

DCBL/ENV-ES/22-23/01

Date: 18.09.2023

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 Occupational Health Center (Dispensary) of Dalmia Cement Bharat Limited for the financial year ending the 31<sup>st</sup> March'2023**

Dear Sir,

\* We are submitting herewith Environment Statement Report (Form-V) of Occupational Health Center (Dispensary) of Dalmia Cement (Bharat) Limited, Bokaro, Jharkhand for the period of financial year April' 2022 – March'2023 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



# ENVIRONMENT STATEMENT (FORM-V) Financial Year 2022-2023

**OCCUPATIONAL HEALTH CENTER (DISPENSARY)**

**DALMIA CEMENT (BHARAT) LIMITED**

(Formerly known as Bokaro Jaypee Cement Limited)

Plot No. IV/A-7(P) 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 43.7 MnT per annum (MTPA), across 15 cement plants and grinding units which are spread across 10 states. With over 33,000 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 13.3 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.

**Dalmia Cement Bharat Limited (DCBL)**, situated in Bokaro Industrial Area, Balidih, Bokaro, Jharkhand. The unit has obtained Environment Clearance, CTE & CTO for manufacturing of 4.5 MTPA for the manufacturing of PSC/PCC/PPC cement. The unit is spread over an area of 26.71 Hectare (66 Acre) land under Bokaro Industrial Area Development Authority (BIADA).

**“FORM – V”**

**(See rule 14)**

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING WITH  
31<sup>st</sup> MARCH 2023**

**PART – A**

(I)	Name & Address of the Owner / Occupier of the Industry operation or Process	<b>Priya Ranjan</b> <b>Unit Head</b> Dalmia Cement (Bharat) Limited (Formerly known as Bokaro Jaypee Cement Limited) Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India.  <b>Dr. Santosh Kumar</b> <b>Medical Officer</b> Occupational Health Center (Dispensary) Dalmia Cement (Bharat) Limited (Formerly known as Bokaro Jaypee Cement Limited) Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India.
(II)	Industry Category Primary ( STC CODE ) Secondary ( SIC CODE )	Not applicable
(III)	Production Capacity	2 Beds
(IV)	Year of Establishment	2011
(V)	Date of last Environmental Statement Submitted	20.09.2022

**PART – B**

**Water & Raw Material Consumption**

**A. Water**

(i) Water Consumption (M<sup>3</sup>/day):

	<b>Water Consumed in 2021-22</b>	<b>Water Consumed in 2022-23</b>
Process	Not Applicable	Not Applicable
Industrial	Not Applicable	Not Applicable
Domestic	Not Applicable	Not Applicable

Domestic water consumption of OHC added in DCBL Domestic water consumption.

Consumption per unit of production

Name of the Product	Water Consumption per unit of Product Output	
	During the Previous Financial Year (2021-22)	During the Current Financial Year (2022-23)
NA	NA	NA

#### B. Raw Material Consumption (Medicine 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 (2021-22) Rupees	During the Current Financial Year Rupees (2022-23)
Medicine Consumption	Patients treated	306602	544154

### 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)	<b>Water</b>			
(i)	<b>Domestic</b>	Zero Discharge	-	-
(ii)	<b>Industrial</b>	Zero Discharge	-	-
(b)	<b>Air: AAQM monitoring report attached</b>			
	<b>Stack Emission</b>			

#### **PART-D**

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

<b>Hazardous Waste</b>		<b>Total Quantity (KL)</b>	
		<b>During the Previous Financial Year (2021-22)</b>	<b>During the Current Financial Year (2022-23)</b>
(a)	From Process (Used Oil-5.1 category)	NA	NA
(b)	From Pollution Control Facilities	NA	NA

#### **PART – E**

##### **Solid Wastes**

<b>Solid Waste</b>		<b>Total Quantity</b>	
		<b>During the Previous Financial Year (2021-22)</b>	<b>During the Current Financial Year (2022-23)</b>
(a)	Bio- Medical Waste	1.75 Kg	2.25

Bio- Medical Waste generated in our OHC (dispensary) disposed through authorized vendor from JSPCB .M/s Bio-Genetics Laboratory PVT.LTD Dhanbad

#### **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**

The waste generated from OHC Dispensary are stored in color coded bin and disposed off as per the BMW rules 2016. All the Bio Medical Waste generated in our dispensary (OHC) Disposed through authorized vendor of JSPCB .M/s Bio-Genetics Laboratory PVT.LTD Dhanbad

## **PART-G**

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

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

- We are conserving our Natural resources by utilizing solid wastes of 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 in steel making process by Bokaro Steel Limited (BSL).
- Rain water harvesting system implemented in our plant and colony area to conserve rain water .We have also renovated wells near surrounding village for the water conservation .
- 100 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/Nm<sup>3</sup>. 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.

## **PART-H**

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

We have accrued total 69.19 Acre lands. In which, we have been developed 33 % of green belt area of total land i.e. 22.83 Acres. Tree plantation is an integral part to the environment management plan at DCBL. The plantation drive is being carried out throughout the year. We

planted 24889 no. of trees till now, at the survival rate of around 90%. The plantation details are as under-

Total greenbelt development area is 23.25 acres (more than 33 %) of total land 69.19 Acres to improve the aesthetic value and to arrest dust and also to mitigate noise pollution.

**YEAR WISE TREE PLANTATION DETAILS GIVEN AS FOLLOWS**

SL. No	Year	Number of plants	Area (in Acres)
1	1st (2011-2012)	5000	5
2	2nd (2012-2013)	2030	4
3	3rd (2013-2014)	2820	3
4	4th (2014-2015)	7620	5
5	5th (2015-2016)	5100	4
6	6th (2016-2017)	1500	1
7	7th (2017-2018)	500	0.55
8	8th (2018-2019)	69	0.3
9	9th (2019-2020)	100	0.4
10	10th (2020-2021)	150	Plantation done in the place of dead tree and near water reservoir vacant place.
11	11th (2021-2022)	500	
12	12 <sup>th</sup> (2022-2023)	350	
	<b>Total</b>	<b>25739</b>	<b>23.25</b>



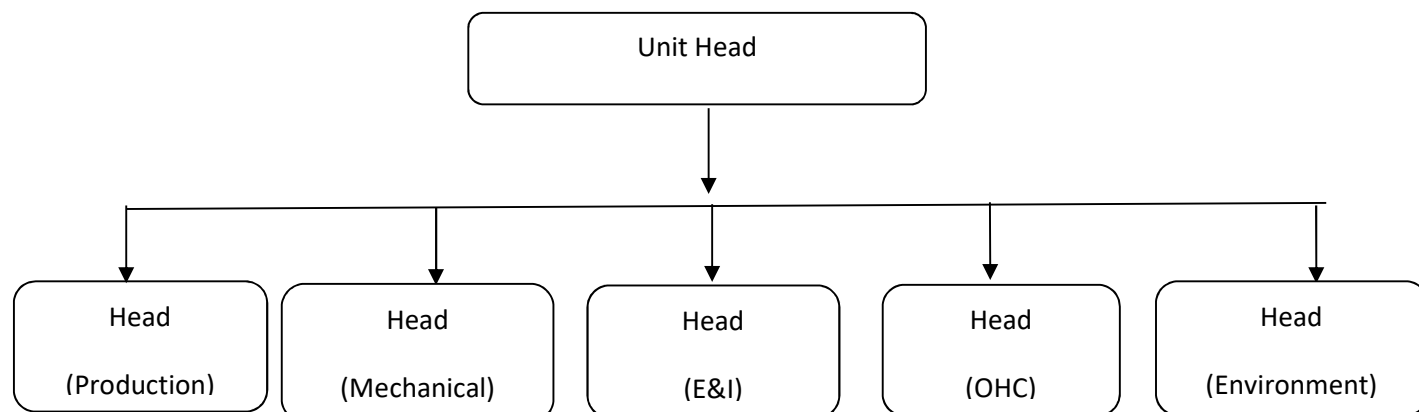
S.N	Year	Name of Species tree planted
1	2011-2012	Gulmohar,Amaltash,Neem,Mihigini,shisham,Ashoka,Teak, Mango,Amala, Shiv Babool,Chatni
2	2012-2013	Gulmohar,Amaltash,Neem,Mihigini,shisham,Ashoka,Teak,Mango, Amala
3	2013-2014	Ashoka,Chatni,Gulmohar,Amaltash,Neem,Mihigini, Shisham
4	2014-2015	Ashoka,Chatni,Gulmohar,Amaltash,Neem,Mihigini, Shisham
5	2015-2016	Chatni,Gulmohar,Neem,Mehegani,Shisham,Pipal,Teak,
6	2016-2017	Gulmohar,Chatni,Neem,Guava,Shiv Baboo,Mango,Jamun
7	2017-2018	Chatni,Gulmoha,Amaltash,Neem,shisham,Guava,Pipal
8	2018-2019	Chatni,Gulmohar,Neem,Mihigini,Guava,Mango,Amala,Neem
9	2019-2020	Chatni,Mihigini,Botal Pam,Mango,Amala,Lemon,Jamu
10	2020-2021	Chatni, Mihigini, Botal Pam, Mango, Amala,Lemon,Jamu
11	2021-2022	Chatni,Mihigini,Mango,Jamu
11	2022-2023	Chatni, Mihigini,Mango, Neem ,Gulmohar

### **PART-I**

#### **ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT**

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 (PM<sub>10</sub>, PM<sub>2.5</sub>, 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 Equipments	No. of Equipments
<b>A. Ambient Air Quality Monitoring</b>		
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)	02
<b>B. Stack Monitoring</b>		
5.	Stack Monitoring Kit	01
6	Continuous Stack Emission System (CEMS)	01

<b>C.</b>	<b>Workplace Monitoring</b>	
8.	Sound Level Meter	01
9.	Personal Sampler APM 800	01
<b>D.</b>	<b>Water Quality Monitoring</b>	
10.	Spectrophotometer-Model DR/2700 (Hach-USA)	01
11.	Turbidity Meter	01
<b>E.</b>	<b>Others</b>	
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) Replacement of conventional lights with LED to save energy
- (ii) Installation of LED Lamps in street light fitting by replacing with CFL lamps.
- (iii) Top soils conservation during excavation and utilized the soil for nursery development and tree plantation.
- (iv) Regular maintenance of vehicles to control of vehicles emission & noise.
- (v) Acoustic enclosures are provided at noise generating area to control of noise pollution
- (vi) Periodic medical health checkup of all employees and workers and Health checkup medical record maintained. 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 2022-2023

## AMBIENT AIR QUALITY MONITORING REPORT

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 (2022-23) : Near Time Office												
	SO <sub>2</sub>			NO <sub>x</sub>			PM-10			PM-2.5		
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Apr-22	4.6	7.6	6.1	13.1	16..90	13.1	49.7	54.2	51.95	20.5	28.4	24.45
May-22	5.9	11.3	8.6	15.2	19.5	17.35	52.4	56.9	54.65	22.7	29.9	26.30
Jun-22	7.5	8.3	7.9	10.8	15.3	13.05	49.8	52.4	51.1	19.1	23.5	21.30
Jul-22	4.9	6.5	5.7	10.6	13.8	12.02	43.6	53.3	48.45	16.6	26.8	21.70
Aug-22	5.3	10.9	8.1	12.4	18.4	15.4	45.8	59.4	52.6	18.8	21.9	20.35
Sep-22	3.20	7.5	5.35	10.6	15.6	13.1	42.5	58.8	50.65	17.3	22.2	19.75
Oct-22	6.2	10.6	8.4	13.5	21.9	17.7	47.3	56.7	52.0	20.8	24.9	22.85
Nov-22	5.8	8.2	7.00	15.8	20.4	18.1	49.1	52.1	50.6	21.7	25.8	23.75
Dec-22	4.3	9.5	6.9	12.3	18.7	15.5	51.9	55.8	53.85	22.5	28.9	25.70
Jan-23	5.1	10.1	7.60	14.9	20.8	17.85	52.8	57.7	55.25	24.9	30.4	27.65
Feb-23	6.7	11.6	9.05	16.4	21.2	18.8	48.5	58.1	53.30	23.4	34.7	29.05
Mar-23	7.6	12.9	10.3	18.5	22.2	20.35	52.7	59.1	55.90	19.2	34.5	26.85
	7.57			16.02			52.52			24.14		
JSPCB Norms	SO <sub>2</sub> :80 µg/m <sup>3</sup>			NO <sub>2</sub> :80 µg/m <sup>3</sup>			PM-10 :100 µg/m <sup>3</sup>			PM-2.5 :60 µg/m <sup>3</sup>		

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 (2022-23) : Near FH-3 Building												
	SO <sub>2</sub>			NO <sub>x</sub>			PM-10			PM-2.5		
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Apr-22	3.9	7.5	5.7	11.6	15.3	13.59	48.45	58.4	53.42	15.1	23.9	19.5
May-22	8.4	12.4	10.4	13.1	18.8	15.01	45.7	56.8	50.69	16.7	20.2	18.45
Jun-22	7.8	9.7	8.8	10.4	16.2	13.3	40.42	48.1	44.26	17.8	24.6	21.2
Jul-22	4.3	6.0	5.15	9.7	14.8	12.25	41.7	49.3	44.7	13.2	23.2	18.2
Aug-22	5.9	8.6	7.25	13.2	19.7	16.45	42.3	45.2	43.75	14.62	16.6	15.61
Sep-22	4.6	7.2	5.9	12.5	16.4	14.45	41.2	44.3	42.7	15.8	20.1	16.95
Oct-22	7.4	8.6	8.0	10.3	13.8	12.05	38.52	56.7	47.61	22.36	26.4	24.38
Nov-22	3.9	7.4	5.56	11.6	16.3	13.95	43.5	53.3	48.28	17.4	24.8	21.1
Dec-22	4.6	8.1	6.35	14.8	17.6	16.02	47.2	55.1	50.68	21.5	29.3	25.3
Jan-23	5.8	9.8	7.3	17.4	18.3	17.87	49.3	56.7	53.04	19.9	25.1	22.5
Feb-23	8.7	10.4	9.55	14.9	15.5	15.2	15.65	59.16	52.69	26.4	31.5	28.9
Mar-23	5.4	11.9	8.65	13.7	19.7	16.7	49.5	54.2	51.85	23.0	30.9	27.0
	7.38			14.73			48.63			21.59		
JSPCB Norms	SO <sub>2</sub> :80 µg/m <sup>3</sup>			NO <sub>2</sub> :80 µg/m <sup>3</sup>			PM-10 :100 µg/m <sup>3</sup>			PM-2.5 :60 µg/m <sup>3</sup>		

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 (2022-23) : Near Store												
	SO <sub>2</sub>			NO <sub>x</sub>			PM-10			PM-2.5		
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Apr-22	7.2	9.6	8.4	14.9	17.5	16.2	49.8	56.2	53.0	18.2	26.2	22.2
May-22	5.1	8.4	6.8	17.5	23.6	20.55	53.0	53.1	53.1	19.4	24.9	22.15
Jun-22	4.9	6.5	5.7	15.7	21.7	18.7	42.3	51.3	46.8	17.2	31.4	24.03
Jul-22	3.8	7.9	5.9	14.1	19.8	16.95	46.1	53.9	50.0	20.5	27.90	24.2
Aug-22	5.6	9.7	7.65	10.7	20.1	15.4	49.4	55.6	52.5	22.8	29.8	26.30
Sep-22	4.9	8.8	6.85	14.8	21.8	18.3	44.7	52.4	48.55	19.5	23.7	21.6
Oct-22	6.1	10.7	10.7	13.1	19.3	16.2	52.5	56.8	54.65	18.3	30.8	24.55
Nov-22	4.8	9.2	7.0	15.6	17.9	16.75	46.3	58.7	52.5	23.1	27.2	25.15
Dec-22	6.7	10.1	8.4	13.7	18.0	15.85	50.5	57.9	54.2	26.8	29.6	28.2
Jan-23	5.6	9.5	7.55	14.4	22.6	18.5	51.3	56.3	53.8	20.3	28.9	24.6
Feb-23	4.8	11.3	8.05	15.8	19.8	17.8	49.7	55.5	52.6	25.7	30.5	28.1
Mar-23	6.4	12.8	9.6	10.3	21.7	16.0	50.9	57.1	54.0	23.9	31.2	27.55
	7.71			17.27			52.10			24.88		
JSPCB Norms	SO <sub>2</sub> :80 µg/m <sup>3</sup>			NO <sub>2</sub> :80 µg/m <sup>3</sup>			PM-10 :100 µg/m <sup>3</sup>			PM-2.5 :60 µg/m <sup>3</sup>		

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 (2022-23) : Near Fabrication Yard												
	SO <sub>2</sub>			NO <sub>x</sub>			PM-10			PM-2.5		
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Apr-22	3.8	7.2	5.5	12.9	21.6	17.25	46.5	57.7	52.1	13.5	21.3	17.4
May-22	4.4	9.7	7.05	16.7	22.8	19.75	45.8	55.2	50.5	19.6	28.4	24.0
Jun-22	5.6	8.9	7.25	10.5	14.6	12.55	44.4	53.3	48.85	14.8	25.7	20.3
Jul-22	7.3	9.5	8.4	12.2	15.3	13.75	42.3	57.6	49.95	18.9	24.50	21.7
Aug-22	4.2	10.7	7.45	13.9	17.8	15.85	43.6	49.8	46.7	15.2	23.9	19.55
Sep-22	5.3	13.4	9.35	11.8	15.9	13.85	41.7	50.2	45.95	13.6	16.5	15.05
Oct-22	4.7	7.5	6.1	15.7	22.3	19.0	50.3	58.6	54.45	24.1	30.4	27.25
Nov-22	6.9	11.5	9.2	22.4	25.9	24.15	51.6	50.5	51.05	23.8	26.7	25.25
Dec-22	5.3	7.9	6.6	20.7	24.6	22.7	49.9	56.2	53.05	25.4	29.9	27.65
Jan-23	4.5	9.8	7.15	19.2	26.8	23.0	52.5	52.4	52.45	23.9	28.6	26.25
Feb-23	7.7	11.2	9.45	21.5	24.1	22.80	51.4	58.5	54.95	26.5	35.1	30.8
Mar-23	6.8	12.4	9.6	18.6	23.4	21.0	52.9	59.3	56.1	27.3	35.6	31.45
	7.75			18.80			51.34			23.60		
JSPCB Norms	SO <sub>2</sub> :80 µg/m <sup>3</sup>			NO <sub>2</sub> :80 µg/m <sup>3</sup>			PM-10 :100 µg/m <sup>3</sup>			PM-2.5 :60 µg/m <sup>3</sup>		

## STACK EMISSION REPORT

DALMIA CEMENT (BHARAT) LIMITED,BOKARO				
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih,Bokaro Steel City (827014), Jharkhand, India				
Stack Emission report (2022-23) (Manual)				
Month	Min.	Max.	Avg.	JSPCB Norms
	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
Apr-22	11.4	23.04	17.2	30 mg/Nm <sup>3</sup>
May-22	13.9	18.12	16.0	
Jun-22	15.8	26.78	21.3	
Jul-22	14.5	21.25	17.9	
Aug-22	15.9	23.60	19.8	
Sep-22	17.5	24.81	21.1	
Oct-22	11.2	19.95	15.6	
Nov-22	14.9	25.3	20.1	
Dec-22	16.40	23.45	19.9	
Jan-23	17.80	25.8	21.8	
Feb-23	16.9	27.36	22.1	
Mar-23	18.40	24.27	21.3	
	11.2	27.36	19.5	

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 (2022-23)				
Month	Min.	Max.	Avg.	JSPCB Norms
	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
Apr-22	13.38	26.49	19.93	30 mg/Nm <sup>3</sup>
May-22	7.83	23.96	15.89	
Jun-22	13.7	26	19.85	
Jul-22	11.23	24.69	17.96	
Aug-22	14.67	23.8	19.23	
Sep-22	8.41	24.52	16.46	
Oct-22	15.55	22.17	18.86	
Nov-22	13.04	25.05	19.04	
Dec-22	7.3	24.7	16.0	
Jan-23	12.38	27.15	19.76	
Feb-23	9.57	21.76	15.66	
Mar-23	12.4	24.65	18.52	
	7.3	27.15	17.22	

## NOISE LEVEL REPORT 2022-23

<b>DALMIA CEMENT (BHARAT)LIMITED,BOKARO</b>						
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih,Bokaro Steel City (827014), Jharkhand, India						
Noise Level report for the year 2022-23						
	Near Time Office					
	Day Time dB(A)			Night Time dB(A)		
Month	Min. dB(A)	Max. dB(A)	Avg. dB(A)	Min. dB(A)	Max. dB(A)	Avg. dB(A)
Apr-22	64.2	65	64.6	60.8	63.3	62.05
May-22	65.8	68.5	67.2	61.2	63.6	62.4
Jun-22	63.1	65.3	64.2	60.6	62.7	61.7
Jul-22	60.6	63.7	62.2	57.7	62.3	60.0
Aug-22	61.5	64.3	62.9	61.5	63.7	62.6
Sep-22	60.8	65.6	63.2	58.9	64.8	61.9
Oct-22	62.1	66.4	64.3	56.7	62.4	59.6
Nov-22	63.8	68.3	66.1	53.3	63.1	58.2
Dec-22	62.2	65.4	63.8	55.6	62.6	59.1
Jan-23	60.6	64.7	62.7	56.9	60.4	58.7
Feb-23	62.3	65.8	64.1	58.8	64.6	61.7
Mar-23	61.4	64.5	63.0	55.9	61.0	58.5
JSPCB NORMS	DAY TIME dB(A)		75	NIGHT TIME dB(A)		70

<b>DALMIA CEMENT (BHARAT)LIMITED,BOKARO</b>						
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih,Bokaro Steel City (827014), Jharkhand, India						
Noise Level report for the year 2022-23						
Near FH-3 Building						
Month	Day Time			Night Time		
	Min. dB(A)	Max. dB(A)	Avg. dB(A)	Min. dB(A)	Max. dB(A)	Avg. dB(A)
Apr-22	41.8	45.8	43.8	41.2	44.6	42.9
May-22	42.7	43.1	42.9	42.1	45.4	43.7
Jun-22	43.5	45.8	44.6	40.5	43.5	42.0
Jul-22	42.9	44.4	43.7	42.7	44.8	43.8
Aug-22	41.4	43.7	42.5	41.3	43.7	42.5
Sep-22	43.6	44.8	44.2	42.1	45.2	43.7
Oct-22	40.5	45.6	43.1	40.9	42.8	41.9
Nov-22	42.8	44.2	43.5	41.3	43.6	42.5
Dec-22	41.3	45.7	43.5	40.7	44.1	42.4
Jan-23	42.9	43.1	43.0	42.4	40.8	41.6
Feb-23	43.7	45.5	44.6	40.6	45.6	43.1
Mar-23	40.5	44.9	42.7	39.5	43.2	41.4
JSPCB NORMS	DAY TIME dB(A)		55	NIGHT TIME dB(A)		45

<b>DALMIA CEMENT (BHARAT)LIMITED,BOKARO</b>						
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih,Bokaro Steel City						
<b>Noise Level report for the year 2022-23</b>						
	<b>Near Store</b>					
	<b>Day Time dB(A)</b>			<b>Night Time dB(A)</b>		
<b>Month</b>	<b>Min dB(A)</b>	<b>Max dB(A)</b>	<b>Avg dB(A)</b>	<b>Min dB(A)</b>	<b>Max dB(A)</b>	<b>Avg dB(A)</b>
<b>Apr-22</b>	59.7	66.9	63.3	59.5	63.7	61.6
<b>May-22</b>	63.2	65.3	64.3	60.23	62.5	61.4
<b>Jun-22</b>	64.7	68.9	66.8	62.3	64.9	63.6
<b>Jul-22</b>	62.3	65.8	64.1	61.0	62.7	61.9
<b>Aug-22</b>	60.8	64.5	62.65	60.7	63.3	62.0
<b>Sep-22</b>	57.6	65.4	61.5	58.3	62.4	60.4
<b>Oct-22</b>	64.3	67.7	66.0	60.6	64.5	62.6
<b>Nov-22</b>	63.2	68.3	65.8	61.2	63.4	64.4
<b>Dec-22</b>	62.5	65.2	63.9	60.4	64.3	62.4
<b>Jan-23</b>	63.3	67.8	65.6	59.7	62.9	61.3
<b>Feb-23</b>	62.9	65.1	64.0	58.5	63.3	60.9
<b>Mar-23</b>	63.8	66.8	65.3	60.3	64.1	62.2
<b>JSPCB NORMS</b>	<b>DAY TIME dB(A)</b>		<b>75</b>	<b>NIGHT TIME dB(A)</b>		<b>70</b>

<b>DALMIA CEMENT (BHARAT)LIMITED,BOKARO</b>						
Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih,Bokaro Steel City						
<b>Noise Level report for the year 2022-23</b>						
	<b>Near Fabrication Yard</b>					
	<b>Day Time</b>			<b>Night Time</b>		
<b>Month</b>	<b>Min dB(A)</b>	<b>Max dB(A)</b>	<b>Avg dB(A)</b>	<b>Min dB(A)</b>	<b>Max dB(A)</b>	<b>Avg dB(A)</b>
<b>Apr-22</b>	64.5	67.0	65.8	60.2	64.8	62.5
<b>May-22</b>	65.7	66.2	66.0	61.5	63.2	62.4
<b>Jun-22</b>	62.8	65.7	64.25	59.3	65.6	63.5
<b>Jul-22</b>	60.4	62.6	61.5	56.2	60.1	58.2
<b>Aug-22</b>	62.9	69.8	66.4	61.1	62.4	61.8
<b>Sep-22</b>	63.7	64.3	64.0	60.3	64.1	62.2
<b>Oct-22</b>	64.2	68.5	66.4	61.5	65.9	63.7
<b>Nov-22</b>	65.4	69.2	67.3	62.6	66.8	64.7
<b>Dec-22</b>	64.8	65.4	65.1	60.8	64.1	62.5
<b>Jan-23</b>	65.1	69.3	67.2	62.4	65.8	64.1
<b>Feb-23</b>	63.5	68.3	65.9	61.9	64.5	63.2
<b>Mar-23</b>	64.6	67.9	66.25	58.6	66.1	62.4
<b>JSPCB NORMS</b>	<b>DAY TIME dB(A)</b>		<b>75</b>	<b>NIGHT TIME dB(A)</b>		<b>70</b>



## **FUGITIVE DUST EMISSION MONITORING REPORT 2022-23**

<b>DALMIA CEMENT (BHARAT) LIMITED</b>				
<b>Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India</b>				
<b>FUGITIVE DUST EMISSION MONITORING REPORT</b>				
<b>YEAR 2022-2023</b>				
<b>Location</b>	<b>Near Mill Area</b>	<b>Near Packing Loading Area</b>	<b>Near Truck Parking Area</b>	<b>Near Clinker Silo</b>
<b>Date</b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>
23.06.2022	1275	1390	1124	1062
27.09.2022	732	684	708	836
28.12.2022	1620	1321	1495	1286
18.03.2023	1818	1480	1562	1176
<b>Min.</b>	<b>732</b>	<b>684</b>	<b>708</b>	<b>836</b>
<b>Max.</b>	<b>1818</b>	<b>1480</b>	<b>1562</b>	<b>1286</b>
<b>Avg.</b>	<b>1275</b>	<b>1082</b>	<b>1135</b>	<b>1061</b>

### **Ground Water level report for the year 2022-23**

<b>DALMIA CEMENT BHARAT LIMITED, BOKARO</b>													
<b>Ground Water level monitoring report for the year 2022-23</b>													
<b>Sr.no</b>	<b>Village Location</b>	<b>Apr-22</b>	<b>May-22</b>	<b>Jun-22</b>	<b>Jul-22</b>	<b>Aug-22</b>	<b>Sep-22</b>	<b>Oct-22</b>	<b>Nov-22</b>	<b>Dec-22</b>	<b>Jan-23</b>	<b>Feb-23</b>	<b>Mar-23</b>
	<b>Unit</b>	<b>Depth of ground water level in feet</b>											
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	6.3
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 2022-23

DALMIA CEMENT (BHARAT) LIMITED, BOKARO															
STP Treated water analysis report for the year 2022-23															
Sr.no	Parameter	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Yarly	JSPCB Norms
1	PH	7.54	7.2	7.2	7.1	7.2	7.4	7.5	7.7	7.3	7.3	7.62	7.58	7.39	5.5-9.0
2	Total Suspended solid (mg/lit.)	82	76.0	62	73	71	70	73	85	11	12	11.6	14.00	53.38	100 mg/L
3	COD (mg/lit.)	78	64.0	19	24	27	26	27	74	32	36	40	42.00	40.75	250 mg/L
4	BOD (mg/lit.)	21	16.0	12	13.9	15.2	12.6	13	18	8.6	8.8	7.9	8.10	12.93	30 mg/L
5	Oil & Grease (mg/lit)	5.2	6.5	6.9	5.7	5.9	4.8	5	4.8	5.1	5.8	5.4	4.80	5.49	10 mg/L