

cement! sugar! refractories! power!

Date: 20.09.2025

DCBL/ENV-ES/25-26/2

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'2025

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' 2024 - March'2025 for your kind perusal and record please.

Thanking you.

Yours faithfully For Dalmia Cement (Bharat) Limited

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 M/s Dalmia Cement (Bharat) Limited

ENVIRONMENT STATEMENT (FORM-V) Financial Year 2024-2025



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 postsale 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 2025

$\underline{PART - A}$

| (I) | Name & Address of the Owner / Occupier of the Industry operation or Process | Sunilkumar K Bhusari (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 | 24.09.2024 |

PART - B

Water & Raw Material Consumption

A. Water

(i) Water Consumption (M^3/day) :

Process & Cooling - 58.1

Domestic - 11.6

(ii) Consumption per unit of production:

| Name of the | | Consumption per unit of luct Output |
|-------------|---|--|
| Product | During the Previous Financial Year (2023-24) | During the Current Financial Year (2024-25) |
| | 0.013 | 0.012 |

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 (2023-24) | | S | | During the Financial Yea | |
| | - | PSC | PCC | PSC | PCC | | |
| Fuel (coal) | PSC/PCC/ | 0.02 | 0.02 | 0.02 | 0.02 | | |
| Clinker | PPC | 0.37 | 0.42 | 0.37 | 0.42 | | |
| Gypsum | | 0.02 | 0.02 | 0.02 | 0.02 | | |
| Slag | | 0.61 | 0.31 | 0.61 | 0.31 | | |
| Fly Ash | | 0.00 | 0.23 | 0.00 | 0.23 | | |

Total Production

| Production | During the Previous Financial Year (MT) (2023-24) | During the Current Financial Year (MT) (2024-25) | Remarks |
|---------------------|---|--|---------|
| Cement (PSC/CC/PPC) | Total Cement Production: (2023-24) 794356 MT | Total Cement Production: (2024-25) 1576741 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) | 0.12 | 13.9 | -53% |

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 (2023-24) | During the Current Financial Year (2024-25) | |
| (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 | |

 $\underline{PART - E}$

Solid Wastes

| Solid Waste | | Total Quantity | | | |
|-------------|---------------------|------------------------------------|-------------------------------------|--|--|
| | | During the Previous | During the Current | | |
| | | Financial Year | Financial Year | | |
| | | (2023-24) | (2023-24) | | |
| (a) | From Process | No solid waste is generated | No solid waste is generated | | |
| | | from the cement grinding | from the cement grinding | | |
| | | process. | process. | | |
| (b) | From Pollution | 1. Dust collected in Bag filters i | 1. Dust collected in Bag filters is | | |
| | Control Equipment's | recycled back into the system. | recycled back into the system. | | |
| | | 2. Dust collected in main Bag | 2. Dust collected in main Bag | | |
| | | House of Cement mill is the | House of Cement mill is the | | |
| | | product (cement) only and | product (cement) only and | | |
| | | being transported to Cement | being transported to Cement | | |
| | | Silo through closed circuit | Silo through closed circuit | | |
| | | consisting of Air slides and | consisting of Air slides and | | |
| | | Bucket elevator. | 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 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 670826 MT of slag, fly ash consumed 284707 MT which is waste material of power plant & 2538 MT chemical gypsum consumed which is waste material of fertilizer industry in our cement making process in the year of 2024-2025.
- 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 Design dust **Outlet dust** Volume of bag S. Fan Location Description **Application Emission** Emission No. filter (m3/h) Volume (mg/Nm3) (mg/Nm3) **Bag House** Cement 1. Mill 10 1030000 1150000 ≤ 30 Bag House 563BF4 Cement Venting **LIST of Nuisance Dust Collectors** Belt conveyor from WT to TT-1 492 1 clinker silo new & existing Clinker 10 10000 11500 ≤ 30 BF1 (492 BC1) at TT-1/Clinker Belt conveyor 492BC1 TT-2 492 2 discharging to 492BC2 & Clinker 10 10000 11500 ≤ 30 BF2 BC4 at TT-2/Clinker Bag filter 492 BF3 for TT-3 3 conveyor 492BC3 Clinker 10 10000 11500 ≤ 30 492BF4 discharging to 492 BC4 492 BC3 discharge and 4 492BF5 Clinker 10 15000 17250 ≤ 30 clinker silo top/ Clinker Belt conveyor 512BC1 TT-4 5 discharge to 512BC3 at TT-Clinker 10 12500 14375 ≤ 30 512BF1 4/ Clinker Belt conveyor 512BC2 6 TT-5 discharge to 512BC3 at TT-Clinker 10 10000 11500 ≤ 30 5/ Clinker Belt conveyor 512BC3 TT-6 512 7 discharge to 512BC4 at TT-Clinker 10 7500 8625 ≤ 30 BF3 6/ Clinker Belt conveyor 512BC4 discharge to 512BE1 at TT-3 8 512 BF4 Clinker 10 5000 5750 ≤ 30 bottom/Clinker CMH Top Cement mill hopper top/ Clinker & 9 10 10000 11500 ≤ 30 533 BF1 Clinker & Gypsum Gypsum Clinker & 17250 10 533 BF3 CMH extraction 10 15000 ≤ 30 Gypsum Clinker & 11 533 BF2 Mill feed conveyor 10 10000 11500 ≤ 30 Gypsum Cement Mill BE feed/ Reject

Cement

10

12500

12

563 BF1

Material

≤ 30

14375

BOKARO CEMENT MANUFACTURING WORKS,

(A unit of DALMIA CEMENT BHARAT LIMITED)

LIST OF POLLUTION CONTROL EQUIPMENTS

| S. No. | Location | Description | OLLUTION CON Application | Design dust Emission | Volume of bag | Fan Volume | Outlet dust Emission |
|-----------|--------------------------|--|---------------------------|-------------------------|---------------|---------------|-------------------------|
| 13 | 563 BF2 | Cement Mill BE Top/ Reject Material | Cement | (mg/Nm3) 10 | 10000 | 11500 | (mg/Nm3) ≤ 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. | | | | Design dust | Volume of bag | Fan | Outlet dust |
| No | Location | Description | Application | Emission (mg/Nm3) | filter (m3/h) | Volume | Emission (mg/Nm3) |

PART-H

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

BOKARO CEMENT MANUFACTURING WORKS(UNIT OF DCBL) GREEN BELT DEVELOPMENT REPORT

Greenbelt/plantation will be done over 33% of the total project area i.e., about 5.2 acres (2.105 ha). The green belt will inter alia cover the entire periphery of the plant. Native fruits bearing species with large canopy will be selected for plantation.

Green Belt development report

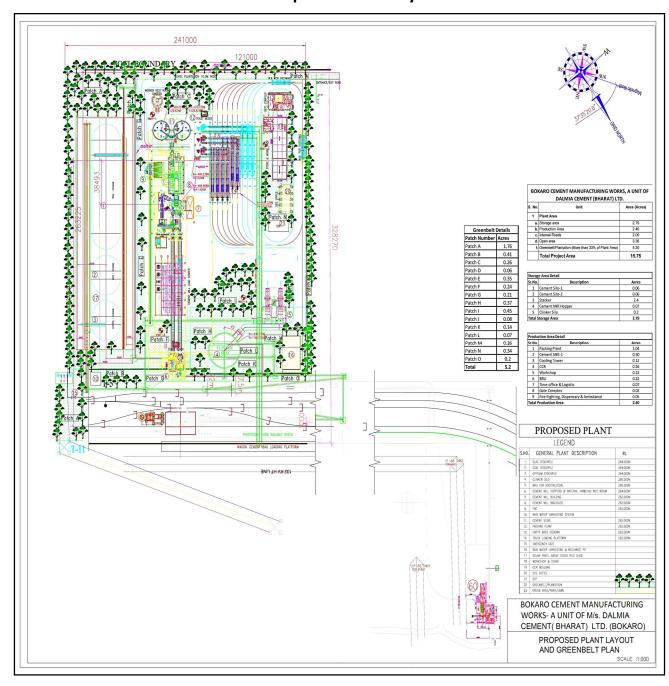
| Sl. N | Years | Area (Acres) | No. of Trees |
|-------|--------------------|--------------|--------------|
| 01. | 1st Year (2022-23) | 0.5 | 550 |
| 02. | 2nd Year (2023-24) | 1.8 | 1665 |
| 03. | 3rd Year (2024-25) | 2.5 | 2380 |
| TOTAL | | 4.8 | 4495 |

| S.N | Year | Name of Species tree planted |
|-----|--------------------|--|
| 01. | 1st Year (2022-23) | Gulmohar, Amaltash, Neem, Mihigini, shisham, Ashoka, Teak, Mango, Amala, Shiv Babool, Chatni, Jamun, Jarul |
| 02. | 2nd Year (2023-24) | Gulmohar,Amaltash,Neem,Mihigini,shisham,Ashoka,Teak,Mango, Amala |
| 03. | 3rd Year (2024-25) | Chatni,Gulmohar,Neem,Mihigini,Guava,Mango,Amala,Neem,Jamun Nerium |

Bokaro Cement Manufacturing works

Unit of Dalmia Cement (Bharat) Limited

Green belt plan in Plant layout



Green Belt development report









Tree plantation done at plant boundary location

1. 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.

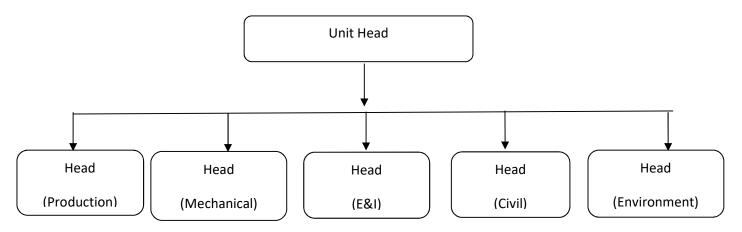
e. Roads and work place areas are fully concreated. all areas cleaned by vacuum road swapping machine

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 |
| В. | 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 2024-2025

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 2024-2025

Near Project Office

| Date | PM-10 μg/m3 | PM-10 μg/m3 PM-2.5 μg/m3 | | NO2 μg/m3 |
|------------|--------------|--------------------------|------|-----------|
| 15.06.2024 | 58.5 | 24.7 | 12.3 | 23.2 |
| 24.09.2024 | 24 56.2 24.3 | | 11.6 | 23.5 |
| 24.12.2024 | 54.6 | 22.7 | 10.7 | 22.3 |
| 07.03.2025 | 57.1 | 28.6 | 14.4 | 27.1 |
| Min. | 54.6 | 22.7 | 10.7 | 22.3 |
| Max. | 58.5 | 28.6 | 14.4 | 27.1 |
| Avg. | Avg. 56.6 | | 12.3 | 24.0 |

| Near Khutri village | | | | | | | | | |
|--|-------|------|------|------|--|--|--|--|--|
| Date PM-10 μg/m3 PM-2.5 μg/m3 SO2 μg/m3 NO2 μg/n | | | | | | | | | |
| 15.06.2024 | 53.7. | 32.2 | 13.4 | 28.4 | | | | | |
| 24.09.2024 | 57.1 | 31.9 | 12.7 | 28.8 | | | | | |
| 24.12.2024 | 55.5 | 30.3 | 11.8 | 27.6 | | | | | |
| 07.03.2025 | 58 | 32.1 | 16.8 | 32.3 | | | | | |
| Min. | 55.5 | 30.3 | 11.8 | 27.6 | | | | | |
| Max. | 58.0 | 32.2 | 16.8 | 32.3 | | | | | |
| Avg. | 56.9 | 31.6 | 13.7 | 29.3 | | | | | |

ENVIRONMENT MONITORING REPORTS FOR THE YEAR 2024-2025

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 2024-2025

| Thakurtand Village | | | | | | | | | |
|--------------------|-------------|-----------------------|------|-----------|--|--|--|--|--|
| Date | PM-10 μg/m3 | 10 μg/m3 PM-2.5 μg/m3 | | NO2 μg/m3 | | | | | |
| 15.06.2024 | 52.7 | 24.7 | 17 | 31.6 | | | | | |
| 24.09.2024 | 51.2 | 24.4 | 16.3 | 26.0 | | | | | |
| 24.12.2024 | 49.6 | 22.8 | 15.4 | 24.8 | | | | | |
| 07.03.2025 | 52.1 | 25.2 | 17.7 | 29.5 | | | | | |
| Min. | 49.6 | 22.8 | 15.4 | 24.8 | | | | | |
| Max. | 52.7 | 25.2 | 17.7 | 31.6 | | | | | |
| Avg. | Avg. 51.4 | | 16.6 | 28.0 | | | | | |

| Gorabali Village Near Temple | | | | | | | | |
|------------------------------|-------------|--------------|-----------|-----------|--|--|--|--|
| | | | | | | | | |
| Date | PM-10 μg/m3 | PM-2.5 μg/m3 | SO2 μg/m3 | NO2 μg/m3 | | | | |
| 15.06.2024 | 57.5 | 26.0 | 14.2 | 26.1 | | | | |
| 24.09.2024 | 52.0 | 25.7 | 13.5 | 26.4 | | | | |
| 24.12.2024 | 50.4 | 24.1 | 12.6 | 25.2 | | | | |
| 07.03.2025 | 52.9 | 26.7 | 15.3 | 28.4 | | | | |
| Min. | 50.4 | 24.1 | 12.6 | 25.2 | | | | |
| Max. | 57.5 | 26.70 | 15.3 | 28.4 | | | | |
| Avg. | 53.2 | 25.63 | 13.90 | 26.53 | | | | |

STACK EMISSION REPORT FOR THE YEAR 2024-25

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

Stack Emission report (2024-25) (Manual)

| Stack Emission report (2024-25) (Wandar) | | | | | | | | | | |
|--|--------|--------|--------|-----------------------|--|--|--|--|--|--|
| Month | Min. | Max. | Avg. | JSPCB Norms | | | | | | |
| | mg/Nm³ | mg/Nm³ | mg/Nm³ | mg/Nm³ | | | | | | |
| Apr-24 | 16.8 | 18.6 | 17.9 | | | | | | | |
| May-24 | 7.43 | 17.3 | 11.2 | | | | | | | |
| Jun-24 | 7.4 | 20.5 | 15.3 | | | | | | | |
| Jul-24 | 11.3 | 18.7 | 14.4 | | | | | | | |
| Aug-24 | 8.5 | 14.7 | 10.8 | | | | | | | |
| Sep-24 | 11.2 | 18.2 | 14.2 | | | | | | | |
| Oct-24 | 10.1 | 14.2 | 12.4 | 20 mg/Nm ³ | | | | | | |
| Nov-24 | 14.9 | 19.1 | 16.7 | 30 mg/Nm ³ | | | | | | |
| Dec-24 | 10.6 | 18.0 | 13.8 | | | | | | | |
| Jan-25 | 9.3 | 14.9 | 12.6 | | | | | | | |
| Feb-25 | 10.6 | 16.3 | 13.3 | | | | | | | |
| Mar-25 | 11.7 | 17.2 | 14.8 | | | | | | | |
| | 7.4 | 17.7 | 13.9 | | | | | | | |

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

Online CEMS Stack emission report (2024-25)

| Offinite Griving States Chinasion Teport (2024-23) | | | | | | | | | | |
|--|--------|--------|--------|-----------------------|--|--|--|--|--|--|
| Month | Min. | Max. | Avg. | JSPCB Norms | | | | | | |
| | mg/Nm³ | mg/Nm³ | mg/Nm³ | mg/Nm³ | | | | | | |
| Apr-24 | 2.24 | 21.02 | 15.30 | | | | | | | |
| May-24 | 4.25 | 27.4 | 17.5 | | | | | | | |
| Jun-24 | 3.21 | 23.7 | 11.68 | | | | | | | |
| Jul-24 | 4.15 | 25.14 | 13.2 | | | | | | | |
| Aug-24 | 3.5 | 18.02 | 9.07 | | | | | | | |
| Sep-24 | 5.14 | 13.07 | 10.6 | 30 mg/Nm ³ | | | | | | |
| Oct-24 | 3.24 | 9.58 | 7.09 | 30 mg/nm ³ | | | | | | |
| Nov-24 | 2.4 | 18.96 | 12.58 | | | | | | | |
| Dec-24 | 6.16 | 13.01 | 8.91 | | | | | | | |
| Jan-25 | 4.29 | 16.73 | 8.36 | | | | | | | |
| Feb-25 | 5.46 | 15.32 | 11.07 | | | | | | | |
| Mar-25 | 3.21 | 21.6 | 16.21 | | | | | | | |
| | 2.2 | 27.4 | 11.8 | | | | | | | |

NOISE LEVEL REPORT 2024-25

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

Noise Level report for the year 2024-25: Near Project Office

| Month | Day Time | Night Time | | | |
|--------------|----------------|------------------|--|--|--|
| ivionen | dB(A) | dB(A) | | | |
| 15.06.2024 | 60.4 | 52.7 | | | |
| 24.09.2024 | 64.1 | 49.4 | | | |
| 24.12.2024 | 63.2 | 48.5 | | | |
| 07.03.2025 | 62.1 | 47.4 | | | |
| | | | | | |
| Min. | 60.4 | 47.4 | | | |
| Max. | 64.1 | 52.7 | | | |
| Avg. | 62.4 | 49.7 | | | |
| | | | | | |
| ICDCD NODNIC | Day Time dB(A) | Night Time dB(A) | | | |
| JSPCB NORMS | 75 | 70 | | | |

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

Noise Level report for the year 2024-25: Khutri Village

| Month | Day Time | Night Time | | | |
|-------------|----------------|------------------|--|--|--|
| Wionth | dB(A) | dB(A) | | | |
| 15.06.2024 | 54.3 | 42.7 | | | |
| 24.09.2024 | 50.2 | 43.6 | | | |
| 24.12.2024 | 49.3 | 42.7 | | | |
| 07.03.2025 | 48.2 | 42.6 | | | |
| | | | | | |
| Min. | 48.2 | 42.6 | | | |
| Max. | 54.3 | 43.6 | | | |
| Avg. | 50.8 | 43.0 | | | |
| | D. T (D/A) | Al'. L. T' (D/A) | | | |
| JSPCB NORMS | Day Time dB(A) | Night Time dB(A) | | | |
| | 55 | 45 | | | |

NOISE LEVEL REPORT 2024-25

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

Noise Level report for the 2024-25: Gorabali Village

| Month | Day Time | Night Time | | | |
|---------------|----------------|------------------|--|--|--|
| | dB(A) | dB(A) | | | |
| 15.06.2024 | 47.9 | 41.8 | | | |
| 24.09.2024 | 48.8 | 42.7 | | | |
| 24.12.2024 | 47.9 | 41.8 | | | |
| 07.03.2025 | 46.3 | 40.9 | | | |
| | | | | | |
| Min. | 46.3 | 40.9 | | | |
| Max. | 48.8 | 42.7 | | | |
| Avg. | 47.7 | 41.8 | | | |
| | | | | | |
| JSPCB NORMS | Day Time dB(A) | Night Time dB(A) | | | |
| JSPCB NORIVIS | 55 | 45 | | | |

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

Noise Level report for ther 2024-25:Thakurtand Village

| Month | Day Time | Night Time | | | |
|-------------|----------------|------------------|--|--|--|
| | dB(A) | dB(A) | | | |
| 15.06.2024 | 51.7 | 44.8 | | | |
| 24.09.2024 | 52.6 | 43.5 | | | |
| 24.12.2024 | 51.7 | 42.6 | | | |
| 07.03.2025 | 50.6 | 41.6 | | | |
| | | | | | |
| Min. | 50.6 | 41.6 | | | |
| Max. | 52.6 | 44.8 | | | |
| Avg. | 51.6 | 43.2 | | | |
| | | | | | |
| ICDCD NODMC | Day Time dB(A) | Night Time dB(A) | | | |
| JSPCB NORMS | 55 | 45 | | | |

FUGITIVE DUST EMISSION MONITORING REPORT 2024-25

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

| Fugitive emission monitoring report (2024-25) | | | | | | | | | |
|---|------------------|------------------------------|----------------------------|---|--|--|--|--|--|
| Location | Near Mill Area | Near Packing Loading Area | Near Truck Parking Area | Near Clinker Silo Raw Material Yard µg/m3 | | | | | |
| Date | μg/m3 | μg/m3 | μg/m3 | | | | | | |
| 15.06.2024 | 747.6 | 674.2 | 1254 | 718.4 | | | | | |
| 24.09.2024 | 812.6 698.7 1292 | | 1292 | 760.7 | | | | | |
| 24.12.2024 | 755.00 | 641.1 | 1235 | 715.5 | | | | | |
| 07.03.2025 | 839.4 | 725.5 | 712 | 799.9 | | | | | |
| | | | | | | | | | |
| Min. | 747.6 | 641.1 | 712 | 715.5 | | | | | |
| Max. | Max. 839.4 | | 1292.0 | 799.9 | | | | | |
| Avg. | 788.7 | 684.9 | 1123.3 | 748.6 | | | | | |

Ground Water level report for the year 2024-25

BOKARO CEMENT MANUFACURING WORKS UNIT OF DALMIA CEMENT BHARAT LIMITED, BOKARO (Ground Water level monitoring report for the year 2024-25) Nov-Apr-May-Jun-Jul-Aug-Sep-Oct-Dec-Jan-Feb-Mar-**Village Location** Sr.no 24 24 24 24 24 24 24 24 25 25 25 Depth of ground water level in feet Unit Pakhriatand 23'9 25'7 24'9 23'4 12'3 7'2 8'7 9'2 16'1 17'9 18'4 19'8 1 (Near Anganwadi) Tupkadih (Near 9'8 2 21'8 23'9 22'8 21'2 11'8 7'5 8'3 13'3 15'1 16'0 17'4 Electric pole) Godawali (Near 12'3 14'7 14'3 12'3 2'9 1'6 2'6 3'4 5'2 7'3 8'1 9'3 3 Temple) Bhutkuru (Near 4 20'2 22'6 21'8 20'5 13'6 9'0 10'2 11'6 15'4 17'7 18'5 19'2 Primary school)

STP Treated water analysis report for the year 2024-25

| | Bokaro Cement Manufacturing Works. | | | | | | | | | | | | | | |
|-------|---|--------|--------|--------|---------|----------|----------|----------|----------|--------|--------|--------|--------|-------|-------------|
| | Unit of Dalmia Cement (Bharat) Limited,Bokaro | | | | | | | | | | | | | | |
| | | ı | ı | STP Tr | eated w | ater ana | lysis re | port for | the year | 2024-2 | 5 | ı | ı | | T |
| Sr.no | Parameter | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 | Oct-24 | Nov-24 | Dec-24 | Jan-25 | Feb-25 | Mar-25 | Yarly | JSPCB Norms |
| 1 | PH | 7.9 | 7.1 | 7.6 | 7.3 | 7.5 | 7.6 | 7.1 | 7.8 | 7.7 | 7.6 | 7.7 | 7.40 | 7.53 | 5.5-9.0 |
| 2 | Total Suspended solid (mg/lit.) | 39 | 29.0 | 25 | 22 | 20 | 18 | 16 | 14 | 19 | 18 | 15 | 16.00 | 20.92 | 100 mg/L |
| 3 | COD (mg/lit.) | 76 | 72 | 64 | 56 | 13.2 | 48 | 44 | 40 | 56 | 52 | 60 | 64.00 | 53.77 | 250 mg/L |
| 4 | BOD (mg/lit.) | 15 | 12.0 | 10.5 | 11.7 | 52 | 12.2 | 13.4 | 14.1 | 15.6 | 13.2 | 12.9 | 19.50 | 16.84 | 30 mg/L |
| 5 | Oil &Grease (mg/lit) | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 10 mg/L |