8.7	14.9	10.8	
Mar-24	10.4	15.7	12.5	
	6.3	22.8	13.0	

DALMIA CEMENT (BHARAT) LIMITED, BOKARO				
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India				
Online CEMS Stack emission report (2023-24)				
Month	Min.	Max.	Avg.	JSPCB Norms
	mg/Nm ³	mg/Nm ³	mg/Nm ³	mg/Nm ³
Aug-23	5.6	23.7	8.7	30 mg/Nm ³
Sep-23	7.4	21.6	14.3	
Oct-23	8.7	24.6	5.9	
Nov-23	5.9	27.5	6.1	
Dec-23	6.6	22.7	12.0	
Jan-24	7.9	19.3	7.9	
Feb-24	6.8	21.6	8.7	
Mar-24	8.3	26.7	8.5	
	5.6	27.5	9.0	

NOISE LEVEL REPORT 2023-24

BOKARO CEMENT MANUFACTURING WORKS UNIT OF DALMIA CEMENT (BHARAT)LIMITED						
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India						
Noise Level report for the year 2023-24: Near Project Office						
	Day Time dB(A)			Night Time dB(A)		
Month	Min.	Max.	Avg.	Min.	Max.	Avg.
Apr-23	54.6	60.7	57.7	47.7	53.1	50.4
May-23	58.6	64.3	61.5	48.3	56.7	52.5
Jun-23	57.7	61.2	59.5	50.4	58.5	54.5
Jul-23	60.4	68.3	64.4	51.2	60.7	56.0
Aug-23	59.7	64.9	62.3	46.8	57.4	52.1
Sep-23	61.8	67.9	64.9	52.7	61.8	57.3
Oct-23	56.8	62.6	59.7	42.9	53.7	48.3
Nov-23	55.1	66.4	60.8	45.6	54.4	50.0
Dec-23	53.9	59.7	56.8	49.8	66.9	58.4
Jan-24	61.5	67.8	64.7	54.6	64.2	59.4
Feb-24	59.4	65.5	62.5	55.7	61.7	58.7
Mar-24	63.2	69.9	66.6	53.4	60.8	57.1
	61.7			54.5		
JSPCB NORMS	DAY TIME dB(A)	75		NIGHT TIME dB(A)	70	

BOKARO CEMENT MANUFACTURING WORKS UNIT OF DALMIA CEMENT BHARAT LIMITED						
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India						
Noise Level report for the year 2023-24 : Khutri Village						
	Day Time dB(A)			Night Time dB(A)		
Month	Min.	Max.	Avg.	Min.	Max.	Avg.
Apr-23	40.7	50.6	45.7	37.9	45.1	41.5
May-23	41.9	51.4	46.7	38.7	46.9	42.8
Jun-23	43.6	52.7	48.2	41.6	45.1	43.4
Jul-23	39.7	48.4	44.1	40.9	44.7	42.8
Aug-23	42.8	50.9	46.9	37.8	41.9	39.9
Sep-23	38.7	46.8	42.8	36.2	44.7	40.5
Oct-23	36.9	45.7	41.3	41.6	42.4	42.0
Nov-23	40.8	49.8	45.3	42.4	43.8	43.1
Dec-23	34.9	42.4	38.7	35.6	47.4	41.5
Jan-24	37.1	44.1	40.6	41.5	44.6	43.1
Feb-24	39.5	48.3	43.9	37.1	46.7	41.9
Mar-24	42.9	53.8	48.4	38.8	47.3	43.1
	44.4			42.1		
JSPCB NORMS	DAY TIME dB(A)	55		NIGHT TIME dB(A)	45	

BOKARO CEMENT MANUFACTURING WORKS UNIT OF DALMIA CEMENT (BHARAT)LIMITED						
Noise Level report for the Year 2023-24 : Gorabali Village						
	Day Time dB(A)			Night Time dB(A)		
Month	Min	Max	Avg.	Min	Max	Avg
Apr-23	37.4	44.7	41.1	30.4	41.2	35.8
May-23	39.6	47.2	43.4	36.7	49.4	43.1
Jun-23	41.3	48.1	44.7	32.6	48.3	40.5
Jul-23	39.7	44.5	42.1	39.3	46.5	42.9
Aug-23	40.2	45.9	43.1	41.1	47.9	44.5
Sep-23	39.1	44.8	42.0	33.6	42.5	38.1
Oct-23	42.4	46.7	44.6	37.8	43.6	40.7
Nov-23	41.5	43.3	42.4	35.3	46.8	41.1
Dec-23	39.7	45.4	42.6	32.4	45.2	38.8
Jan-24	39.8	43.2	41.5	38.6	48.7	43.7
Feb-24	37.7	44.9	41.3	31.1	43.4	37.3
Mar-24	40.6	45.8	43.2	32.8	41.9	37.4
	42.6			40.3		
JSPCB NORMS	DAY TIME dB(A)		55	NIGHT TIME dB(A)		45

BOKARO CEMENT MANUFACTURING WORKS UNIT OF DALMIA CEMENT (BHARAT)LIMITED						
Noise Level report: Thakurtand Village						
	Day Time dB(A)			Night Time dB(A)		
Month	Min	Max	Avg	Min	Max	Avg
Apr-23	41.4	45.1	43.3	36.7	39.4	38.1
May-23	34.7	47.7	41.2	34.8	40.7	37.8
Jun-23	39.5	48.9	44.2	33.4	36.2	34.8
Jul-23	37.2	46.8	42	29.3	35.4	32.4
Aug-23	34.5	44.9	39.7	35.9	38.5	37.2
Sep-23	36.1	43.8	40.0	31.6	34.8	33.2
Oct-23	38.4	44.7	41.6	26.5	37.6	32.1
Nov-23	30.9	41.5	36.2	30.2	42.3	36.3
Dec-23	33.6	48.2	40.9	34.3	40.9	37.6
Jan-24	35.3	49.1	42.2	35.8	41.4	38.6
Feb-24	39.0	42.5	40.8	38.5	40.9	39.7
Mar-24	37.1	46.7	41.9	33.7	40.5	37.1
	41.2			36.2		
JSPCB NORMS	DAY TIME dB(A)		55	NIGHT TIME dB(A)		45

FUGITIVE DUST EMISSION MONITORING REPORT 2023-24

BOKARO CEMENT MANUFACTURING WORKS

UNIT OF DALMIA CEMENT (BHARAT) LIMITED, BOKARO

Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India

Fugitive emission monitoring report (2023-24)

Location	Near Mill Area	Near Packing Loading Area	Near Truck Parking Area	Near Clinker Silo
Date	µg/m3	µg/m3	µg/m3	µg/m3
23.06.2023	854.15	845.71	582.6	790.7
15.09.2023	728.1	673.6	956.5	734.1
05.01.2024	540.6	649.7	643.2	696.6
07.03.2024	591.4	681.2	734.6	708.3
Min.	540.6	649.7	582.6	696.6
Max.	854.2	845.7	956.5	790.7
Avg.	678.6	712.6	729.2	732.4

Ground Water level report for the year 2023-24

DALMIA CEMENT BHARAT LIMITED, BOKARO

Ground Water level monitoring report for the year 2023-24

Sr.no	Village Location	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
	Unit		Depth of ground water level in feet										
1	Pakhriatand (Near Anganwadi)	23'8"	24'5"	24'9"	26'3"	23'4"	11'5"	13'9"	14'5"	19'8"	21'7"	21'4"	20'1"
2	Tupkadih (Near Electric pole)	19'9"	20'7"	21'0"	22'6"	20'9"	11'7"	12'0"	12'7"	16'9"	19'6"	17'2"	15'7"
3	Godawali (Near Temple)	10'5"	11'2"	11'9"	12'4"	9'7"	3'7"	3'6"	3'9"	6'3"	8'3"	7'8"	6'5"
4	Bhutkuru (Near Primary school)	20'1"	20'7"	20'8"	20'3"	19'8"	11'5"	13'1"	14'3"	17'1"	18'1"	19'5"	17'8"

STP Treated water analysis report for the year 2023-24

BOKARO CEMENT MANUFACTURING WORKS (UNIT OF DALMIA CEMENT (BHARAT) LIMITED) BOKARO										
STP Treated water analysis report for the year 2023-24										
Sr.no	Parameter	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Yearly Avg.	JSPCB Norms
1	PH	7.21	7.3	7.4	7.5	7.3	7.2	7.30	7.32	5.5-9.0
2	Total Suspended solid (mg/lit.)	18	19	21	17	20	36	35.0	23.7	100 mg/L
3	COD (mg/lit.)	32	34	36	38	35	10	37.0	31.5	250 mg/L
4	BOD (mg/lit.)	BDL	BDL	BDL	BDL	BDL	BDL	4.50	4.5	30 mg/L
5	Oil &Grease (mg/lit)	7.2	7.5	7.7	7.4	7.2	BDL	BDL	7.4	10 mg/L