

#### cement! sugar! refractories! power!

To Date: 14.05.2024
The Member Secretary,
State Level Environment Impact Assessment Authority, Jharkhand
Nursery Complex, Near Dhurwa Bus Stand, Dhurwa,
Ranchi-Jharkhand -834004

Subject: Half yearly Environment Clearance (EC) Compliance report of Dalmia Cement (Bharat) Limited, Bokaro for the period of October 2023 to March 2024.

Ref: EC Letter no. EC/SEIAA/2018-19/2138/2019/474, Ranchi, Dated:23.09.2019.

Dear Sir,

Please find enclosed herewith half yearly Environment Clearance compliance report of Dalmia Cement (Bharat) Limited, Bokaro, Jharkhand for the period of October' 2023 to March '2024 for your kind perusal.

Thanking you.

Yours Sincerely,

For Dalmia Cement (Bharat) Limited, Bokaro

Brki hen

#### **Authorized Signatory**

#### Copy:

- The Director, Ministry of Environment, Forest and Climate Change, 2nd Floor, Headquarter-Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand - 834002
- The Member Secretary, Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, Delhi-110032
- The Member Secretary, Jharkhand State Pollution Control Board, Township Administration Building, HEC Complex, Dhurwa, Ranchi-834004
- Regional Environmental Officer, Jharkhand State Pollution Control Board Dhanbad, HIG-1, Sardar Patel Nagar, Hirapur Dhanbad-826001

#### Enclosed:

- 1. EC Compliance Report
- 2. Annexure -1 to 9

Dalmia Cement (Bharat) Limited

Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro - 827014, Jharkhand, India T +91 6542 253 278 Toll Free 1800 2020 W www.dalmiacement.com CIN: U65191TN1996PLC035963 Registered Office: Dalmiapuram, District Truchirapalli, Tamil Nadu - 621651, India. A Dalmia Bharat Group company, www.dalmiabharat.com

**Environment Clearance compliance report of Dalmia Cement** (Bharat) Limited from October 2023 to March 2024

EC Letter No.-EC/SEIAA/2018-19/1997/2138/2019/474 Ranchi, Dated:23.09.2019.



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

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

# ENVIRONMENT CLEARANCE COMPLIANCE REPORT OF DALMIA CEMENT (BHARAT) LIMITED FOR THE PERIOD OF OCTOBER 2023 TO SEPTEMBER 2024

EC Letter No.-EC/ SEIAA / 2018-19 /2138/ 2019/ 474, Ranchi Dated:23.09.2019.

|    | EC Compliance Condition  | EC Compliance Status  |
|----|--|---|
| I  | Specific Condition   |   |
|    | This Environmental Clearance is valid subject to the following condition below — That this project has- a. Obtained all legal rights to operate at concerned place. b. Complied with all existing concerned laws of the land and c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.  | Complied with.  a. Obtained all necessary statutory clearance to operate our stand-alone cement Grinding Unit.  b. Complied all legal law of land with respect to our unit  c. Complied with.   |
| II | Statutory Compliance   |   |
| 1  | The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.   | Not Applicable. The unit is located in notified Industrial area at JIADA, Bokaro, Jharkhand with due allocation through Govt of Jharkhand.  |
| 2  | The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.  | Not Applicable. There is no wild life sanctuary within 10 km radius of our unit.  |
| 3  | The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area) | Not Applicable. The unit is located in notified industrial area at BIADA Bokaro. There is no record of schedule -I species within 10 km radius of our unit. Therefore, there is no need for site specific conservation plan/ wild life management plan. |

| 4  | The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.  | Complied with.  Our Unit has obtained CTE from JSPCB Ranchi vide letter no JSPCB/HO/RNC/CTE-11785214/2022/96 Dated: 06.03.2022. CTO obtained and renewed vide letter no JSPCB/HO/RNC/ CTO-14970501/2023/503, Dated15.03.2023 for the plant expansion from 3.7 MTPA to 4.50 MTPA from JSPCB Ranchi and CTO valid up to 31.03.2027. |
|----|---|---|
| 5  | The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project   | Complied with. This is a standalone cement grinding unit, where, water requirement for process is zero. The small quantity of water is required for cooling purpose, which is obtained from BIADA. The Unit have water agreement with BIADA for the supply of water to DCBL Bokaro.   |
| 6  | The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time  | Complied with. DCBL, Bokaro has obtained Authorization of Hazardous waste from JSPCB, Ranchi vide letter no JSPCB/HO/RNC/HWM-9675664/2021/26, Dated 09.04.2021, which is valid up to 31.12.2026.  |
| 7  | No mining /activity shall be undertaken in the forest land or deemed forest without obtaining prior forestry clearance.   | Not Applicable to our unit operations   |
| 8  | This Environmental Clearance is granted subject to final outcome of Hon'ble supreme court of India. Hon'ble High Court, Hon'ble NGT, MoEF&CC and any other Court of Law, if any, as, may be applicable to this project.   | Agreeable   |
| 9  | Environmental Clearance is subject to obtained prior clearance from forestry and wildlife angle including clearance from standing committee of NBWL as may be applicable to this project (in case any fauna occurs /is found in the project area or if the area involves forest land or Wildlife habitat I.e core zone of elephant/tiger reserve etc. and located within 10 km of protected area. | Not applicable. The unit is located in notified Industrial area at JIADA, Bokaro, Jharkhand with due allocation through Govt of Jharkhand.  |
| 10 | The project proponent may apply simultaneously for forest and NBWL clearance, in order to complete the formalities without undue delay, which till process on their respective merits, no rights will vest in or  | <b>Not applicable</b> . The unit is located in notified Industrial area at BIADA, Bokaro, Jharkhand with due allocation through Govt of Jharkhand.  |

|   | accrue to them unless all clearance are obtained.  |   |
|---|--|---|
| Ш | Air quality monitoring and preservation  | ,   |
| 1 | The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. no 612 (E) dated 25 August ,2014 (Cement) and subsequent amendment dated 9th May 2016 (Cement) and connected to SPCB and CPCB online server and calibrate these system from time from time to according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises. | Complied with. Unit has already installed on line continuous emission monitoring system in our process stack and connected to JSPCB & CPCB server. On line stack emission monitoring data continuously transmitted to CPCB & JSPCB server. Regular maintenance and calibration are being done of stack emission monitoring equipment. Fugitive emission is being regularly monitored in the plant premises and data is being regularly submitted to JSPCB & CPCB, copy of the same attached as per Annexure-1   |
| 2 | The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.).  | Complied with. We are regularly monitoring fugitive dust emission in our plant by JSPCB & NABL approved laboratory. Copy of all Environmental monitoring reports from October 2023 to March 2024 is attached as per Annexure-1  |
| 3 | The project proponent shall install system to carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM-10 and PM-2.5 in reference to PM emission, and S02 and NOx in reference to S02 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)   | Complied with.  We have installed 2 Nos On-line Continuous AAQM monitoring station in up wind and downwind directions with parameter of PM-10, PM-2.5, SO2 & NOx, at the boundary location of the unit. CAAQM monitoring equipment is transmitting data to JSPCB, & CPCB server through wide area network. The same data is also displayed at the factory main gate.  Unit have also installed 4.nos manual AAQM monitoring station at 120-degree direction of a plant boundary location. AAQM reports are being regularly submitted to JSPCB Ranchi and Regional office at Dhanbad on monthly basis. six monthly average AAQM report attached as per Annxure-1 |
| 4 | The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual  | Complied. Six monthly environmental monitoring reports from October 2023 to March 2024 is   |

|    | monitoring of air quality/fugitive emissions to Regional office of MoEF&CC, Zonal office of CPCB and Regional of SPCB along with six monthly monitoring report  | attached as per Annexure-1   |
|----|---|--|
| 5  | Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards. | Complied.  We have installed 2 nos Bag house in VRM mills for the control of air pollution. The Bag house stack emission maintained below 30 mg/Nm3. Apart from this 33 nos of nuisance bag filter installed in all material transfer points to control the fugitive dust emission. All belt conveyors are fully covered for the control off fugitive dust emission. Raw materials and products are stored in covered sheds and silos. regular cleaning of roads by 2 nos road sweeping machine. Good housekeeping is being maintained all around the plant. |
| 6  | The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.  | Complied. Regular maintenance of bag filters, leakage checking, cleaning of bag filters is being done by dedicated mechanical maintenance team as per schedule.  |
| 7  | Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.  | Complied. Applicable CREP compliance conditions complied.  |
| 8  | Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.  | Complied. Regular road sweeping and -floor cleaning is being done by 2 nos of vacuum sweeping machine for the control of fugitive dust emission. Good housekeeping is being maintained in all around plant premises area.  |
| 9  | Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.   | Complied. All raw materials are being transported in covered belt conveyors. Raw material & products is being transported in covered tarpaulin trucks / bulkers /rail for the control of material spillage as well as control of fugitive dust emission.   |
| 10 | Provide wind shelter fence and chemical spraying on the raw material stock piles;   | Complied. We have constructed plant boundary walls around the plant along with thick green belt, which act as wind shelter or wind shield for contaminants. We have boundary wall  |

|    |   | erected between plant and hostels which act as wind shields. We have also constructed walls around packing unit and raw material yared , which act as wind shelter. Raw materials stored in covered sheds and silos.  |
|----|---|---|
| 11 | Have separate truck parking area and monitor vehicular emissions at regular interval.   | Complied. Separate truck parking facility provided to park trucks. Regular checking of vehicles PUC certificates which entering in plant to control of vehicular emission.  |
| 12 | Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport.  | Complied. All raw materials and products are being transported in covered trucks, bulker, covered conveyor belts/railways to reduce the fugitive dust emission.  Regular water sprinkling and road swapping is being done on the roads through water spray tanker to control of fugitive dust emission.                       |
| 13 | Ventilation system shall be designed for adequate air changes as per ACGIH Document for all tunnels, motor houses, cement bagging plants.   | Complied. Air ventilation system arrangement done for adequate air change in motor houses and packing plant area.   |
| IV | Water quality monitoring and preservatio  | n:  |
| 1  | The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 as amended from time to time and connected to SPCB and CPCB online servers and calibrate this system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous) | Our unit is standalone cement grinding unit and does not require water for process. The water is only used for equipment cooling in closed loop. Makeup water is only added. Therefore, there is no effluents generated from our process. In view of this effluent monitoring system is not relevant for our unit.            |
| 2  | The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.  | Complied with. We are taking water from BIADA for plant operation and domestic use. No ground water is used in our plant. however, we are regularly monitoring ground water quality and depth level in surrounding village wells. Water quality & wells depth level reports of surrounding village attached as per Annexure-1 |

| 3 | The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report. | There is no effluent generation from our unit as it does not require water for its process. Ground water monitoring reports are being regularly submitted to MoEF&CC regional office, Zonal office of CPCB and regional office of SPCB as a part of EC compliance report. Ground water quality analysis report attached as per <b>Annexure-1</b> |
|---|--|--|
| 4 | Adhere to 'Zero Liquid Discharge   | <b>Complied with</b> . Zero Liquid Discharge is being maintained.  |
| 5 | Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.   | Complied with.  100 KLD STP is in operation for the treatment of domestic waste water. Treated sewage quality meet the prescribed standard norms. Treated water analysis report attached as per Annexure-1   |
| 6 | Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.   | Complied with. Garland drain are existing in the raw material yard to accumulate run off water in a settling pit. As a practice, we collect water from pit in water tanker and use it for water sprinkling on our internal roads, on daily basis.  |
| 7 | The project proponent shall practice rainwater harvesting to maximum possible extent.  | Complied with. Rain water harvesting system implemented in our unit to recharge the ground water and same is also approved from Ground Water Board, Ranchi. We have also renovation of wells and pounds near surrounding village area to conserve the rain water.  |
| 8 | Water meters shall be provided at the inlet to all unit processes in the cement plant.   | Complied. Water meter installed at inlet of our unit.  |
| 9 | The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water practicing cascade use and by recycling treated water.   | Complied. Optimum use of water is practiced and all necessary efforts has been made to reduce water consumption in our plant.  |
| V | Noise monitoring and prevention  |  |

|      | <del>-</del>   |  |
|------|--|--|
| 1    | Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six- monthly compliance report. | Compiled Noise level are being regularly monitored in different locations of Unit. Noise level report is being regularly submitted to Ministry, CPCB, JSPCB as a part of sixmonthly EC Compliance report. Six monthly noise level report (October 2023 to March 2024) attached as per Annexure-1 |
| 2    | The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.  | Being complied.  |
| VI   | Energy Conservation measures-:   |  |
| 1    | Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.                 | Complied with. We have installed solar plate light in plant, colony area.  |
| 2    | Provide the project proponent for LED lights in their offices and residential areas,   | Complied with. LED bulbs are being used in all offices and residential areas for the lighting purpose.   |
| 3    | Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS Standards. Waste management   | Complied with. Slag and fly ash are being used as a raw material for cement manufacturing as per BIS norms.  |
| VII  | Waste management   |  |
| 1    | The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016.  | Complied with. Hazardous waste Authorization obtained from JSPCB vide letter no JSPCB/HO/RNC/HWM-9675664/2021/26, Dated 09.04.2021, which is valid up to 31.12. 2026. Hazardous waste such as used oil, waste oil disposed through authorized vendor.  |
| 2    | Kitchen waste shall be composted or converted to biogas for further use. (to be decided on case to case basis depending on type and size of plant)   | Complied with. Kitchen waste composted and used in greenbelt development.  |
| VIII | Green Belt and EMP:  |  |

| 1  | Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant   | Complied with. We have developed greenbelt in 33% of the total land of unit. Tree plantation report attached as per Annexure-2  |
|----|---|---|
| 2  | The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration including plantation  | Dalmia Cement (Bharat) Limited Bokaro is a standalone cement grinding unit for the manufacturing of blended cement by utilizing industrial waste -such as slag, fly ash and gypsum. Only small quantity of coal is used in HAG for moisture drying in raw material slag.  The GHG emission inventory and action plan for the reduction of GHG emission report attached as per <b>Annexure-3</b> . |
| IX | Public hearing and Human health issues  |   |
| 1  | Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.  | Complied with. On side emergency preparedness plan, Hazard identification and Risk Assessment (HIRA) already prepared and same is approved by Chief Factory Inspector of Jharkhand.   |
| 2  | The PP shall provide Personal Protection Equipment (PPE) as per the norms of factory Act.   | Complied with. All Personal protective equipment's (PPE) Safety shoes, Nose mask, safety helmet, earplug, provided to all employees and contract workers for their safety.  |
|    |   | Safety training is being regularly done among the employees for the awareness of safe working culture.  |
| 3  | Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking. mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. | Complied with. All necessary infrastructure / facility provided to construction labour during construction phase of the project and also removed temporary houses after completion of project   |
| 4  | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act  | Complied Periodic medical health checkup is being regularly done to all employees and workers every six months. reports are being maintained as per Factory Act.  |

| X | Corporate Environment Responsibility   |  |
|---|--|--|
| 1 | The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as   | <b>Being Complied.</b> we are regularly doing CER surrounding village area which is as follows:  |
|   | applicable, regarding Corporate Environment Responsibility.  | Nells & Pond renovation done surrounding village area for water conservation.  |
|   |  | 2. street light & solar light installed in village   |
|   |  | 3.Tree plantation done surrounding village   |
|   |  | 4 Toilet constructed in schools  |
|   |  | 5. Renovation of school building, community hall and Aganwadi surrounding village area. CER report for the period October 2023 to March 2024 attached as per <b>Annexure: 4</b>  |
| 2 | The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six- monthly report. | Complied with. DCBL Bokaro have Environmental Management Policy duly approved from Board of Director. copy of Environment policy attached herewith as per Annexure-5   |
| 3 | A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of Senior Executive. who will directly to the head of the organization.   | Complied. Environment Management Cell has been established at our plant as well as at Corporate headquarter for the management of environmental activities with qualified person. Environment management cell is headed by Executive Director (Plant Head) in our unit.  |
| 4 | Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action  | Action plan for EMP implementation is in place. Separate budget allocated for Environment Protection. It is ensured that budget shall not be diverted for any other purpose. Expenditure on environmental protection is being regularly submitted to Ministry and his Regional Office as a part of EC compliance report. Expenditure on Environment Protection (Capital cost & |

|   | plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.  | Recurring cost) from October 2023 to March 2024 is attached as per <b>Annexure-6</b>  |
|---|---|---|
| 5 | Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.   | Complied with. Self-Environment audit is being regularly done for the continual improvement of environment quality in our plant. Self-Environment audit report attached as per Annexure-7. Third party Environment audit report submitted in pervious compliance report |
| 6 | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented. Miscellaneous:   | Not relevant  |
| X | Miscellaneous   |   |
| 1 | The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently. | We have advertised our Environmental Clearance in local new papers (Hindustan Times Ranchi, Hindi News Aaj), which are widely circulated in the region and copy of the same attached herewith as per Annexure-8.  |
| 2 | The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in tun has to display the same for 30 days from the date of receipt.   | Complied. We have submitted Environment Clearance copy to local Panchayat and other Govt. bodies, district head quarter. receiving copy of the same attached herewith as per Annexure-9   |
| 3 | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.  | Complied.   |
| 4 | The project proponent shall monitor the criteria pollutants level namely; $PM_{10}$ , $SO_2$ . $NO_x$ (Ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.   | <b>Complied</b> . On-line environment monitoring data is being regularly displayed at factory main gate for the notice of public.   |

| 5     | The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.  | Complied.   |
|-------|--|---|
| 6     | The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.   | Complied Environment Statement in Form V is regularly submitted to JSPCB, Dhanbad & Ranchi. Last Environment Statement was submitted vide our letter no. DCBL/ENV-ES/22-23/01, Dated 18.09.2023.  |
| 7     | The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project  | Date of final approval: 04.02.2019 for change of energy efficient motor in VRM mill (for 3.70 MTPA EC) Date of financial closure:10.10.2019 (for 3.70 MTPA EC) Date of Land development: There is no land development as the change happen due to change in energy efficient motor replaced 10.01.2020. Date of Production date: 06.03.2020 (3.70 MTPA) |
| 7(1)  | The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.   | Noted & agreed.   |
| 7(II) | The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee   | Commitments and recommendations made in EIA/EMP is being complied. DCBL located in notified industrial area (BIADA), hence, Project exempted for public hearing.  |
| 8     | It shall be mandatory for the project management to submit six (06) monthly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard copies and soft copies to the regulatory authority concerned SEIAA, Regional Office of MoEF&CC at Ranchi, Jharkhand State Pollution Control Board(JSPCB) Ranchi, and Central Pollution Control Board(CPCB) | Noted & agreed  |
| 9     | Concealing factual data or submission of false /Fabricated data and failure to comply with any of the conditions mentioned above may results   | Noted & agreed.   |

| 10 | in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act,1986.  The SEIAA, Jharkhand or any other competent  | Noted & agreed. |
|----|---|-----------------|
|    | Authority may alter modify the above condition or stipulated any further condition in the interest of Environment Protection.   |                 |
| 11 | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).  | Noted & agreed  |
| 12 | Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.  | Noted & agreed. |
| 13 | The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions not satisfactory.  | Noted & agreed. |
| 14 | The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.   | Noted & agreed. |
| 15 | The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.   | Noted & agreed. |
| 16 | The above conditions shall be enforced, interalia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter. | Noted & agreed. |

| 17 | Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 cf the National Green Tribunal Act, | Noted & agreed |
|----|--|----------------|
| 18 | This environmental clearance is valid for seven years from the date of issue.  | Noted & Agreed |

### **Annexure-1**

### **DALMIA CEMENT BHARAT LIMITED, BOKARO**

# AMBIENT AIR QUALITY MONITORING REPORT FROM OCTOBER 2023 TO MARCH 2024

| Ambient air quality monitoring report -Near Time office |       |       |       |        |  |  |  |  |
|---|-------|-------|-------|--------|--|--|--|--|
|   | SO2   | NOx   | PM-10 | PM-2.5 |  |  |  |  |
|   | μg/m3 | μg/m3 | μg/m3 | μg/m3  |  |  |  |  |
| October-2023,   | 10.4  | 19.6  | 53.1  | 29.0   |  |  |  |  |
| November-2023,  | 8.9   | 19.2  | 52.7  | 27.6   |  |  |  |  |
| December-2023,  | 9.2   | 20.1  | 53.9  | 29.5   |  |  |  |  |
| January-2024,   | 8.2   | 18.5  | 51.5  | 27.9   |  |  |  |  |
| February-2024,  | 7.8   | 17.1  | 50.1  | 25.7   |  |  |  |  |
| March-2024,   | 9.0   | 19.3  | 48.8  | 26.2   |  |  |  |  |
| Min.  | 7.8   | 17.1  | 48.8  | 25.7   |  |  |  |  |
| Max.  | 10.4  | 20.1  | 53.2  | 29.5   |  |  |  |  |
| Avg.  | 8.9   | 19.0  | 51.6  | 27.7   |  |  |  |  |

|                | Ambient air quality monitoring report FH-3 Building |       |       |        |  |  |  |  |  |
|----------------|---|-------|-------|--------|--|--|--|--|--|
|                | SO2   | NOx   | PM-10 | PM-2.5 |  |  |  |  |  |
|                | μg/m3   | μg/m3 | μg/m3 | μg/m3  |  |  |  |  |  |
| October-2023,  | 9.4   | 17.8  | 53.0  | 28.3   |  |  |  |  |  |
| November-2023, | 8.7   | 18.9  | 50.0  | 24.1   |  |  |  |  |  |
| December-2023, | 9.4   | 19.0  | 50.5  | 26.9   |  |  |  |  |  |
| January-2024,  | 7.8   | 17.1  | 49.8  | 25.7   |  |  |  |  |  |
| February-2024, | 6.3   | 14.2  | 46.7  | 22.5   |  |  |  |  |  |
| March-2024,    | 6.0   | 15.5  | 47.8  | 24.9   |  |  |  |  |  |
| Min            | 6.0   | 14.2  | 46.7  | 22.5   |  |  |  |  |  |
| Max.           | 9.4   | 19.0  | 53.0  | 28.3   |  |  |  |  |  |
| Avg.           | 7.9   | 17.0  | 49.7  | 25.4   |  |  |  |  |  |

### **JSPCB Norms**

| SO <sub>2</sub> | NOx           | PM <sub>10</sub> | PM <sub>2.5</sub> |
|-----------------|---------------|------------------|-------------------|
| $(\mu g/m^3)$   | $(\mu g/m^3)$ | $(\mu g/m^3)$    | $(\mu g/m^3)$     |
| 80              | 80            | 100              | 60                |

# AMBIENT AIR QUALITY MONITORING REPORT FROM OCTOBER 2023 TO MARCH 2024

| Ambient air quality monitoring report: Near Wagon Tippler |       |       |       |        |  |  |  |  |
|---|-------|-------|-------|--------|--|--|--|--|
|   | SO2   | NOx   | PM-10 | PM-2.5 |  |  |  |  |
|   | μg/m3 | μg/m3 | μg/m3 | μg/m3  |  |  |  |  |
| October-2023,   | 12.4  | 20.4  | 55.8  | 32.5   |  |  |  |  |
| November-2023,  | 13.1  | 20.7  | 54.5  | 31.1   |  |  |  |  |
| December-2023,  | 15.3  | 21.1  | 56.1  | 32.0   |  |  |  |  |
| January-2024,   | 14.3  | 22.3  | 54.1  | 33.8   |  |  |  |  |
| February-2024,  | 13.7  | 17.7  | 51.8  | 26.3   |  |  |  |  |
| March-2024,   | 14.4  | 20.0  | 52.4  | 27.2   |  |  |  |  |
| Min   | 12.4  | 17.7  | 51.8  | 26.3   |  |  |  |  |
| Max   | 15.3  | 22.3  | 56.1  | 33.8   |  |  |  |  |
| Average   | 13.9  | 20.4  | 54.1  | 30.5   |  |  |  |  |

| Ambient air quality monitoring report: Fabrication yard |       |       |       |        |  |  |  |
|---|-------|-------|-------|--------|--|--|--|
|   | SO2   | NOx   | PM-10 | PM-2.5 |  |  |  |
|   | μg/m3 | μg/m3 | μg/m3 | μg/m3  |  |  |  |
| October-2023,   | 10.8  | 21.3  | 56.3  | 33.8   |  |  |  |
| November-2023,  | 9.7   | 21.9  | 53.7  | 31.6   |  |  |  |
| December-2023,  | 10.2  | 24.9  | 54.1  | 32.7   |  |  |  |
| January-2024,   | 11.6  | 25.1  | 56.0  | 31.2   |  |  |  |
| February-2024,  | 10.7  | 20.4  | 48.7  | 23.9   |  |  |  |
| March-2024,   | 11.4  | 21.3  | 50.1  | 24.7   |  |  |  |
| Min   | 9.7   | 20.4  | 48.7  | 23.9   |  |  |  |
| Max   | 11.6  | 25.1  | 56.3  | 33.8   |  |  |  |
| Average   | 10.7  | 22.5  | 53.1  | 30.0   |  |  |  |

### **JSPCB Norms**

| SO <sub>2</sub> | NOx           | $PM_{10}$     | PM <sub>2.5</sub> |
|-----------------|---------------|---------------|-------------------|
| $(\mu g/m^3)$   | $(\mu g/m^3)$ | $(\mu g/m^3)$ | $(\mu g/m^3)$     |
| 80              | 80            | 100           | 60                |

# MANUAL STACK EMISSION MONITORING REPORT OF VRM BAG HOUSE STACK FROM OCTOBER 2023 TO MARCH 2024.

| Month          | Min. | Max. | Avg. |
|----------------|------|------|------|
| October-2023,  | 15.3 | 25.3 | 20.3 |
| November-2023, | 16.5 | 26.6 | 21.2 |
| December-2023, | 17.3 | 25.1 | 21.0 |
| January-2024,  | 12.4 | 21.6 | 17.1 |
| February-2024, | 7.2  | 14.2 | 10.8 |
| March-2024,    | 8.9  | 15.3 | 11.6 |
| Min.           | 7.2  | 14.2 | 10.8 |
| Max.           | 17.3 | 26.6 | 21.2 |
| Avg.           | 12.8 | 21.1 | 16.7 |

# ON LINE STACK EMISSION MONITORING REPORT OF VRM BAG HOUSE STACK FROM OCTOBER 2023 TO MARCH 2024

| Month          | Min. | Max. | Avg. |
|----------------|------|------|------|
| October-2023,  | 12.2 | 25.1 | 21.1 |
| November-2023, | 6.8  | 19.2 | 16.8 |
| December-2023, | 4.4  | 24.8 | 17.1 |
| January-2024,  | 7.7  | 22.4 | 18.4 |
| February-2024, | 4.3  | 21.2 | 12.5 |
| March-2024,    | 8.1  | 22.9 | 18.1 |
| Min.           | 4.4  | 19.2 | 12.5 |
| Max.           | 12.2 | 25.1 | 21.1 |
| Avg.           | 7.6  | 22.5 | 17.2 |

| JSPCB Norms | 30 mg/Nm3 |
|-------------|-----------|
|-------------|-----------|

### NOISE LEVEL REPORT FROM OCTOBER 2023 TO MARCH 2024

| Near FH-3 Building |      |            |      |  |                  |      |      |
|--------------------|------|------------|------|--|------------------|------|------|
|                    | Day  | / Time dB( | A)   |  | Night Time dB(A) |      |      |
|                    | Min. | Max.       | Avg. |  | Min.             | Max. | Avg. |
| October2023,       | 42.8 | 44.7       | 43.4 |  | 37.9             | 42.7 | 41.4 |
| November-2023,     | 43.1 | 43.5       | 43.2 |  | 38.8             | 41.4 | 40.6 |
| December-2023,     | 44.3 | 44.8       | 44.1 |  | 39.7             | 43.7 | 42.1 |
| January-2024,      | 42.4 | 43.4       | 42.2 |  | 43.1             | 44.1 | 43.4 |
| February-2024,     | 42.8 | 44.6       | 43.6 |  | 39.5             | 43.7 | 41.7 |
| March-2024,        | 41.8 | 43.5       | 42.7 |  | 38.1             | 42.2 | 42.0 |

| Near Fabrication yard |                |            |      |   |                  |      |      |
|-----------------------|----------------|------------|------|---|------------------|------|------|
|                       | Day            | / Time dB( | A)   |   | Night Time dB(A) |      |      |
|                       | Min. Max. Avg. |            |      |   | Min.             | Max. | Avg. |
| October-2023,         | 65.1           | 69.1       | 67.6 | ] | 68.4             | 65.6 | 63.3 |
| November-2023,        | 64.3           | 68.4       | 66.6 | ] | 60.7             | 62.9 | 62.4 |
| December-2023,        | 63.7           | 66.2       | 65.0 |   | 59.7             | 63.4 | 61.5 |
| January-2024,         | 62.9           | 67.5       | 65.4 |   | 57.3             | 64.5 | 60.9 |
| February-2024,        | 60.8           | 63.7       | 62.2 |   | 53.9             | 63.8 | 58.1 |
| March-2024,           | 61.7           | 65.9       | 63.4 |   | 52.1             | 58.6 | 55.4 |

|                | Near T         | ime office | )     |      |                |      |      |  |      |                  |  |  |  |
|----------------|----------------|------------|-------|------|----------------|------|------|--|------|------------------|--|--|--|
|                | Day Time dB(A) |            |       |      | Day Time dB(A) |      |      |  | Nigh | Night Time dB(A) |  |  |  |
|                | Min.           |            | Min.  | Max. | Avg.           |      |      |  |      |                  |  |  |  |
| October-2023,  | 62.8           | 64.4       | 64.6  |      | 58.4           | 63.9 | 61.5 |  |      |                  |  |  |  |
| November-2023, | 61.4           | 65.9       | 63.54 |      | 57.4           | 61.2 | 60.1 |  |      |                  |  |  |  |
| December-2023, | 63.1           | 66.5       | 64.9  |      | 59.2           | 62.3 | 61.3 |  |      |                  |  |  |  |
| January-2024,  | 60.7           | 64.7       | 62.6  |      | 57.6           | 60.8 | 59.0 |  |      |                  |  |  |  |
| February-2024, | 62.8           | 65.3       | 64.13 |      | 56.2           | 63.5 | 58.2 |  |      |                  |  |  |  |
| March-2024,    | 60.5           | 66.9       | 63.84 |      | 58.9           | 62.7 | 60.9 |  |      |                  |  |  |  |

|                | Wagor          | Tripler |      |  |                  |      |       |
|----------------|----------------|---------|------|--|------------------|------|-------|
|                | Day Time dB(A) |         |      |  | Night Time dB(A) |      |       |
|                | Min.           | Max.    | Avg. |  | Min.             | Max. | Avg.  |
| October-2023,  | 62.3           | 65.8    | 64.6 |  | 61               | 63.4 | 63.3  |
| November-2023, | 63.8           | 67.2    | 65.5 |  | 59.9             | 62.7 | 61.5  |
| December-2023, | 64.6           | 68.7    | 66.3 |  | 60.7             | 64.1 | 62.6  |
| January-2024,  | 61.7           | 67.1    | 63.7 |  | 57.5             | 65.8 | 60.7  |
| February-2024, | 60.5           | 65.1    | 64.8 |  | 59.5             | 63.5 | 61.13 |
| March-2024,    | 62.3           | 69.7    | 65.5 |  | 56.8             | 62.7 | 59.2  |

# FUGITIVE DUST EMISSION MONITORING REPORT FROM SEPTEMBER 2023 TO MARCH 2024

| Sr.<br>No | Date of monitoring | Near Mill area<br>µg/m3 | Near Coal<br>yard µg/m3 | Near Packing<br>plant μg/m3 | Near raw<br>material yard<br>µg/m3 |
|-----------|--------------------|-------------------------|-------------------------|-----------------------------|------------------------------------|
| 1         | October-2023,      | 878.2                   | 898.5                   | 957.6                       | 764.8                              |
| 2         | November-2023,     | 987.3                   | 803.7                   | 1067.9                      | 1107.4                             |
| 3         | December-2023,     | 1093.8                  | 1023.6                  | 1139.5                      | 954.12                             |
| 4         | January-2024,      | 1123.6                  | 1135.2                  | 879.4                       | 809.3                              |
| 5         | February-2024,     | 1206.7                  | 813.3                   | 1035.7                      | 1095.3                             |
| 6         | March-2024,        | 1034.2                  | 1134.5                  | 993.4                       | 1247.5                             |
|           | Min.               | 878.2                   | 803.7                   | 879.4                       | 764.8                              |
|           | Max.               | 1206.7                  | 1135.2                  | 1139.5                      | 1247.5                             |
|           | Avg.               | 1053.97                 | 968.13                  | 1012.25                     | 996.40                             |

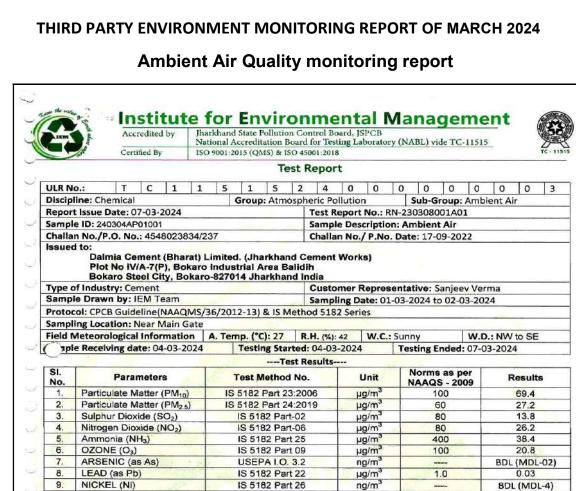
| Fugitive dust CPCB Norms | 2000 μg/m3 |
|--------------------------|------------|
|--------------------------|------------|

# GROUND WATER LEVEL REPORT OF SURROUNDING VILLAGES FROM OCTOBER 2023 TO MARCH 2024

| Pakhriatand (Near 23 Anganwadi) 86 Tupkadi (Near 23 Electric Pole) 86 Godawali 23 (Near Temple) 86 | Coordinate of |          | De   | pth from gro | ound (feet) |           |        |
|--|---------------|----------|--|--------------|-------------|-----------|--------|
| Location   | Site          | October- | November   | Decembe      | January-    | February- | March- |
|  | Site          | 2023,    | 223, -2023, r-2023, 2024, 2024, 20<br>5'0" 16'7" 17'4" 20'5" 20.7" 22<br>1'3" 12'1" 13'6" 16'1" 16'9" 19 | 2024,        |             |           |        |
| Pakhriatand  |               |          |  |              |             |           |        |
| (Near  | 23070'5590"N  |          |  |              |             |           |        |
| Anganwadi)   | 86006'2678" E | 16'0"    | 16'7"  | 17'4"        | 20'5"       | 20.7"     | 22'3"  |
| Tupkadi (Near  | 23071'3362"N  |          |  |              |             |           |        |
| Electric Pole)   | 86006'1573" E | 11'3"    | 12'1"  | 13'6"        | 16'1"       | 16'9"     | 19'2"  |
| Godawali   | 23068'7751"N  |          |  |              |             |           |        |
| (Near Temple)  | 86006'0031" E | 4'8"     | 5'4"   | 6'3"         | 6'9"        | 7'5"      | 9'8"   |
| Bhutkuru   |               |          |  |              |             |           |        |
| (Near primary  | 23070'4642"N  |          |  |              |             |           |        |
| School)  | 86005'1418" E | 13'9"    | 14'6"  | 15'3"        | 17'0"       | 17'8"     | 19'1"  |

# DALMIA CEMENT BHARAT LIMITED, BOKARO STP OUTLET WATER QUALITY ANALYSIS REPORT

|        | TLET WATER C   |         | NALYSIS RE       | PORT FRO      | ОМ ОСТОЕ      | BER 2023        |
|--------|----------------|---------|------------------|---------------|---------------|-----------------|
| Sr. No | Parameter      | PH      | Suspended solids | COD<br>mg/lit | BOD<br>mg/lit | Oil &<br>Grease |
| 31.110 | Norms          | 5.5-9.0 | 100              | 250           | 30            | 10              |
|        | •              |         |                  |               |               |                 |
| 1      | October-2023,  | 7.5     | 24               | 44            | 6.0           | 3.2             |
| 2      | November-2023, | 7.1     | 20               | 24            | BDL           | BDL             |
| 3      | December-2023, | 7.2     | 22               | 20            | BDL           | 7.1             |
| 4      | January-2024,  | 7.1     | 33               | 84            | 12.0          | 3.6             |
| 5      | February-2024, | 7.2     | 36               | 80            | 11.0          | 1.5             |
| 6      | March-2024,    | 7.5     | 38               | 76            | 12            | 2.9             |
|        |                | _       |                  | _             |               |                 |
|        | Min.           | 7.1     | 20               | 20            | 6             | 1.5             |
|        | Max.           | 7.5     | 38               | 84            | 12            | 7.1             |
|        | Avg.           | 7.28    | 29               | 54            | 9.8           | 3.8             |



| - |     | - | • |    |        |   |
|---|-----|---|---|----|--------|---|
|   | _ F | n | d | of | Report | - |

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| 1 mit is Specified    | As per the Environmental (Protection) Rule – 1986   |
| mark                  | Sample Comply with prescribed specification.  |

Tested By: Neeral Singh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

icting Contractual Notes: The laboratory accepts responsibility for content of this report.
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is issued by the Director of the Organization.

Checked by

anmen Akthorized Signatory

(Taugeer Ahn

S. C. Jain) Technical Manager Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India Ph - 8407804253, 8407804251, Email - icm2012@rediffmail.com

ISO 9001:2015 SO 45001:2018



Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )



Testing Ended: 07-03-2024

#### **Test Report**

| Discipline: Chemical  | Group: Atmo         | Group: Atmospheric Pollution Sub-Group: Ambient Air |                     |                |  |  |  |
|---|---------------------|---|---------------------|----------------|--|--|--|
| Report Issue Date: 07-03-2024   |                     | Test Report No.: RN-230308001A01                    |                     |                |  |  |  |
| Sample ID: 240304AP01001  |                     | Sample Description: Ambient Air                     |                     |                |  |  |  |
| Challan No./P.O. No.: 4548023834/237  |                     | Challan No  | ./ P.No. Date: 17-0 | 9-2022         |  |  |  |
| Plot No IV/A-7(P), Bokaro<br>Bokaro Steel City, Bokar<br>Type of Industry: Cement |                     | id India  | Representative: Sa  | nieev Verma    |  |  |  |
| Sample Drawn by: IEM Team   | _                   | Sampling Date: 01-03-2024 to 02-03-2024             |                     |                |  |  |  |
| Protocol: CPCB Guideline(NAAQMS,  | /36/2012-13) & IS M |   |                     |                |  |  |  |
| Sampling Location: Near Main Gate   |                     |   |                     |                |  |  |  |
| Field Meteorological Information  | A. Temp. (°C): 27   | R.H. (%): 42  | W.C.: Sunny         | W.D.: NW to SE |  |  |  |

Testing Started: 04-03-2024 --- Test Results---

|                |  | I COL MCOUNT        |       |                              |                 |
|----------------|--|---------------------|-------|------------------------------|-----------------|
| SI. Parameters |  | Test Method No.     | Unit  | Norms as per<br>NAAQS - 2009 | Results         |
| 1.             | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m³ | (4444)                       | BDL (MDL-0.18)  |
| 2.             | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m³ |                              | BDL(MDL-1.8)    |
| 3.             | BENZENE (C <sub>6</sub> H <sub>6)</sub>          | IS 5182 Part 11     | µg/m³ |                              | BDL (MDL- 0.06) |

----End of Report----

| Env.Condition of Lab.  Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 6 testing area as per IS 196:1966(C). |  |  |  |
|--|--|--|--|
| Abbreviation   | MDL: Minimum Detection Limit, BDL: Below Detection Limit |  |  |
| Norms** is Specified   | National Ambient Air Quality Standards (NAAQS), 2009.    |  |  |
| Remark   | Sample Comply with prescribed specification.             |  |  |

Tested By: Neeraj Singh

Sample Drawn By:Rajiv Kumar Singh & Team

Sample Receiving date: 04-03-2024

Specific Contractual Notes: -Checked by The laboratory accepts responsibility for content of this report.

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Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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ISO 9001:2015 (QMS) & ISO 45001:2018



#### Test Report

| ULR No.:                 | T         | C       | 1 1       | . 5     | 1          | 5      | 2                               | 4  | 0     | 0      | 0     | 0        | 0     | 0      | 0       | 0     | 4 |
|--------------------------|-----------|---------|-----------|---------|------------|--------|---------------------------------|--|-------|--------|-------|----------|-------|--------|---------|-------|---|
| Discipline: C            | hemical   |         |           |         | Group:     | Atmo   | sphe                            | ric Poll   | ution | 1      |       | Sub-G    | roup: | Ambi   | ent Air |       |   |
| Report Issue             | Date: 0   | 7-03-2  | 024       |         |            |        | 1                               | est Re   | port  | No.: I | RN-2  | 303080   | 01A0  | 2      |         |       |   |
| Sample ID: 240304AP01002 |           |         |           |         |            | S      | Sample Description: Ambient Air |  |       |        |       |          |       |        |         |       |   |
| Challan No./             | P.O. No.  | : 4548  | 023834/   | 237     |            |        | - 0                             | Challan  | No./  | P.No   | . Da  | te: 17-0 | 9-202 | 22     |         |       |   |
| Type of Indu             |           | -       | y, Dokai  | 0-021   | 014 Jhar   | Kiiaii | 7                               | 11000  | ner R | epre   | senta | ative: S | aniee | v Verr | na      |       |   |
| Sample Dra               |           |         | am        |         |            |        | _                               | Customer Representative: Sanjeev Verma Sampling Date: 01-03-2024 to 02-03-2024 |       |        |       |          |       |        |         |       |   |
| Protocol: CP             | CB Guide  | eline(N | IAAQMS    | /36/20  | )12-13) &  | ISM    |                                 |  | _     |        |       |          |       |        |         |       |   |
|                          |           |         |           | n Vard  | 1          |        |                                 |  |       |        |       |          |       |        |         |       |   |
| Sampling Lo              | cation: N | lear Fa | ibricatio | ii tatu |            |        |                                 |  |       |        |       |          |       |        |         |       |   |
| Sampling Lo              |           |         |           | _       | emp. (°C): | 27     | R.H.                            | . (%): 42  | 2     | W.C.   | : Sur | ny       |       | W.D.   | .: NW   | to SE |   |

| 1           | est | Results  |  |
|-------------|-----|----------|--|
| The case of |     | IICSUITS |  |

| SI.<br>No. | Parameters                              | Test Method No.      | Unit  | Norms as per<br>NAAQS - 2009 | Results      |
|------------|---|----------------------|-------|------------------------------|--------------|
| 1.         | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m³ | 100                          | 68.1         |
| 2.         | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m³ | 60                           | 30.3         |
| 3.         | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m³ | 80                           | 16.8         |
| 4.         | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m³ | 80                           | 32.4         |
| 5.         | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m³ | 400                          | 37.1         |
| 6.         | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m³ | 100                          | 18.4         |
| 7.         | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m³ |                              | BDL (MDL-02) |
| 8.         | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m³ | 1.0                          | 0.03         |
| 9.         | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m³ |                              | BDL (MDL-4)  |

#### -End of Penort-

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all             |
|-----------------------|---|
| Abbreviation          | testing area as per IS 196:1966(C).  MDL: Minimum Detection Limit, BDL: Below Detection Limit |
| I mit is Specified    | As per the Environmental (Protection) Rule - 1986   |
| hark                  | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

| Specific Contractual Notes: -   | Checked by        | Authorized Signatory |
|---|-------------------|----------------------|
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| In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com  | (Taugeer Ahmad)   | (D). S. C. Jain)     |
| On the basis of Quality Checketl and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.   | Technical Manager | Panco                |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



Certified by

ISO 9001:2015 (Quality Management System) ISO 45001:2018 (Occupational Health & Safety Management System)



| Discipline: Chemical   | Group: Atmo                             | ospheric Polluti                    | on Sub-  | -Group: Ambient Air |  |  |  |
|--|---|-------------------------------------|--|---------------------|--|--|--|
| Report Issue Date: 07-03-2024  |   | Test Report No.: RN-230308001A02    |  |                     |  |  |  |
| Sample ID: 240304AP01002   |   | Sample De                           | escription: Ambie  | ent Air             |  |  |  |
| Challan No./P.O. No.: 4548023834   | /237                                    | Challan No./ P.No. Date: 17-09-2022 |  |                     |  |  |  |
| Plot No IV/A-7(P), Bokar<br>Bokaro Steel City, Boka<br>Type of Industry: Cement  |   | id India                            | r Representative   | Sanieev Verma       |  |  |  |
| Sample Drawn by: IEM Team  |   |                                     | Date: 01-03-2024   |                     |  |  |  |
| Protocol: CPCB Guideline(NAAQMS  | /36/2012-13) & IS M                     |                                     | A PURPLE OF THE A STANDARD OF THE STANDARD OF  |                     |  |  |  |
| and the same of th |   |                                     | No. of the last of |                     |  |  |  |
| Sampling Location: Near Fabricatio   | n Yard                                  |                                     |  |                     |  |  |  |
| Sampling Location: Near Fabrication Id Meteorological Information  | NAME OF TAXABLE PARTY OF TAXABLE PARTY. | R.H. (%): 42                        | W.C.: Sunny  | W.D.                |  |  |  |

Testing Started: 04-03-2024

| SI.<br>No. | Parameters                                    | Test Method No.     | Unit  | Norms as per<br>NAAQS - 2009 | Results         |
|------------|---|---------------------|-------|------------------------------|-----------------|
| 1.         | Benzo (a) Pyrene (BaP) Particulate phase only | IS 5182 Part 12     | ng/m³ |                              | BDL (MDL-0.18)  |
| 2,         | Carbon Monoxide (CO)                          | IEM/SOP/Air-01:2022 | mg/m³ |                              | BDL(MDL-1.8)    |
| 3.         | BENZENE (C <sub>6</sub> H <sub>6)</sub>       | IS 5182 Part 11     | μg/m³ |                              | BDL (MDL- 0.06) |

|                       | End of Report   |
|-----------------------|---|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Norms** is Specified  | National Ambient Air Quality Standards (NAAQS), 2009.   |
| Remark                | Sample Comply with prescribed specification.  |

Tested By: Neerai Singh

Sample Drawn By:Rajiv Kumar Singh & Team

Sample Receiving date: 04-03-2024

Specific Contractual Notes: -

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report of by the Director of the Organization.

Checked by

Authorized Signatory

(Taugeer Ahrtlad)

S. C. Jain

Testing Ended: 07-03-2024

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharthand 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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ISO 45001:2018



National Accreditation Board for Testing Laboratory (NABL) vide TC-11515

Certified By

ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

| ULR No.:                 | T  | C       | 1 1     | . 5    | 1          | 5      | 2                                       | 4  | 0     | 0       | 0     | 0        | 0      | 0      | 0       | 0    | 5 |
|--------------------------|--|---------|---------|--------|------------|--------|---|--|-------|---------|-------|----------|--------|--------|---------|------|---|
| Discipline: C            | hemical  |         |         |        | Group:     | Atmo   | osphe                                   | ric Poll   | ution | 1       |       | Sub-G    | roup:  | Ambi   | ent Air |      |   |
| Report Issue             | Date: 0  | 7-03-20 | 24      |        |            |        | 1                                       | est Re   | port  | No.:    | RN-2  | 303080   | 01A0   | 3      |         |      |   |
| Sample ID: 240304AP01003 |  |         |         |        |            |        | 5                                       | ample  | Desc  | criptio | on: A | mbien    | t Air  |        |         |      |   |
| Challan No./             | P.O. No.   | : 45480 | 23834/  | 237    |            |        | (                                       | Challan  | No./  | P.No    | o. Da | te: 17-0 | 09-202 | 22     |         |      |   |
| Type of Indu             | The second second  |         | , bokai | 0-621  | 014 Jhar   | KIIAII |   |  | ner R | epre    | sent  | ative: S | aniee  | v Verr | na      |      |   |
| Sample Dra               |  |         | m       | _      |            |        | -                                       | Customer Representative: Sanjeev Verma Sampling Date: 01-03-2024 to 02-03-2024 |       |         |       |          |        |        |         |      |   |
| Protocol: CP             |  |         |         | /36/20 | 12-13) &   | IS M   |   |  | -     | -       | . 50  |          |        |        |         |      |   |
|                          | cation: N  |         |         |        |            |        | 222000000000000000000000000000000000000 |  |       | UEAL.   |       |          |        | _      |         |      |   |
| Sampling ro              |  |         |         |        |            |        |   |  |       |         |       |          |        |        |         |      |   |
|                          | STATE OF THE PARTY |         |         | A. Te  | emp. (°C): | 27     | R.H.                                    | . (%): 42  |       | W.C.    | .: Su | nny      |        | W.D.   | : NW to | o SE |   |

#### ----Test Results----

| SI.<br>No. | Parameters                              | Test Method No.      | Unit              | Norms as per<br>NAAQS - 2009 | Results      |
|------------|---|----------------------|-------------------|------------------------------|--------------|
| 1.         | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                          | 55.7         |
| 2.         | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m³             | 60                           | 25.3         |
| 3.         | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m³             | 80                           | 12.4         |
| 4.         | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m³             | 80                           | 24.3         |
| 5.         | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m³             | 400                          | 41.2         |
| 6.         | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m³             | 100                          | 17.5         |
| 7.         | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> |                              | BDL (MDL-02) |
| 8.         | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m³             | 1.0                          | 0.03         |
| 9.         | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ***                          | BDL (MDL-4)  |

#### ----End of Report----

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986   |
| hark                  | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Checked by

Authorized Signatory

Technical Manager

(Dr. S. C. Jain) Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

ISO 9001:2015 .SO 45001:2018

Ph - 8407804253, 8407804251, Email - icm2012@rediffmail.com



ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System ) Certified by



#### **Test Report**

| Discipline: Chemical                                 | Group: Atmo         | ospheric Polluti   | on Sub-Gr  | oup: Ambient Air |  |  |  |
|--|---------------------|--|--|------------------|--|--|--|
| Report Issue Date: 07-03-2024                        |                     | Test Repo  | rt No.: RN-23030800  | 01A03            |  |  |  |
| Sample ID: 240304AP01003                             |                     | Sample De  | escription: Ambient  | Air              |  |  |  |
| Challan No./P.O. No.: 4548023834/                    | 237                 | Challan No   | o./ P.No. Date: 17-09  | 9-2022           |  |  |  |
| Bokaro Steel City, Bokar<br>Type of Industry: Cement | o-827014 Jharkhan   | The state of the s | Representative: Sa   | nieev Verma      |  |  |  |
| Sample Drawn by: IEM Team                            |                     |  | Sampling Date: 01-03-2024 to 02-03-2024  |                  |  |  |  |
| Protocol: CPCB Guideline(NAAQMS                      | /36/2012-13) & IS M |  |  |                  |  |  |  |
| Sampling Location: Near Colony                       | V                   |  | Alcoholin (Alcoholin Alcoholin Alcoh |                  |  |  |  |
|  |                     | \$25.00.0000 - FEB. 100.0000 - 100.0000  | The second secon |                  |  |  |  |
| Field Meteorological Information                     | A. Temp. (°C): 27   | R.H. (%): 42   | W.C.: Sunny  | W.D.: NW to SE   |  |  |  |

-Test Results----

| SI.<br>No. | Parameters                                    | Test Method No.     | Unit  | Norms as per<br>NAAQS - 2009 | Results         |
|------------|---|---------------------|-------|------------------------------|-----------------|
| 1.         | Benzo (a) Pyrene (BaP) Particulate phase only | IS 5182 Part 12     | ng/m³ | 1 <del></del>                | BDL (MDL-0.18)  |
| 2.         | Carbon Monoxide (CO)                          | IEM/SOP/Air-01:2022 | mg/m³ |                              | BDL(MDL-1.8)    |
| 3.         | BENZENE (C <sub>6</sub> H <sub>6)</sub>       | IS 5182 Part 11     | µg/m³ | ****                         | BDL (MDL- 0.06) |

----End of Report----

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Norms** is Specified  | National Ambient Air Quality Standards (NAAQS), 2009.   |
| Remark                | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kurnar Singh & Team

cific Contractual Notes: -

ed by the Director of the Organization.

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report

(Taugeer Ahmad) Technical Manager

Checked by

(Dr/S. C. Jain)

nta/Authorized Signatory

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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Certified By

ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

| ULR No.:                                      | Т                     | C       | 1      | 1      | 5      | 1 5                   | 2       | 4                 | 0     | 0        | 0     | 0      | 0       | 0             | 0      | 0 | 6   |
|---|-----------------------|---------|--------|--------|--------|-----------------------|---------|-------------------|-------|----------|-------|--------|---------|---------------|--------|---|-----|
| Discipline: Cl                                | nemical               |         | -      | -      | Gro    | up: Atm               | ospher  | ic Pollu          | tion  |          | St    | ıb-Gr  | oup: A  | mbie          | nt Air |   | 400 |
| Report Issue                                  | Date: 07              | -03-20  | 24     |        | -27    |                       | Te      | st Rep            | ort N | lo.: RN  | 1-230 | 30800  | 1A04    |               |        |   |     |
| Sample ID: 2                                  | 40304AP               | 01004   |        |        |        |                       | Sa      | mple I            | escr  | iption   | : Aml | oient. | Air     |               |        |   |     |
| Challan No./                                  | P.O. No.:             | 45480   | 23834  | /237   |        |                       | CI      | nallan I          | No./  | P.No.    | Date: | 17-09  | 9-2022  | 2             |        |   |     |
|   | karo Ste<br>strv: Cem | el City |        |        |        |                       | nd Indi | a<br>ustom        | er Re | prese    | ntath | ve: Sa | nieev   | Verm          | а      |   |     |
| Sample Dray                                   |                       |         | ım     |        |        |                       | 100.50  | mplin             | -     |          |       |        |         | 1000          | a      |   |     |
|   | 200                   |         | 107.15 |        |        |                       | -       | arraphan d        | ,     | _        | 201   |        |         |               |        |   |     |
| Protocol: CP                                  | CB Guide              | line(NA | AAQM!  | 3/36/2 | 2012-1 | 3) & IS N             | lethod  | 5182 S            | eries |          |       |        |         |               |        |   |     |
| Protocol: CPC<br>Sampling Loc                 |                       |         |        |        |        | 3) & IS N             | lethod  | 5182 S            | eries | 6        |       | 100    |         |               |        |   |     |
| Protocol: CPG<br>Sampling Loc<br>Field Meteor | ation: N              | ear Wa  | gon Ti | ppler  |        | 3) & IS M<br>(°C): 27 |         | 5182 S<br>(%): 42 | 7     | /.C.: Si | unny  | W      | /.D.: N | <b>I</b> W to | SE     |   |     |

#### Test Results

| SI.<br>No. | Parameters                              | Test Method No.      | Unit              | Norms as per<br>NAAQS - 2009 | Results      |
|------------|---|----------------------|-------------------|------------------------------|--------------|
| 1.         | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m³             | 100                          | 67.2         |
| 2.         | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m³             | 60                           | 26.4         |
| 3.         | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m³             | 80                           | 13.5         |
| 4.         | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m³             | 80                           | 26.7         |
| 5.         | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m³             | 400                          | 35.1         |
| 6.         | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                          | 28.7         |
| 7.         | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m³             |                              | BDL (MDL-02) |
| 8.         | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m³             | 1.0                          | 0.04         |
| 9.         | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m³             |                              | BDL (MDL-4)  |

#### ----End of Report----

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986   |
| mark                  | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

a/Authorized Signatory

(Taugeer Ahmed

S. C. Jain)

Technical Manager

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

ISO 9001:2015 ISO 45001:2018

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



ISO 9001:2015 (Quality Management System )
ISO 45001:2018 (Occupational Health & Safety Management System ) Certified by

#### Test Report

| Discipline: Chemical   | Group: Atmos         | spheric Pollution                | Sul  | o-Group: Ambient Air                                |  |  |
|--|----------------------|----------------------------------|--|---|--|--|
| Report Issue Date: 07-03-2024                                |                      | Test Report No.: RN-230308001A04 |  |   |  |  |
| Sample ID: 240304AP01004                                     |                      | Sample Desc                      | ription: Amb   | ent Air   |  |  |
| Challan No./P.O. No.: 4548023834/                            | 237                  | Challan No./                     | P.No. Date:  | 17-09-2022  |  |  |
| Bokaro Steel City, Boka                                      | ro-82/014 Jharkhand  |                                  | epresentativ   |   |  |  |
| Type of Industry: Cement                                     |                      |                                  |  | e: Sanieev Verma                                    |  |  |
| Sample Drawn by: IEM Team                                    | -                    |                                  | ST. DO. DOMEST SPECIAL SECTION | and the Author of the Author Against the Annuage of |  |  |
|  | /36/2012-13) & IS Me | Sampling Da                      | te: 01-03-2024   | and the Author of the Author Against the Annuage of |  |  |
|  |                      | Sampling Da                      | te: 01-03-2024   | and the Author of the Author Against the Annuage of |  |  |
| Sample Drawn by: IEM Team<br>Protocol: CPCB Guideline(NAAQMS | pler                 | Sampling Da<br>thod 5182 Serie   | te: 01-03-2024   | and the Author of the Author Against the Annuage of |  |  |

| SI.<br>No. | Parameters                                       | Test Method No.     | Unit  | Norms as per<br>NAAQS - 2009 | Results         |
|------------|--|---------------------|-------|------------------------------|-----------------|
| 1.         | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m³ |                              | BDL (MDL-0.18)  |
| 2.         | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m³ | ****                         | BDL(MDL-1.8)    |
| 3.         | BENZENE (C <sub>6</sub> H <sub>6)</sub>          | IS 5182 Part 11     | µg/m³ |                              | BDL (MDL- 0.06) |

---- Fnd of Report----

|                       | Lita of Report  |
|-----------------------|---|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Norms** is Specified  | National Ambient Air Quality Standards (NAAQS), 2009.   |
| Remark                | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By:Rajlv Kumar Singh & Team

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Checked by Authorized Signatory

(Taugeer Ahr

S. C. Jain

Technical Manage Direct

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

ISO 45001:2018

150 9001:2015

RO

### **STACK EMISSION REPORT**







#### **Test Report**

| ULR No.:   | T  | C             | 1                        | 1                  | 5                | 1                | 5                                | 2                                  | 4  | 0  | 0      | 0      | 0                          | 0             | 0      | 0     | 1     | 8 |
|--|--|---------------|--------------------------|--------------------|------------------|------------------|----------------------------------|------------------------------------|--|--|--------|--------|----------------------------|---------------|--------|-------|-------|---|
| Discipline: Chem   | ical   |               |                          | •                  |                  | Gro              | up: A                            | mosp                               | heric  | Pollut   | ion    |        | Sub-G                      | roup:         | Stack  | Emiss | ion   |   |
| Report Issue Dat   | e: 07-   | 03-2          | 024                      |                    |                  |                  |                                  |                                    | Te   | st Re  | port N | lo.: F | RN-230                     | 30800         | 151    |       |       |   |
| Sample ID: 24030   | 04APC  | 400           | 1                        |                    |                  |                  |                                  |                                    | Sa   | mple   | Desci  | iptic  | n: Sta                     | ck Emi        | ission |       |       |   |
| Challan No./P.O.   | No.:   | 4548          | 30238                    | 34/23              | 7                |                  |                                  |                                    | Cl   | allan  | No./   | P.No   | . Date                     | 17-09         | 9-2022 | Š     |       |   |
| Plot No<br>Bokard  | Stee   | l Ĉit         |                          |                    |                  |                  |                                  |                                    | lia  |  |        |        |                            |               | 10     | 904   |       |   |
| Tunn of Industria  | Cam  | ant           |                          |                    |                  |                  |                                  |                                    |  | Intan  | or De  | mmo    | anninti                    | un Ca         | minau  | Varm  | -     |   |
| Type of Industry:<br>Sample Drawn b  | _  |               | am                       |                    | -                |                  |                                  |                                    |  |  |        | •      | entati                     |               | njeev  | Verm  | а     |   |
| Sample Drawn b   | y: IEI   | И Те          |                          | 80/20              | 13-14            | ) & IS           | Meth                             | od 11                              | Sa   | mplir  |        | •      | sentati<br>L-03-20         |               | njeev  | Verm  | a     |   |
|  | y: IEI<br>iuideli                              | VI Te         | LATS/                    |                    | )13-14<br>A. Tem | •                |                                  |                                    | Sa   | mplir<br>eries                                   | ng Dat | e: 01  |                            |               |        |       | to SE |   |
| Sample Drawn b   | y: IEI<br>iuideli<br>gical II                  | M Te<br>ne (I | LATS/a                   | n /                | A. Ten           | p. (°C           |                                  | R.H                                | Sa<br>255 Sa<br>4. (%)                                 | mplir<br>eries<br>: 45                           | ng Dat | e: 01  | L-03-20                    | )24           | w.D.   | : NW  | to SE |   |
| Sample Drawn b<br>Protocol: CPCB G<br>Field Meteorolog                     | y: IEI<br>iuideli<br>gical II                  | M Te<br>ne (I | LATS/a                   | n /                | A. Ten           | p. (°C<br>Testir | ): 26                            | R.H                                | 255 Se<br>4. (%)<br>04-03-                             | mplir<br>eries<br>: 45<br>2024                   | ng Dat | e: 01  | L-03-20<br>inny            | )24           | w.D.   | : NW  | to SE |   |
| Sample Drawn b<br>Protocol: CPCB G<br>Field Meteorolog                     | y: IEN<br>iuideli<br>gical II<br>g date        | M Te<br>ne (I | LATS/S<br>matio<br>03-20 | n /                | A. Ten           | p. (°C<br>Testir | ): 26<br>ng Sta<br>eneral        | R.H<br>rted:(                      | \$255 Set 1. (%)                                       | mplir<br>eries<br>: 45<br>2024<br>ation          | W.C    | e: 01  | L-03-20<br>inny            | )24           | w.D.   | : NW  | to SE |   |
| Sample Drawn b<br>Protocol: CPCB G<br>Field Meteorolog<br>Sample Receiving | y: IEM<br>juideli<br>gical In<br>g date<br>ion | M Te<br>ne (I | Matio<br>03-20<br>BAG I  | n /<br>124<br>HOUS | A. Tem           | Testin<br>G      | ): 26<br>ng Sta<br>eneral<br>Sta | R.H<br>rted:(<br>Physical<br>ck He | Sa<br>255 Se<br>1. (%)<br>04-03-<br>1 Inform<br>ight f | mplir<br>eries<br>: 45<br>2024<br>ation<br>rom G | W.C    | e: 01  | l-03-20<br>inny<br>Testinį | )24<br>g Ende | W.D.   | : NW  | to SE |   |

| Stack Identification         | BAG HOUSE MILL    | Stack Height from Ground Level (m)     | 50          |
|------------------------------|-------------------|--|-------------|
| Emission Due to              | Induction Furnace | Port Hole Height from Ground Level (m) | 30          |
| Plat Form                    | Permanent         | Inner Dimension of Stack (m)           | 3.7         |
| Stack Description            | Common            | Type of Fuel Used                      | Electricity |
| Shape of Stack               | Circular          | Quantity of Fuel                       |             |
| <b>Construction Material</b> | Metal             | Production Capacity                    | 1-          |
| Sampling Port                | Available         | Pollution Control Device (if any)      | Bag Filter  |
|                              |                   | Tast Regult                            |             |

| SI. NO. | Parameters                    | Test Methods      | Unit               | Result   | Limits           |
|---------|-------------------------------|-------------------|--------------------|----------|------------------|
| 1.      | Flue Gas Temperature          | IS 11255 (Part-3) | °K                 | 370      | ·                |
| 2.      | Flue Gas Velocity             | IS 11255 (Part-3) | m/s                | 16.2     | 3 <del>4 4</del> |
| 3.      | Flue Gas Volumetric Flow Rate | IS 11255 (Part-3) | Nm³/hr.            | 490391.9 |                  |
| 4.      | Particulates Matter (PM)      | IS 11255 (Part-1) | mg/Nm <sup>3</sup> | 19.4     |                  |

| Dust | Kg/hr   | 9.5 |
|------|---------|-----|
| Dasc | 100/111 | 5.5 |

|   | 100 to                 | End of Report   |
|---|------------------------|---|
| ď | Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|   | Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| c | Limit is Specified     | As per the Environmental (Protection) Rule - 1986   |
|   | Remark                 | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

| Specific | Contractual | Notes: |
|----------|-------------|--------|

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6. In case of feedback/ complaints, please send an email at <a href="mailto:microggmail.com">microggmail.com</a>

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Checked by (Taugeer Ahm

Apthorized Signatory

(Dr. S. C. Jain) Technical Manager Director

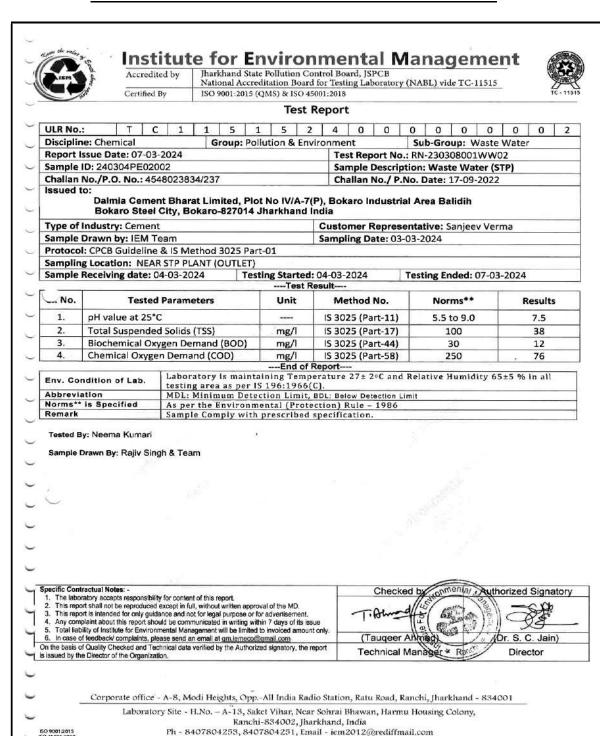
Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

ISO 9001:2015 ISO 45001:2018

#### STP OUT LET TREATED WATER ANALYSIS REPORT



### **Fugitive Dust Emission report**



### Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System ) Certified by

#### **Test Report**

| Discipline: Chemical     | Group: Atmospheric Pollution | Sub-Group: Work Environment & Indoor Air |  |  |
|--------------------------|------------------------------|--|--|--|
| Report Issue Date: 07-03 | -2024 T                      | est Report No.: RN-230308001FE01         |  |  |
| Sample ID: 240304AP0200  | s S                          | Sample Description: Fugitive Emission    |  |  |
| Challan No./P.O. No.: 45 | 48023834/237 C               | hallan No./ P.No. Date: 17-09-2022       |  |  |
| Issued to:               |                              | 11 15 1 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |  |  |

Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IV/A-7(P), Bokaro Industrial Area Balldih Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement Customer Representative: Sanjeev Verma Sample Drawn by: IEM Team Sampling Date: 01-03-2024

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Truck Parking Area

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.C.: Sunny W.D.: NW to SE Sample Receiving date: 04-03-2024 Testing Started: 04-03-2024 Testing Ended: 07-03-2024

----Test Results----

| SI. No. | Parameters | Test Method No.   | Unit  | Limit | Results |
|---------|---|-------------------|-------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM)  | IS 5182 Part - 04 | µg/m³ | 2000  | 1247.3  |

|  | Ella of Report   |
|--|--|
| nv.Condition of Lab. Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in testing area as per 18 196:1966(C). |  |
| Abbreviation   | MDL: Minimum Detection Limit, BDL: Below Detection Limit |
| Limit is Specified   | As Per G.S.R. 414 (E), Dated 30th May 2008.              |
| Remark   | Sample comply with the prescribed spefication.           |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

cific Contractual Notes:

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 On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is sayed by the Director of the Organization.

Jain) Technical Manage Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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ISO 45001:2018 (Occupational Health & Safety Management System )



| Discipline: Chemical      | Group: Atmospheric Pollution | Sub-Group: Work Environment & Indoor Air |
|---------------------------|------------------------------|--|
| Report Issue Date: 07-03  | -2024 Te                     | st Report No.: RN-230308001FE02          |
| Sample ID: 240304AP0200   | 2 Sa                         | mple Description: Fugitive Emission      |
| Challan No./P.O. No.: 454 | 48023834/237 Ch              | allan No./ P.No. Date: 17-09-2022        |
| Issued to:                |                              |  |

Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IV/A-7(P), Bokaro Industrial Area Balidin

Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement Customer Representative: Sanjeev Verma Sample Drawn by: IEM Team Sampling Date: 01-03-2024

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Near Clinker Silo(Raw material yard)

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.D.: NW to SE

nple Receiving date: 04-03-2024 Testing Started: 04-03-2024 Testing Ended: 07-03-2024

----Test Results--

| SI. No. | Parameters                         | Test Method No.   | Unit  | Limit | Results |
|---------|------------------------------------|-------------------|-------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³ | 2000  | 998.4   |

--- End of Report----

| Env. Condition of Lab. Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 testing area as per IS 196:1966(C). |  |
|---|--|
| Abbreviation  | MDL: Minimum Detection Limit, BDL: Below Detection Limit |
| Limit is Specified  | As Per G.S.R. 414 (E), Dated 30th May 2008.              |
| Remark  | Sample comply with the prescribed spefication.           |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

cific Contractual Notes: -

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report sued by the Director of the Organization.

(Taugeer Ahmad)

(Dr. S. C. Jain)

Technical Manager

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India Fh - 8407804254, 8407804251, Email - iem2012@rediffmail.com ISO 45001:2018

ISO 9001:2015



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| Discipline: Chemical      | Group: Atmospheric Pollutio  | n Sub-Group: Work Environment & Indoor Air |  |
|---------------------------|--|--|--|
| Report Issue Date: 07-03- | -2024  | Test Report No.: RN-230308001FE03          |  |
| Sample ID: 240304AP0200   | 3  | Sample Description: Fugitive Emission      |  |
| Challan No./P.O. No.: 454 | 48023834/237   | Challan No./ P.No. Date: 17-09-2022        |  |
| Plot No IV/A-7(           | t (Bharat) L <mark>im</mark> ited. (Jharkhand Co<br>P), Bokaro Industrial Area Balidi<br>ity, Bokaro-827014 Jharkhand In | h  |  |
| Type of Industry: Cement  |  | Customer Representative: Sanjeev Verma     |  |
| Sample Drawn by: IEM T    | by: IEM Team Sampling Date: 01-03-2024   |  |  |
|                           |  |  |  |

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Near Mill Area

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.C.: Sunny W.D.: NW to SE nple Receiving date: 04-03-2024 Testing Started: 04-03-2024 Testing Ended: 07-03-2024

----Test Results----

| SI. No. | Parameters                         | Test Method No.   | Unit  | Limit | Results |
|---------|------------------------------------|-------------------|-------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³ | 2000  | 1103.6  |
|         |                                    | End of Report     |       |       |         |

| Env. Condition of Lab.  Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % testing area as per IS 196:1966(C). |  |
|--|--|
| Abbreviation   | MDL: Minimum Detection Limit, BDL: Below Detection Limit |
| Limit is Specified   | As Per G.S.R. 414 (E), Dated 30th May 2008.              |
| Remark   | Sample comply with the prescribed spefication.           |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

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In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report sued by the Director of the Organization.

Checked by

(Taugeer Ahm)

C. Jain) Director

Technical Manager

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

ISO 45001:2018

ISO 9001:2015



## Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB Accredited by

ISO 9001:2015 (Quality Management System )
ISO 45001:2018 (Occupational Health & Safety Management System ) Certified by

#### **Test Report**

| Discipline: Chemical     | Group: Atmospheric Pollution | Sub-Group: Work Environment & Indoor A |  |
|--------------------------|------------------------------|--|--|
| Report Issue Date: 07-03 | -2024 T                      | est Report No.: RN-230308001FE04       |  |
| Sample ID: 240304AP0200  | 4 S                          | ample Description: Fugitive Emission   |  |
| Challan No./P.O. No.: 45 | 48023834/237                 | hallan No./ P.No. Date: 17-09-2022     |  |
| Issued to:               |                              |  |  |

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

Type of Industry: Cement Customer Representative: Sanjeev Verma Sample Drawn by: IEM Team Sampling Date: 01-03-2024

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Near Packing Plant

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.C.: Sunny W.D.: NW to SE nple Receiving date: 04-03-2024 Testing Started: 04-03-2024 Testing Ended: 07-03-2024

----Test Results----

| il. No. | Parameters                        | Test Method No.   | Unit  | Limit | Results |
|---------|-----------------------------------|-------------------|-------|-------|---------|
| 1. S    | uspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³ | 2000  | 981.3   |

| Env.Condition of Lab.   | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|---|---|
| Abbreviation MDL: Minimum Detection Limit, BDL: Below Detection Limit |   |
| Limit is Specified  | As Per G.S.R. 414 (E), Dated 30th May 2008.   |
| Remark  | Sample comply with the prescribed spefication.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

ecific Contractual Notes:

sued by the Director of the Organization.

(Taugeer Ahmad) Technical Manager

Rand

Authorized Signatory

S. C. Jain)

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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### Work place monitoring report



## Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB

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#### Test Report

| Discipline: Chemical                 | Group: Atmospheric Pollution |                                       | Sub-Group: Work Environment & Indoor |  |
|--------------------------------------|------------------------------|---------------------------------------|--------------------------------------|--|
| Report Issue Date: 07-03-2024        |                              | Test Report No.: RN-230308001FE01     |                                      |  |
| Sample ID: 240304AP02001             |                              | Sample Description: Fugitive Emission |                                      |  |
| Challan No./P.O. No.: 4548023834/237 |                              | Challan No./ P.No. Date: 17-09-2022   |                                      |  |
| Issued to:                           | _                            |                                       |                                      |  |

Dalmia Cement (Bharat) L<mark>imited. (Jharkha</mark>nd Ceme<mark>nt Works)</mark> Plot No IV/A-7(P), Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement Customer Representative: Sanjeev Verma

Sample Drawn by: IEM Team Sampling Date: 01-03-2024

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Truck Parking Area

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.C.: Sunny W.D.: NW to SE Testing Ended: 07-03-2024

Sample Receiving date: 04-03-2024 Testing Started: 04-03-2024

-Test Results----

| SI. No. | Parameters                         | Test Method No.   | Unit        | Limit | Results |
|---------|------------------------------------|-------------------|-------------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³       | 2000  | 1247.3  |
|         |                                    | Ford of Domest    | A SANTAL IN | 0     |         |

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |  |  |  |
|-----------------------|---|--|--|--|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |  |  |  |
| Limit is Specified    | As Per G.S.R. 414 (E), Dated 30th May 2008.   |  |  |  |
| Remark                | Sample comply with the prescribed spefication.  |  |  |  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

Critic Contractual Notes:

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Technical Manag

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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150 45001:2018



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| Discipline: Chemical     | Group: Atmospheric Pollution | Sub-Group: Work Environment & Indoor Air |
|--------------------------|------------------------------|--|
| Report Issue Date: 07-03 | -2024 Te                     | est Report No.: RN-230308001FE02         |
| Sample ID: 240304AP0200  | 2 Sa                         | mple Description: Fugitive Emission      |
| Challan No./P.O. No.: 45 | 48023834/237 CI              | nalian No./ P.No. Date: 17-09-2022       |
| leguad to:               |                              |  |

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

Type of Industry: Cement Customer Representative: Sanjeev Verma Sample Drawn by: IEM Team Sampling Date: 01-03-2024

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Near Clinker Silo(Raw material yard)

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.C.: Sunny W.D.: NW to SE

5-mple Receiving date: 04-03-2024 Testing Started: 04-03-2024 Testing Ended: 07-03-2024

----Test Results----

| SI. No. | Parameters                         | Test Method No.   | Unit  | Limit | Results |
|---------|------------------------------------|-------------------|-------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³ | 2000  | 998.4   |

---End of Report----

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Limit is Specified    | As Per G.S.R. 414 (E), Dated 30th May 2008.   |
| Remark                | Sample comply with the prescribed spefication.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Checked b

cized Signatory

(Tauqeer Ahmaid S. C. Jain)

Technical Manager

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Fh - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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#### **Test Report**

| Discipline: Chemical     | Group: Atmospheric Pollution   | Sub-Group: Work Environment & Indoor Air |
|--------------------------|--|--|
| Report Issue Date: 07-03 | -2024  | Test Report No.: RN-230308001FE03        |
| Sample ID: 240304AP0200  | 3  | Sample Description: Fugitive Emission    |
| Challan No./P.O. No.: 45 | 48023834/237   | Challan No./ P.No. Date: 17-09-2022      |
| Plot No IV/A-7           | t (Bharat) Li <mark>m</mark> ited. (Jharkhand Ce<br>P), Bokaro Industrial Area Balidih<br>ity, Bokaro-827014 Jharkhand Inc | · ·                                      |
| Type of Industry: Cemen  |  | Customer Representative: Sanieev Verma   |

Sample Drawn by: IEM Team Sampling Date: 01-03-2024

Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series

Sampling Location: Near Mill Area

Field Meteorological Information A. Temp. (°C): 26 R.H. (%): 45 W.C.: Sunny W.D.: NW to SE nple Receiving date: 04-03-2024 Testing Started: 04-03-2024

Testing Ended: 07-03-2024

----Test Results----

| SI. No. | Parameters                         | Test Method No.   | Unit  | Limit | Results |
|---------|------------------------------------|-------------------|-------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³ | 2000  | 1103.6  |

----End of Report----

| Env.Condition of Lab. | Laboratory Is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Limit is Specified    | As Per G.S.R. 414 (E), Dated 30th May 2008.   |
| Remark                | Sample comply with the prescribed spefication.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

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Checked by

Technical Manager

S. C. Jain

Authorized Signatory

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

150 45001:2018

ISO 9001:2015

ued by the Director of the Organization.



Jharkhand State Pollution Control Board, JSPCB Accredited by

Certified by

ISO 9001:2015 (Quality Management System )
ISO 45001:2018 (Occupational Health & Safety Management System )



| Discipline: Chemical G  | roup: Atmospheric Po   | llution                            | Sub-Group: Work Enviro                             | nment & Indoor Air |  |  |
|---|--|------------------------------------|--|--------------------|--|--|
| eport Issue Date: 07-03-2024  |  |                                    | Test Report No.: RN-230308001FE04                  |                    |  |  |
| Sample ID: 240304AP02004  |  | Sam                                | ole Description: Fugitive E                        | mission            |  |  |
| Challan No./P.O. No.: 454802383   | 34/237   | Chall                              | an No./ P.No. Date: 17-09                          | 9-2022             |  |  |
|   | t) Limited. (Jharkhai  |                                    | t Works)   |                    |  |  |
| Plot No IV/A-7(P), Bok<br>Bokaro Steel City, Bo   | aro Industrial Area B  | Balidih<br>nd India                |  | nieev Verma        |  |  |
| Plot No IV/A-7(P), Bok  | aro Industrial Area B  | Balidih<br>nd India<br>Cust        | t Works)  comer Representative: Sa                 | njeev Verma        |  |  |
| Plot No IV/A-7(P), Bok<br>Bokaro Steel City, Bok<br>Type of Industry: Cement<br>Sample Drawn by: IEM Team | aro Industrial Area B<br>karo-827014 Jharkha   | Balidih<br>nd India<br>Cust<br>Sam | comer Representative: Sa<br>pling Date: 01-03-2024 | njeev Verma        |  |  |
| Plot No IV/A-7(P), Bok<br>Bokaro Steel City, Bot<br>Type of Industry: Cement                              | aro Industrial Area B<br>karo-827014 Jharkha<br>//////////////////////////////////// | Balidih<br>nd India<br>Cust<br>Sam | comer Representative: Sa<br>pling Date: 01-03-2024 | njeev Verma        |  |  |

Testing Started: 04-03-2024 ----Test Results----

| SI. No. | Parameters                         | Test Method No.   | Unit  | Limit | Results |
|---------|------------------------------------|-------------------|-------|-------|---------|
| 1.      | Suspended Perticulate Matter (SPM) | IS 5182 Part - 04 | µg/m³ | 2000  | 981.3   |
|         |                                    | End of Report     |       |       |         |

| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|-----------------------|---|
| Abbreviation          | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Limit is Specified    | As Per G.S.R. 414 (E), Dated 30th May 2008.   |
| Remark                | Sample comply with the prescribed spefication.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

nple Receiving date: 04-03-2024

Specific Contractual Notes: -

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is lessed by the Director of the Organization. ued by the Director of the Organization.

Checked by

**Authorized Signatory** 

(Taugeer Ahmad) Technical Manager (Dr.S. C. Jain)

Director

Testing Ended: 07-03-2024

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

150 45001:2018

ISO 9001:2015

### **Noise Level Report**



## Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

| ULR No.:   | T  | C  | 1   | 1                       | 5                   | 1                      | 5 2      | 4                | 0       | 0              | 0      | 0      | 0     | 0       | 0      | 0     | 7    |
|--|--|--|---|-------------------------|---------------------|------------------------|----------|------------------|---------|----------------|--------|--------|-------|---------|--------|-------|------|
| Discipline: C  | nemical  |  | Gro   | up: A                   | tmos                | pheric P               | ollution | Sul              | -Grou   | ıp: An         | bient  | Noise  | Leve  | ls (Exc | luding | Vibra | tion |
| Report Issue   | Date: 0  | 7-03-2   | 2024  |                         |                     |                        |          | Tes              | t Rep   | ort No         | .: RN- | 23030  | 08001 | N1      | -      |       |      |
| Sample ID: 2   | 40304AI  | 0300   | 1   |                         |                     |                        |          | Sar              | nple D  | Descri         | ption: | Ambi   | ent N | oise    |        |       |      |
| Challan No./   | P.O. No.   | : 4548   | 302383  | 34/23                   | 7                   |                        |          | Ch               | allan N | No./P          | No. D  | ate: 1 | 7-09- | 2022    |        |       |      |
| Pic  | t No IV  | A-7(P  | , Bok   | aro I                   | ndus                | i. (Jhark<br>trial Are | a Balic  | ih               | Work    | (S)            |        |        |       |         |        |       |      |
| Pic<br>Bo  | karo St  | A-7(P  | , Bok   | aro I                   | ndus                |                        | a Balic  | ih<br>ndia       |         |                |        | ****** | . Can | las. N  |        |       |      |
| Pic<br>Bo<br>Type of Indu                                | t No IV/<br>karo Ste<br>stry: Cer  | A-7(P<br>eel Cit<br>ment                               | ), Bok<br>y, Bol                              | aro I                   | ndus                | trial Are              | a Balic  | ih<br>ndia<br>Cu | stome   | er Rep         | -      | -      |       |         |        |       |      |
| Pic<br>Bo  | karo Ste<br>karo Ste<br>stry: Cer<br>vn by: II                           | A-7(P<br>eel Cit<br>ment<br>EM Te                      | ), Bok<br>ly, Bol<br>am                       | aro I<br>karo-          | ndus<br>8270        | trial Are<br>14 Jhari  | a Balic  | ih<br>ndia<br>Cu |         | er Rep         | -      | -      |       |         |        |       |      |
| Pic<br>Bo<br>Type of Indu<br>Sample Dra                  | ot No IV/<br>karo Ste<br>stry: Cer<br>wn by: II<br>CB Guide              | A-7(P<br>eel Cit<br>ment<br>EM Te<br>eline &           | ), Bok<br>ty, Bol<br>am                       | aro I<br>karo-<br>ethod | ndus<br>8270        | trial Are<br>14 Jhari  | a Balic  | ih<br>ndia<br>Cu | stome   | er Rep         | -      | -      |       |         |        |       |      |
| Pic<br>Bo<br>Type of Indu<br>Sample Drav<br>Protocol: CP | ot No IV/<br>karo Ste<br>stry: Cer<br>wn by: II<br>CB Guide<br>cation: N | A-7(P<br>eel Cit<br>ment<br>EM Te<br>eline &<br>lear M | ), Bok<br>ty, Bol<br>am<br>a IS Me<br>lain Ga | aro I<br>karo-<br>ethod | <b>8270</b><br>8270 | trial Are<br>14 Jhari  | a Balic  | ih<br>ndia<br>Cu | stome   | er Rep<br>Date | -      | 3-2024 | to 02 | -03-2   |        | o SE  |      |

----Test Result----

| SI. No | Parameter                    | Method       | Unit  | Day Time | Night Time | Limits       |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1      | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 68.1     | 58.2       | D-75<br>N-70 |

#### ----End of Reports----

Note: -

- 1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
- 2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
- 3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
  4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
  5.A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency
- response characteristics of the human ear.

6.Leq: It is an energy mean of the noise level, over a specified period.

| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|------------------------|---|
| Abbreviation           | MDL: Minimum Detection Limit  |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000  |
| nark                   | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

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Checked by Authorized Signatory

(Taugeer Ahm

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com





Jharkhand State Pollution Control Board, JSPCB

National Accreditation Board for Testing Laboratory (NABL) vide TC-11515



ISO 9001:2015 (QMS) & ISO 45001:2018



#### Test Report

| ULR No.:  | T  | C   | 1                          | 1              | 5                                    | 1                  | 5            | 2              | 4          | 0               | 0      | 0      | 0         | 0      | 0     | 0     | 0      | 8       |
|---|--|---|----------------------------|----------------|--------------------------------------|--------------------|--------------|----------------|------------|-----------------|--------|--------|-----------|--------|-------|-------|--------|---------|
| Discipline: Ch  | emical   |   | Grou                       | p: Atı         | mosp                                 | heric P            | olluti       | on             | Sub-       | Group           | : Amb  | ient N | Voise     | Levels | (Exc  | ludin | ng Vib | ration) |
| Report Issue Date: 07-03-2024                               |  |   |                            |                |                                      |                    |              | Test           | Repoi      | rt No.:         | RN-2   | 30308  | 001N      | 12     |       |       |        |         |
| Sample ID: 24   | 10304AP  | 03002   |                            |                |                                      |                    |              |                | Sam        | ole De          | script | ion: A | mbie      | nt No  | ise   |       |        |         |
| Challan No./I   | .O. No.:   | 454802  | 23834                      | 1/237          |                                      |                    |              |                | Chall      | an No           | ./ P.N | lo. Da | te: 17    | -09-2  | 022   |       |        |         |
| Plo   | mia Cerr<br>t No IV/A  | 1-7(P), I   | Boka                       | ro In          | dustr                                | ial Are            | a Ba         | lidih          |            | Vorks           | )      |        |           |        |       |       |        |         |
| Plo<br>Boi  | t No IV/A  | \-7(P), l<br>el City,   | Boka                       | ro In          | dustr                                | ial Are            | a Ba         | lidih          | ia         |                 |        |        | -41. ra . | Canie  |       |       |        |         |
| Plo<br>Bol<br>Type of Indus                                 | t No IV/A<br>caro Stee<br>stry: Cem  | N-7(P), I<br>el City,<br>ent                                    | Boka<br>Boka               | ro In          | dustr                                | ial Are            | a Ba         | lidih          | ia<br>Cust | omer            | Repr   |        |           | -      |       |       | 3      |         |
| Plo<br>Boi  | t No IV/A<br>karo Stee<br>try: Cem<br>/n by: IE                            | N-7(P), I<br>el City,<br>ent<br>M Tear                          | Boka<br>Boka<br>m          | ro In<br>aro-8 | dustr<br>2701                        | ial Are<br>4 Jhari | a Ba         | lidih          | ia<br>Cust |                 | Repr   |        |           | -      |       |       | 3      |         |
| Plo<br>Bol<br>Type of Indus<br>Sample Drav                  | t No IV/A<br>caro Stee<br>try: Cem<br>n by: IE<br>B Guidel                 | A-7(P), I<br>el City,<br>ent<br>M Tean<br>ine & IS              | Boka<br>Boka<br>m<br>S Met | ro In<br>aro-8 | <b>dustr</b><br><b>2701</b><br>9989: | ial Are<br>4 Jhari | a Ba         | lidih          | ia<br>Cust | omer            | Repr   |        |           | -      |       |       | 3      |         |
| Pio<br>Bol<br>Type of Indus<br>Sample Drav<br>Protocol: CPC | t No IV/A<br>caro Stee<br>stry: Cem<br>/n by: IE<br>:B Guidel<br>ation: Ne | A-7(P), I<br>el City,<br>lent<br>M Tean<br>ine & IS<br>ear Fabr | Boka<br>Boka<br>m<br>S Met | hod 9          | 9989:<br>rd                          | ial Are<br>4 Jhari | a Ba<br>khan | lidih<br>d Ind | ia<br>Cust | omer<br>oling ( | Repr   | 01-03  | -2024     | to 02  | -03-2 | 2024  | to SE  |         |

---Test Result----

| SI. No | Parameter                    | Method       | Unit  | Day Time | Night Time | Limits       |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1.     | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 68.2     | 58.1       | D-75<br>N-70 |

#### ---End of Reports---

- 1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
- 2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
- 3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- 4. dB(A) Leg denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- 5.A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq. denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- 5. Leq: It is an energy mean of the noise level, over a specified period.

| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|------------------------|---|
| Abbreviation           | MDL: Minimum Detection Limit  |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000  |
| ark                    | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report

is issued by the Director of the Augustration. A-8, Modi Heights, Opp.-All India Radio Slation, Ratu Road, Ranch

Checked by Authorized Signatory

(Taugeer Ahr

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

| ULR No.:   | T  | C   | 1                            | 1                                 | 5                | 1 5                              | 2                | 4      | 0             | 0      | 0      | 0      | 0      | 0      | 0       | 1      | 0    |
|--|--|---|------------------------------|-----------------------------------|------------------|----------------------------------|------------------|--------|---------------|--------|--------|--------|--------|--------|---------|--------|------|
| Discipline: Ch   | emical   |   | Group                        | : Atn                             | nosph            | eric Pollu                       | tion             | Sub-G  | roup          | : Amb  | ient N | loise  | Levels | (Exclu | uding ' | Vibrat | ion) |
| Report Issue I   |  |   |                              |                                   | Test F           | _                                |                  |        |               |        | •      |        |        |        |         |        |      |
| Sample ID: 24  | 0304AP0  | 03004   |                              |                                   |                  |                                  |                  | Samp   | le De         | script | ion: A | mbie   | nt No  | ise    |         |        |      |
| Challan No./P  | .O. No.:   | 454802  | 23834                        | /237                              |                  |                                  |                  | Challa | n No          | ./ P.N | io. Da | te: 17 | -09-20 | 022    |         |        |      |
|  |  |   |                              |                                   |                  | Jharkhar                         |                  |        | orks)         | )      |        |        |        |        |         |        |      |
| Dalı<br>Plot<br>Bok  | No IV/A  | 1-7(P), I<br>el City,   | Bokar                        | o Inc                             | lustria          | Jharkhar<br>al Area B<br>Jharkha | alidih           | lia    |               |        | esent  | ative: | Sanie  | ev Ve  | rma     |        |      |
| Dalı<br>Plot   | No IV/A<br>aro Stee<br>try: Cem                                      | A-7(P), I<br>el City,<br>ent                                  | Bokar<br>Boka                | o Inc                             | lustria          | al Area B                        | alidih           | Custo  | mer           | Repre  |        |        |        |        |         |        |      |
| Dali<br>Plot<br>Bok<br>Type of Indus                                 | No IV/A<br>aro Stee<br>try: Cem<br>n by: IE                          | i-7(P), let City,<br>ent<br>M Tean                            | Bokar<br>Boka                | ro Inc<br>ro-82                   | dustria<br>27014 | al Area B<br>Jharkha             | alidih           | lia    | mer           | Repre  |        |        |        |        |         |        |      |
| Dali<br>Plot<br>Bok<br>Type of Indus<br>Sample Draw                  | No IV/A<br>aro Stee<br>try: Cem<br>n by: IE<br>B Guidel              | A-7(P), I<br>el City,<br>ent<br>M Tean<br>ine & IS            | Bokar<br>Boka<br>n<br>S Meti | ro-82                             | 989:19           | al Area B<br>Jharkha             | alidih           | Custo  | mer           | Repre  |        |        |        |        |         |        |      |
| Dair<br>Plot<br>Bok<br>Type of Indus<br>Sample Draw<br>Protocol: CPC | No IV/A<br>aro Stee<br>try: Cem<br>n by: IEI<br>B Guidel<br>tion: Ne | A-7(P), E<br>el City,<br>ent<br>M Tean<br>ine & IS<br>ear Wag | Bokar<br>Boka<br>n<br>S Meth | ro Inc<br>ro-82<br>nod 9<br>ppler | 989:19           | al Area B<br>Jharkha             | alidih<br>nd Inc | Custo  | mer<br>ling D | Repre  | 01-03- |        | to 02- | -03-20 |         | SE     |      |

|        | 1    |          |            | 1      |
|--------|------|----------|------------|--------|
| Method | Unit | Day Time | Night Time | Limits |

| SI. No | Parameter                    | Method       | Unit  | Day Time | Night Time | Limits       |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1.     | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 66.7     | 59.3       | D-75<br>N-70 |
| 1      |                              | End of Repo  | rts   |          |            |              |

#### Note: -

- 1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
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| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|------------------------|---|
| Abbreviation           | MDL: Minimum Detection Limit  |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000  |
| ( ark                  | Sample Comply with prescribed specification.  |

Tested By: Neeraj Singh

Sample Drawn By: Rajiv Kumar Singh & Team

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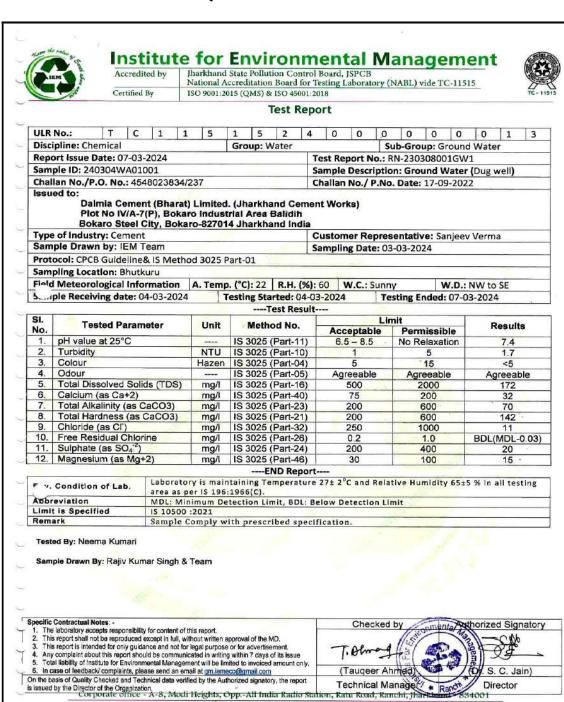
Authorized Signatory

(Tauqeer Ahmad

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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### **GROUND WATER QUALITY REPORT NEAR VILLAGE AREA**



Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

ISO 45001:2015

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



Jharkhand State Pollution Control Board, JSPCB Accredited by

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#### **Test Report** 1 1 5 5 2 4 0 0 0 Discipline: Chemical Group: Residues and Contaminants in Water Sub-Group: Trace Metals elements Report Issue Date: 07-03-2024 Test Report No.: RN-230308001GW1 Sample ID: 240304RC01001 & 240304MB01001 Sample Description: Ground Water (Dug well) Challan No./P.O. No.: 4548023834/237 Challan No./ P.No. Date: 17-09-2022 Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IV/A-7(P), Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India Type of Industry: Cement Customer Representative: Sanjeev Verma Sample Drawn by: IEM Team Sampling Date: 03-03-2024 Protocol: IS Method & CPCB Guideline Sampling Location: Bhutkuru

#### ple Receiving date: 04-03-2024 Testing Started: 04-03-2024 ----Test Result----

R.H. (%): 60

W.C.: Sunny

Testing Ended: 07-03-2024

W.D.: NW to SE

| SI.<br>No. | Tested Parameter | Unit          | Method No.       | Limits                          | Results           |
|------------|------------------|---------------|------------------|---------------------------------|-------------------|
| 1.         | Copper           | mg/l          | APHA 3111 B.2017 | 0.5-1.5                         | BDL (MDL - 0.02)  |
| 2.         | Chromium         | mg/l          | APHA 3111 B.2017 | 0.05 - No Relaxation            | BDL (MDL ~ 0.005) |
| 3.         | Lead (Pb)        | mg/l          | APHA 3111 B.2017 | 0.01 - No Relaxation            | BDL (MDL - 0.07)  |
| 4.         | Manganese (Mn)   | mg/l          | APHA 3111 B.2017 | 0.1 - 0.3                       | BDL (MDL - 0.04)  |
| 5.         | Total Coliform   | MPN/100<br>mL | IS 1622: 1981    | Shall not be                    | BDL (MDL-1.8)     |
| 6.         | E. Coli          | MPN/100<br>mL | IS 1622: 1981    | detectable in any 100 ml sample | BDL (MDL-1.8)     |

#### ----End Report----

|   |                        | ciu neport  |
|---|------------------------|---|
| _ | Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Ų | Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
|   | Limit is Specified     | IS 10500 :2022  |
| _ | Remark                 | Sample Comply with prescribed specification.  |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

Field Meteorological Information | A. Temp. (°C): 22

Specific Contractual Notes: -

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report

Checked by

(Taugeer Ahmad

S. C. Jain

Technical Manager

thorized Signatory

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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#### **Test Report**

| ULR No.:   | T  | C  | 1                                  | 1                    | 5                    | 1 !                      | 5        | 2      | 4         | 0          | 0                 | 0       | 0               | 0            | 0     | 0      | 1     | 4 |
|--|--|--|------------------------------------|----------------------|----------------------|--------------------------|----------|--------|-----------|------------|-------------------|---------|-----------------|--------------|-------|--------|-------|---|
| Discipline: Che  | mical  | 111  |                                    |                      |                      | Group                    | : Wa     | ater   |           |            | 12                | Su      | b-Gro           | up: G        | round | Wate   | r     |   |
| Report Issue Date: 07-03-2024  |  |  |                                    |                      |                      |                          |          |        | Tes       | t Re       | port N            | lo.: RI | N-230           | 30800        | 1GW2  | 2      |       |   |
| Sample ID: 240   | 304W   | A010   | 02                                 |                      |                      |                          |          |        | Sar       | nple       | Descr             | iption  | : Gro           | und W        | /ater | (Dug v | vell) |   |
| Challan No./P.   | O. No.   | : 454  | 802383                             | 34/23                | 7                    |                          |          |        | Cha       | illan      | No./              | P.No.   | Date:           | 17-09        | -2022 | 2      | -     |   |
| Plot   | No IV  | /A-7(  | P), Bo                             | karo                 | Indu                 | ed. (Jhari<br>strial Are | a B      | alidih |           | Wor        | ks)               |         |                 |              |       |        |       |   |
| Dair<br>Plot<br>Bok  | No IV  | /A-7(<br>teel C                                      | P), Bo                             | karo                 | Indu                 |                          | a B      | alidih | lia       | .e76163664 | 57659 <b>4</b> 4. | nrae    | ntati           | va: Sa       | niecv | Vorm   |       |   |
| Dalr<br>Plot   | No IV<br>aro Si<br>ry: Cer                               | /A-7(<br>teel C<br>ment                              | P), Bo                             | karo                 | Indu                 | strial Are               | a B      | alidih | lia<br>Cu | ston       | ner Re            | •       | V 1000 000 1000 | 200000 00000 | njeev | Verma  | а     |   |
| Dair<br>Plot<br>Bok<br>Type of Industr<br>Sample Drawn                   | No IV<br>aro Si<br>ry: Cer<br>by: Il                     | VA-7(<br>teel C<br>ment<br>EM Te                     | P), Bo<br>lity, Bo<br>eam          | karo<br>karo         | Indu<br>-827         | strial Are<br>014 Jhar   | a B      | alidih | lia<br>Cu | ston       | 57659 <b>4</b> 4. | •       | V 1000 000 1000 | 200000 00000 | njeev | Verma  | a     |   |
| Dair<br>Plot<br>Bok<br>Type of Industr<br>Sample Drawn                   | No IV<br>aro St<br>ry: Cer<br>by: It<br>Guide            | VA-7(<br>teel C<br>ment<br>EM Te<br>eline&           | P), Bo<br>lity, Bo<br>eam<br>IS Me | karo<br>karo<br>thod | Indu<br>-827         | strial Are<br>014 Jhar   | a B      | alidih | lia<br>Cu | ston       | ner Re            | •       | V 1000 000 1000 | 200000 00000 | njeev | Verma  | a     |   |
| Dair<br>Plot<br>Bok<br>Type of Industr<br>Sample Drawn<br>Protocol: CPCB | No IV<br>aro Si<br>ry: Cer<br>by: It<br>Guide<br>tion: P | VA-7(<br>teel C<br>ment<br>EM Te<br>eline&<br>akhari | P), Bo<br>lity, Bo<br>eam<br>IS Me | karo<br>karo<br>thod | indu<br>-827<br>3025 | strial Are<br>014 Jhar   | a Bakhar | alidih | Cu<br>Sar | stom       | ner Re            | e: 03-  | 03-20           | 24           |       | Verma  |       |   |

| SI. | Tested Parameter                 | Unit  | Method No.        | Li         | mit           | D             |
|-----|----------------------------------|-------|-------------------|------------|---------------|---------------|
| No. | rested Parameter                 | Unit  | Method No.        | Acceptable | Permissible   | Results       |
| 1.  | pH value at 25°C                 |       | IS 3025 (Part-11) | 6.5 - 8.5  | No Relaxation | 7.8           |
| 2.  | Turbidity                        | NTU   | IS 3025 (Part-10) | 1          | - 5           | 1.8           |
| 3.  | Colour                           | Hazen | IS 3025 (Part-04) | 5          | 15            | <5            |
| 4.  | Odour                            |       | IS 3025 (Part-05) | Agreeable  | Agreeable     | Agreeable     |
| 5.  | Total Dissolved Solids (TDS)     | mg/l  | IS 3025 (Part-16) | 500        | 2000          | 83            |
| 6.  | Calcium (as Ca+2)                | mg/l  | IS 3025 (Part-40) | 75         | 200           | 20            |
| 7.  | Total Alkalinity (as CaCO3)      | mg/l  | IS 3025 (Part-23) | 200        | 600           | 82            |
| 8.  | Total Hardness (as CaCO3)        | mg/l  | IS 3025 (Part-21) | 200        | 600           | 116           |
| 9.  | Chloride (as Cl')                | mg/l  | IS 3025 (Part-32) | 250        | 1000          | 8             |
| 10. | Free Residual Chlorine           | mg/i  | IS 3025 (Part-26) | 0.2        | 1.0           | BDL(MDL 0.03) |
| 11. | Sulphate (as SO <sub>4</sub> -2) | mg/l  | IS 3025 (Part-24) | 200        | 400           | 10            |
| 12. | Magnesium (as Mg+2)              | mg/l  | IS 3025 (Part-46) | 30         | 100           | 16            |

----Test Result----

|   | at variety             | END Report  |
|---|------------------------|---|
|   | באי. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|   | Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
|   | Limit is Specified     | IS 10500 :2021  |
| × | Remark                 | Sample Comply with prescribed specification.  |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

| Checked by Authorized Signatory     |
|-------------------------------------|
| T. Ohmod                            |
| (Taugeer Ahmad) / /SDf. S. C. Jain) |
| Technical Manager Director          |
|                                     |

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

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#### Test Report

| ULR No.:  | T  | C 1  | 1  | 1     | 5              | 1 5       | 2     | 4                     | 0              | 0    | 0                  | 0      | 0      | 0      | 0            | 1    | 4 |
|---|--|--|--|-------|----------------|-----------|-------|-----------------------|----------------|------|--------------------|--------|--------|--------|--------------|------|---|
| Discipline: Chemical Group: Residues and Contan           |  |  |  |       | tamir          | ants in \ | Nater |                       | Sub-Gr         | oup: | Trace              | Metal  | s elem | ents   |              |      |   |
| Report Issue  | Date: 07   | -03-202  | 24   |       |                |           |       | Test Re               | port           | No.  | RN-230             | 03080  | 01GW   | 2      |              |      |   |
| Sample ID: 2  | 40304RC  | 01002 8  | £ 240                                      | 304N  | иво10          | 002       |       | Sample                | Desc           | ript | ion: Gr            | ound 1 | Water  | (Dug   | well)        |      |   |
| Challan No./  | P.O. No.:  | : 454802   | 23834                                      | /237  | ,              |           |       | Challar               | No./           | P.N  | lo. Date           | : 17-0 | 9-202  | 2      |              |      |   |
| PI  | almia Ce<br>ot No IV   | /A-7(P),   | Bok  | aro l | ndust          | trial Are | Balic | lih                   | Work           | s)   |                    |        |        |        |              |      |   |
| PI<br>Be  | ot No IV   | /A-7(P),<br>eel City,  | Bok  | aro l | ndust          | trial Are | Balic | lih<br>ndia           |                | 350  | esentat            | ive: S | anieev | v Vern | na           |      |   |
| PI  | ot No IV<br>okaro Sto<br>stry: Cen                               | /A-7(P),<br>eel City,<br>nent                                    | Boka<br>, Bok                              | aro l | ndust          | trial Are | Balic | lih<br>ndia<br>Custor | ner R          | epr  | esentat<br>03-03-2 |        | anjeev | v Vern | na           |      |   |
| Pi<br>Be<br>Type of Indu                                  | ot No IV<br>okaro Sto<br>stry: Cen<br>vn by: IE                  | /A-7(P),<br>eel City,<br>nent<br>EM Tean                         | , Boka<br>, Bok                            | aro l | ndust          | trial Are | Balic | lih<br>ndia<br>Custor | ner R          | epr  | esentat<br>03-03-2 |        | anjeev | v Vern | na           |      |   |
| Pi<br>Be<br>Type of Indu<br>Sample Drav<br>Protocol: IS I | ot No IV<br>okaro Sto<br>stry: Cen<br>vn by: IE                  | /A-7(P),<br>eel City,<br>nent<br>EM Tean<br>& CPCB (             | , <b>Bok</b><br>, <b>Bok</b><br>m<br>Guide | aro l | ndust          | trial Are | Balic | lih<br>ndia<br>Custor | ner R          | epr  |                    |        | anjeev | v Vern | na           |      |   |
| Pi<br>Be<br>Type of Indu<br>Sample Drav<br>Protocol: IS I | ot No IV.  okaro Str  stry: Cem  vn by: IE  Method 8  cation: Pa | /A-7(P),<br>eel City,<br>nent<br>EM Tean<br>& CPCB (<br>akhariya | Boke<br>Boken<br>M<br>Guide<br>Tand        | aro h | ndust<br>82701 | trial Are | Balic | lih<br>ndia<br>Custor | ner R<br>ng Da | epr  |                    | 024    | anjeev |        | na<br>: NW t | o SE |   |

| Test Result |                  |               |                  |                                 |                   |  |  |  |
|-------------|------------------|---------------|------------------|---------------------------------|-------------------|--|--|--|
| SI.<br>No.  | Tested Parameter | Unit          | Method No.       | Limits                          | Results           |  |  |  |
| 1.          | Copper           | mg/l          | APHA 3111 B.2017 | 0.5-1.5                         | BDL (MDL - 0.02)  |  |  |  |
| 2.          | Chromium         | mg/l          | APHA 3111 B.2017 | 0.05 - No Relaxation            | BDL (MDL - 0.005) |  |  |  |
| 3.          | Lead (Pb)        | mg/l          | APHA 3111 B.2017 | 0.01 - No Relaxation            | BDL (MDL - 0.07)  |  |  |  |
| 4.          | Manganese (Mn)   | mg/l          | APHA 3111 B.2017 | 0.1 - 0.3                       | BDL (MDL - 0.04)  |  |  |  |
| 5.          | Total Coliform   | MPN/100<br>mL | IS 1622: 1981    | Shall not be                    | BDL (MDL-1.8)     |  |  |  |
| 6.          | E. Coli          | MPN/100       | IS 1622: 1981    | detectable in any 100 ml sample | BDL (MDL-1.8)     |  |  |  |

----End Report---

| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
|------------------------|---|
| A' reviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit  |
| Limit is Specified     | IS 10500 :2022  |
| Remark                 | Sample Comply with prescribed specification.  |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

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S. C. Jain) Director Technical Manage

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

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## **DALMIA CEMENT (BHARAT) LIMTED, BOKARO**

#### TREE PLANTATION DETAILS

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.

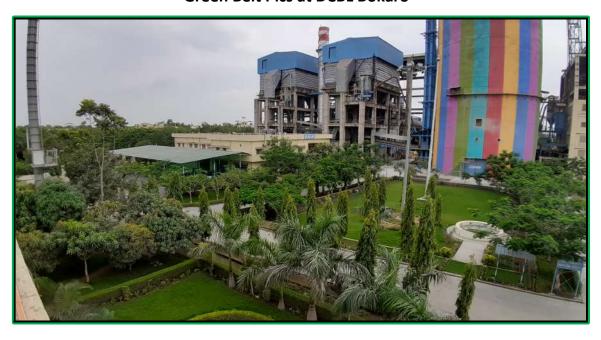
#### YEAR WISE TREE PLANTATION DETAILS GIVEN AS FOLLOWS

| 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              |                                      |
| 11     | 11 <sup>th</sup> (2021-2022) | 500              | Plantation done in the place of dead |
| 12     | 12 <sup>th</sup> (2022-2023) | 350              | tree                                 |
| 13     | 12 <sup>th</sup> (2023-2024) | 400              |                                      |
|        | Total                        | 26139            | 23.25                                |

| 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,,Mango,Kaaju.   |
| 11  | 2021-2022 | Chatni,Mihigini,,Mango,Kaaju,Amala, Neem, Gulmohar                      |
| 12  | 2022-2023 | Chatni,Mihigini,,Mango, Neem, Gulmohar                                  |
| 13  | 2023-2024 | Chatni,Mihigini,,Mango, Neem, Gulmohar                                  |



### **Green Belt Pics at DCBL Bokaro**











Tree plantation done railway siding



### DALMIA CEMENT (BHARAT) LIMITED, BOKARO

#### Carbon emission and carbon neutrality action plan

Cement is the basic building block of the housing and infrastructure development in the country. Unlike developed countries, India is uniquely positioned to maintain the growth, provide basic infrastructure and housing to its growing population and maintain the GHG emissions.

Globally, cement industry is classified as basic heavy-industry. As a result, European Union has put the cement industry in a unique position until 2030 where carbon allowances are provided free of cost (100%) to the cement and lime industries because it is not possible to pass on the cost of making carbon neutral cement or concrete to the customers in Europe, where per capita income of the population is way higher than in India.

Hence, a public-private approach to decarbonise the basic heavy-industry in India needs to be unique while serving the reasonable developmental expectations of the country and its people.

Despite the challenge of cement decarbonisation, Dalmia cement has been taking actions to reduce the GHG emissions. Dalmia Cement (Bharat) Limited (DCBL) is a leading cement manufacturer Dalmia Cement is one of India's pioneering homegrown cement companies, operating since 1939. Dalmia is one of the lowest carbon footprint cement producers globally and one of the most profitable cement company in India which reiterates its business philosophy of Clean and Green is Profitable and Sustainable.

Dalmia has served as climate catalyst in the global heavy-industry. It is the first triple joiner company globally to RE 100; EP 100; and EV 100 (significant transition to electric vehicles). Dalmia also aims to eliminate fossil fuels in the cement kiln.

Dalmia Cement is the leading voice on zero carbon transition at platforms such as United Nations, World Economic Forum and Annual Conference of Parties (COP) serving to the United Nations Framework Convention on Climate Change (UNFCCC). Dalmia has aligned its operations to Sustainable Development Goals (SDGs) within and beyond boundary through its Corporate Responsibility arm Dalmia Bharat Foundation.

Dalmia is founding member of the Leadership Group for Industry Transition (LEADIT), Chaired by India and Sweden to drive transformation in hard-to-decarbonize and energy-intensive sectors.

Dalmia is a founding member of First Movers Coalition (FMC), an initiative endorsed by US President and aims at creating green products demand globally. In a major push to EV transition, Dalmia has procured 22 heavy-duty electric vehicles for its raw material transport. Dalmia has a target to become 50-million-ton cement group by 2025. It is already 13.3 times water positive and committed to become 20 times water positive by 2025.

The commitments and leadership of Dalmia on zero carbon transition offers a whole new set of opportunities for the global heavy industry sector to relook at the processes, technologies and techno-commercial models for decarbonization and/ or reduction of the carbon footprint.

Dalmia Cement (Bharat) Limited is a cement grinding unit which is located at Bokaro Jharkhand for the manufacturing of PSC (Portland Slag Cement) and CC (Composite Cement) with production capacity of 4.5 MTPA.

DCBL Bokaro using fuel for the moisture removing in raw materials and material transportation in vehicles. Electricity is used for plant operation.

The GHG emission is classified under two scope - Scope-1-Direct emission and Scope-2 Indirect emission from electricity consumption for cement manufacturing.,.

- **1. GHG Emission from fuel consumption:** Direct GHG emission occur from that are owned or controlled by the company (Scope 1).
  - 1. Coal consumption in FBC (Indian Coal)
  - 2. Diesel Consumption in FBC for light up
  - 3. Own vehicles and hiring equipment' by the company & fuel consumed process activities.

#### **GHG Emission from fuels**

| UOM                   | 2020-21                      | 2021-22                         | 2022-23                            |
|-----------------------|------------------------------|---------------------------------|------------------------------------|
| Va. COO /Tana of      |                              |                                 |                                    |
| Cementitious material | 41                           | 43                              | 48                                 |
|                       | Kg CO2 /Tone of Cementitious | Kg CO2 /Tone of Cementitious 41 | Kg CO2 /Tone of Cementitious 41 43 |

- **2. GHG emission from power consumption:** Indirect GHG Emissions (Scope 2), accounts of GHG emission from the purchased electricity consumed by the company. Emission cannot be controlled at the sources it can be only controlled by changing the type of electricity consumed.
  - 1. Electricity consumption from Grid.

#### **GHG** Emission from power consumption

| Categories                                     | UOM   | 2020-21 | 2021-22 | 2022-23 |
|--|---|---------|---------|---------|
| Scope-2 Emissions from Electricity consumption | Kg CO2 /Tone of<br>Cementitious<br>material | 44      | 46      | 42      |

#### Summary report of GHG emission last five years in below table

| Categories  | UoM  | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
|---|--|---------|---------|---------|---------|---------|---------|
| Scope-1 Emissions from Coal & Diesel consumption for the process of Cement Manufacturing. | Kg CO2<br>/Tone of<br>Cementitious<br>material | 53      | 58      | 52      | 41      | 43      | 48      |
| Scope-2<br>Emissions from Electricity<br>consumption                                      | Kg CO2<br>/Tone of<br>Cementitious<br>material | 59      | 61      | 42      | 44      | 46      | 42      |

The emission intensity of GHG emission of our unit scope -1 and scope -2 decreases continuously from previous years on account of the actions taken.

#### Mitigation plan for reduction of GHG emission

DCBL Bokaro is working on GHG mitigation Plan to bring down the GHG emissions from fuel usage and electricity usage. One of the main mitigation opportunities, as an immediate lever, is -to increase share of renewal energy for the electricity consumption.

The carbon footprint accounting has been implemented as per the international best practice and it is used for internal as well as external benchmarking.

#### 1. GHG emission mitigation:

Enhancing energy efficient of plant equipment's, use of renewal energy for electricity consumption and use of clean fuel /alternative fuel such as biodiesel in FBC.

#### (a) Reduction of GHG emission by the process optimization:

- 1. We are continually reducing clinker consumption for cement manufacturing.
- 2. We are planning for construction of new clinker silo for the storage of clinker to reduces road

transportation

3. We have continually increase rail transportation for inwards and outwards materials, reduce

road transportation.

#### (b) GHG emission reduction by improving energy efficiency plant equipment

We are regular working for reduction of power consumption in plant. energy efficient enhanced by working on the areas such as energy benchmarking study to identify the gaps in specific energy consumption such as process fan and other high energy consuming equipment's. To overcome the gaps, best practice could be followed to reduce the energy consumption. These measures for improving energy efficiency would proportionally result in reduce GHG emission due to increased energy efficiency and decreased energy consumption.

Implementation of ISO 50001:2018

We are in process for implementation of ISO 50001:2018 specific requirements for establishing, implementing, maintaining, and improving an energy management system (EnMS). The intended outcome is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance and EnMS.

#### (C). Increasing power sourcing from renewal energy

We are working to increase share of renewal energy for the electricity consumption. The percentage of emissions could be reduced by improving the percentage of renewable energy either by onside installation (solar rooftop system) or offsite renewable energy consumption through PPA or Open Access. The higher amount of renewable energy consumption would lead to lesser GHG emissions over the period. Dalmia Cement (Bharat) Limited, Bokaro unit will work on procuring 100% Renewable energy in long -term and eliminate emissions from Grid electricity.

(d) We have installed solar light & LED light in plant and colony area for the reduction of power

consumption.

(e) Tree plantation regularly done in plant & village area and maintaining the green belt. This will also help to reduce GHG emission.

#### 2.Regular Assessment of GHG Emissions and Strengthening of Inventory

Dalmia Cement (Bharat) Limited plants including Bokaro unit carry out regular GHG assessment and a third party assured yearly inventory to ascertain as well as find reduction opportunities from the major sources of GHG emissions.

#### **GHG Reduction Targets:**

- (a). To drive innovation resources are involved from various departments to reduce the emission. This will bring buy-in from all the stockholders involved and help in driving innovation to reduce the GHG emission.
- (b) To improve cost efficiency: cost saving can be made by identifying opportunities to increase resources and energy efficiency. This may help to improve our competitive advantage
- (c) Organization will setup ambitious targets, measuring managing, reporting and reducing GHG emissions.
- (d) Organization will be conduct internal as well external energy audit reduction of GHG emission
- (e) It will help in raising awareness among consumers and employees on what role they can play in reducing impact of GHG emission
- (f) Dalmia Cement (Bharat) Limited Bokaro unit will continually analysis the GHG Reduction potential opportunities identified, priorities and implement them to achieve GHG emission reduction target as well as associated cost benefit.

## Annexure-4

## Corporate Environment Responsibility & CSR report for the period of October 2023 to March 2024

| SI.<br>No | Name Of Activity  | Place Of Activity/ Village                      | Expense (in Rs.) |
|-----------|---|---|------------------|
| 1         | Plantation Work at Pakhariyatand<br>Road                              | Pakhariyatand                                   | 8200.00          |
| 2         | Beautician Training at GMV  | Govind Mahyamik Vidyalaya,<br>Gorabali, Kanari  | 110000.00        |
| 3         | Artificial Jewelry Making Training                                    | Govind Mahyamik Vidyalaya,<br>Gorabali, Kanari  | 95000.00         |
| 4         | Water pump installation at<br>Community Centre Bishunpur              | Bishunpur                                       | 200000.00        |
| 5         | Vegetable Plant and Vermi<br>Compost distribution                     | Gorabali  | 35000.00         |
| 6         | Formal Inauguration of Bokaro<br>Diksha                               | Bokaro  | 85000.00         |
| 7         | Neki ki Deewar DCBL   |   | 10000.00         |
| 8         | Blanket Distribution Gorabali, Narkara, Bishupur,<br>Kanari, Tupkadih |   | 400000.00        |
| 9         | Beautician Training Certificate Distribution                          |   |                  |
| 10        | Tailoring Training Certificate distribution                           | Govind Mahyamik Vidyalaya,<br>Gorabali, Kanari  | 25000.00         |
| 11        | Vegetable Seed / Sapling and Vermi<br>Compost Distribution            | Gorabali, Khutri, Kanari,<br>Tupkadih           | 200000.00        |
| 12        | Goat Distribution   | Gorabali, Khutri, Kanari,<br>Tupkadih           | 150000.00        |
| 13        | Tailoring Training  | Gorabali and Marafari                           | 98000.00         |
| 14        | Republic day celebration  | Govind Mahyamik Vidyalaya,<br>and Bokaro DikshA | 87000.00         |
| 15        | International Women's day celebration                                 | DCBL  | 67000.00         |
| Total     |   |   | 1595200.00       |

#### CORPORATE ENVIRONMENT POLICY

#### DALMIA BHARAT LIMITED

Regd. Office: Dalmiapuram – 621651, Dist: Tiruchirapalli, Tamil Nadu [CIN: L40109TN2006PLC058818]

Tel. No.: (04329) 235132 Website: www.dalmiabl.com; E-mail: invhelp1@dalmiabharat.com

#### **BUSINESS RESPONSIBILITY POLICY**

[Adopted by the Board of Directors at its meeting held on 17-8-2016]

#### Preface

Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, vide its clause 34(2)(f), mandates that the Annual Report of top five hundred listed entities based on market capitalization (calculated as on March 31 of every financial year) shall contain a Business Responsibility Report describing the initiatives taken by the Company from an environmental, social and governance perspective, in the format as specified by the SEBI from time to time.

SEBI vide Circular No. CIR/CFD/CMD/10/2015 dated November 04, 2015 has prescribed nine key principles to assess the fulfillment of listed entities and a description of the care elements under these principles. This Policy is accordingly framed to address the nine principles prescribed by SEBI in the said circular.

#### Stakeholders

The relevant stakeholders are Shareholders, Security Holders, Subsidiary Companies, Joint Venture Companies, Employees, Suppliers, Distributors, Public, Customers and Society at large.

#### Principle 1 - Ethics, Transparency and Accountability

Dalmia Bharat Limited (the "Company") is committed to ensure adherence, while concluding in all its sphere of activities and while dealing with both the internal and external stakeholder, to the following:

- Promote values as well as demonstrate commitment to uphold its ethics princ ples wherever operate in conjunction with business partners.
- Not do or give or receive, directly or indirectly for business or financial gain, any financial inducement or improper advantage, or engage in any form of unetical conduct or exercise undue influence over any other third party.
- Not indulge in giving extravagant, lavish or uncustomary gifts to Authorities which may
  obligate or inappropriately influence the recipient.
- Ensure vouch for completeness, validity and accuracy of the records, financial or
  otherwise and the validity of all information. Systematically identify and engage in an
  effective and transparent manner with all the stakeholders to create sustainable, long
  term value for our stakeholders.
- Take the contractual obligations seriously and ensure to pay suppliers, employees and other entitled to receive money according to agreed contracts/terms.
  - Not to engage in or promote practices which are corrupt and anti-competitive and comply with the competition laws.

- Encourage all associated parties to comply with these principles and avoid complicity with anyone that violates above principles.
- · Comply with all the laws and regulations as applicable.

#### Principle 2 - Sustainability

The Company is committed to offer goods which are safe and have a positive contribution on environment and society. To achieve this objective, we are committed to:

- Adopt most energy efficient technologies in manufacturing process, improve the energy efficiency of equipment.
- Make continuous effort to increase the use of renewable energy and fuels, coprocessing wastes to reduce our greenhouse gases.
- Invest in research and development.
- Make continuous efforts to reduce water intensity and fresh water usage by increased use of harvested and recycled water in our operations.
- Assess biodiversity quality in all our extraction sites and strive to create positive impact.
- Continuously strive to improve the quality of products, processes and services.
- Encourage recognition and respect for rights of owners of intellectual property.
- Promote free competition and freedom of choice to consumers.
- Identify stakeholders to understand their concerns.
- Implement suitable grievance handling mechanism, wherever required.

#### Principle 3 - Wellbeing of Employees

The Company being a strong value driven, people oriented and accountable organization is committed to offer the best working environment to all its employees. To achieve this objective, we are committed to:

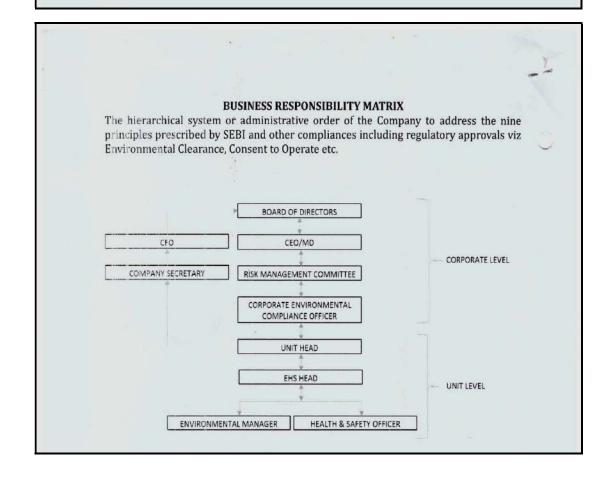
- Maintain good working conditions promote a harmonious and productive atmosphere in the workplace and provide fair and equal employment opportunity for all employees to maximize their career growth with enhanced skills and to create a favourable environment to work as an effective team.
- Ensure no harm anywhere to any one in our entire operations as part of our commitment towards health and safety of all people involved.
- We shall provide Safe and secure workplace free from harassment, discrimination or other intimidating behaviors of all kinds and shall follow the procedures, principles and rules prescribed by the Government under Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 and rules made thereunder.
- We shall ensure equal opportunities and fair treatment to all employees including eligible applicants for employment in the Company irrespective of their caste, creed, religion, gender, marital status, age starting from the process of employee's acquisition till grant of all terminal benefits and will not tolerate discrimination of any kind. We shall recruit, retain and develop people based on suitability of role and the opportunity for personal and professional growth.
- We shall promote well being and work life balance of people to let them live a happy life and honour individuality of every employee.
- We shall not engage any person to work who is unwilling or below the age of 18 years.
- We shall respect the right of freedom of association, participation and collective bargaining.

#### Independent Audit / Evaluation of working of the Policy

Independent Audit / evaluation of working of the Policy shall be done by the Internal Auditor atleast once a year and report the same to the Chief Financial Officer and Whole Time Director, being designated by the Board of Directors as responsible Director for the preparation and implementation of the Business Responsibility Policy.

#### Conclusion

This Policy will be reviewed as and when deemed necessary in view of the revision/amendment in the Regulations notified from time to time or otherwise.



## Annexure-6

## CAPITAL COST INVESTMENT ON ENVIRONMENT PROTECTION AT DCBL BOKARO UP TO MARCH 2024

|     | M/S DALMIA CEMENT (BHARAT) LIMITED, BOKARO   |            |                   |                      |  |  |  |
|-----|--|------------|-------------------|----------------------|--|--|--|
|     | Plot No. IV/A-7(P),Bokaro Industrial Area,Balidih ,Bokaro Steel City,Jharkhand -827014 |            |                   |                      |  |  |  |
| CA  | CAPITAL COST INVESTMENT ON ENVIRONMENT PROTECTION AT DCBL BOKARO UP TO MARCH 2024      |            |                   |                      |  |  |  |
| S.N | PARTICULARS  | Asset no   | Investment in Rs. | Investment in Crores |  |  |  |
| 1   | INVESTMENT ON AIR POLLUTION CONTROL MEASURES   | •          | •                 |                      |  |  |  |
| а   | Bag House cement mill  | 5500000007 | 193983042.2       |                      |  |  |  |
| b   | Bag house fan  | 5500000014 | 13972406.4        |                      |  |  |  |
| С   | Bag house for cement mill  | 5500000037 | 9901023.02        |                      |  |  |  |
| d   | Bag house fan  | 5500000046 | 185484.52         |                      |  |  |  |
| е   | Sprs Bag house fan -mill -1  | 5500000016 | 6300867.1         |                      |  |  |  |
| f   | Sprs Bag house fan -mill -2  | 5500000017 | 6300867.53        |                      |  |  |  |
| g   | Bag filter from silo to packing plant EEL India limited                                |            | 21000000          | 29.05                |  |  |  |
| h   | Bag filter clair Packing plant area  |            | 4800000           |                      |  |  |  |
| i   | Bag filter at Wagon Tippler  |            | 28150000          |                      |  |  |  |
| j   | Bag filter Dry fly ash silo Top storage bin  |            | 900000            |                      |  |  |  |
| h   | Bag filter Dry fly ash silo Top storage bin Sep-                                       |            | 1300000           |                      |  |  |  |
| i   | Packer 4 Bag filter  |            | 3700000           |                      |  |  |  |
|     |  |            | 290493690.8       |                      |  |  |  |
| 2   | INVESTMENT ON FUGITIVE DUST EMISSION CONTROL   |            |                   |                      |  |  |  |
| a   | Construction of Tarpaulin shed near packing plant                                      | 5200000052 | 1741749.73        |                      |  |  |  |
| f   | Road Swapping machine  | 5900000085 | 128981            |                      |  |  |  |
| g   | Water spray tanker   | 5060000016 | 100000            | 8.64                 |  |  |  |
| h   | Delexo Road Swapping Machine   | 5500000172 | 2452009.2         | 0.04                 |  |  |  |
| i   | Steel Silo for storage of PCC  | 5500000185 | 28115894.14       |                      |  |  |  |
| J   | Plant Roads construction   | 520000010  | 53848342.83       |                      |  |  |  |
|     |  |            | 86386976.9        |                      |  |  |  |
| 3   | INVESTMENT IN WATER POLLUTION CONTROL MEASUR   | RES        |                   |                      |  |  |  |
| a   | Rain water Harvesting  | 5200000034 | 56547.38          |                      |  |  |  |
| b   | Sewar line connected to plant toilet to STP  | 5200000054 | 958795.98         |                      |  |  |  |
| С   | Bio Toilet at Wagon Tippler & Railway penal Yard                                       | 5200000055 | 99308.58          |                      |  |  |  |
| d   | Construction of Sewage treatment Plant   | 5200000067 | 4772895.03        |                      |  |  |  |
| e   | Water treatment plant  | 5040000011 | 133559.51         | 0.70                 |  |  |  |
| f   | Toilets & Bathroom for Labour Camp   | 5200000056 | 1074911.5         | 0.78                 |  |  |  |
| g   | Water treatment plant  | 5040000013 | 682090.06         |                      |  |  |  |
|     |  |            | 7778108.04        |                      |  |  |  |

| 4  | ENVIRONMENT POLLUTION MONITORING EQUIPMEN                              | NT                 |            |      |  |  |  |
|----|--|--------------------|------------|------|--|--|--|
| 1  | CAAQM -S02 & NOx Analyzer  | 5500000068         | 1308596    |      |  |  |  |
| 2  | Laboratory balance   | 5500000074         | 19244      |      |  |  |  |
| 3  | Opacity meter From Chemtrols industries LTD                            | 590000033          | 88889.55   |      |  |  |  |
| 4  | Opacity meter From Chemtrols industries LTD                            | 590000034          | 88889.55   |      |  |  |  |
| 5  | Data connectivity to CPCB Server                                       | 5800000003         | 188100     |      |  |  |  |
| 6  | Stack monitoring kit from form forebes marshal                         | 5010000067         | 10596.16   |      |  |  |  |
| 7  | Incubator  | 5500000029         | 13000.32   |      |  |  |  |
| 8  | On line CAAQM station Environment SA                                   | 5500000066         | 2522852.76 |      |  |  |  |
| 9  | Up gradation Software of CAAQMS  | 5800000003         | 490800     |      |  |  |  |
| 10 | Construction of 2.no CAAQMS Room                                       | 5200000035         | 454879     | 0.61 |  |  |  |
| 11 | Respirable Dust Sampler 460 BL PM -10 ,4no                             | Environment<br>Lab | 280000     |      |  |  |  |
| 12 | Respirable Dust Sampler 460 BL PM- 2.5 ,4no                            | Environment<br>Lab | 300000     |      |  |  |  |
| 13 | Vayubodhan Stack monitoring Kit VSS1                                   | Environment<br>Lab | 75000      |      |  |  |  |
| 14 | Spectrophotomer  | Environment<br>Lab | 280000     |      |  |  |  |
|    |  |                    | 6120847.34 |      |  |  |  |
|    | Capital cost Investment from October 23 to March 24                    |                    |            | Nil  |  |  |  |
|    | Total Capital Cost Investment on Environment measures up to March 2024 |                    |            |      |  |  |  |

## DALMIA CEMENT (BHARAT) LIMITED, BOKARO

## RECURRING COST EXPENDITURE ON VARIOUS ENVIRONMENTAL PROTECTION ACTIVITIES

| 1                 | Cost on Schedule maintenance   | Rs. Lacs |
|-------------------|--|----------|
|                   | Bags replacement with new bags, Bags cleaning, De dusting line checking, cleaning and repairing work. Bag filters fan maintenance etc) | 7.14     |
| 2                 | Power consumption in Pollution control equipment (Bag<br>House & Bag Filter) 10889294 KWH X 5.61                                       | 610.9    |
| 2                 | Third Party Environmental Monitoring & Analysis  | 1.15     |
| 3                 | AMC of CEMS Data transmission to JSPCB& CPCB   | 0.17     |
| 4                 | AMC of CAAQMS Maintenance, Servicing and Calibration,  | 0.75     |
| 5                 | AMC of CAAQMS Data transmission to JSPCB & CPCB  | 0.5      |
| 6                 | Calibration of Pollution Monitoring Equipment's (CEMS)   | 1.5      |
| 7                 | Calibration of Pollution monitoring instrument (RDS &Stack VSSI,Noise level meter)   | 0.15     |
| 8                 | Air Pollution Monitoring Accessories' Pump maintenance kit & PM-10 & 2.5 Filter paper  | 2.00     |
| 9                 | Water Pollution Management (AMC of STP, R.O Plant, D.M. Plant, & Softener Plant), Cleaning of Nala,                                    | 0.25     |
| 10                | STP Operation & Maintenance  | 2.89     |
| 11                | Road Sweeping Machine Operation & Maintenance  | 2.6      |
| 12                | Disposal of Bio medical waste  | 0.09     |
| 13                | Fuel consumption in water sprinkling tanker of water on dusty area   | 0.12     |
| 14                | Green Belt Development   | 7.44     |
| TOTAL I<br>TO MAR | 637.65   |          |

## Annexure-7

## **Environment Internal audit report**

## October 2023-March-2024

Date: 16.02.2024

| Sr.<br>No | Environment internal audit observation points  | Auditee Status   | Auditor<br>Status |
|-----------|--|--|-------------------|
| 1.        | Review status of Statutory compliance - Consent to Operate (CTO) & Environment Clearance (EC) compliance condition   | Complied. Timely submitted EC Compliance report to JSPCB /MOEF&CC /CPCB/SEIAA. | Complied          |
| 2.        | Review status of Statutory compliance - E-Waste Management   | Complied. Timely submitted E-Waste return to JSPCB Ranchi and Dhanbad.         | Complied          |
| 3.        | Statutory compliance - Hazardous waste management  | Complied. Timely submitted Hazardous waste return Form-IV JSPCB & Dhanbad      | Complied          |
| 4.        | Review status of Statutory compliance Condition of OHC, CTO and Authorization of Bio medical waste compliance condition under Bio- Medical Waste Management. | <u>*</u>   | Complied          |
| 5         | Checked On Line CEMS & CAAQMS data at JSPCB & CPCB Server  | Complied, On line CEMS & CAAQMS Data updated in JSPCB & CPCB server            | Complied          |
| 6         | Checked Calibration certificate record of Pollution monitoring equipment.  | Complied. On line CEMS & CAAQMS calibrated with in time.                       | Complied          |
| 7         | On Line monitoring data display at factory main gate.  | Complied. Online Environment monitoring data displayed at main gate            | Complied.         |
| 8         | Checked Third party Environment monitoring report.   | Complied, third party Environment monitoring report done on quarterly basis.   | Complied.         |
| 9         | Checked Drinking water quality   | Complied, Drinking water quality regular checked.                              | Complied.         |

| 10 | Checked status validity of CTO & EC    | Complied. within time limit                     | Complied. |
|----|--|---|-----------|
| 11 | Checked fugitive dust emission records | Complied  | Complied  |
| 12 | Status of Green belt development       | Complied Green belt maintained 33% of the plant | Complied  |

#### **Annexure-8**

## Advertisement in newspaper for receiving of EC from SEIAA



#### EC Copy submitted to local authority & another Govt. Department



newthink! cement! sugar! refractories! power!

To.

Date: 03.10.2019

Shri Ganesh Thakur ji

Mukhiya

Village/Basti: Balidih

Gorabali (South) Gram Panchayat

Bokaro

Sub: Environment Clearance for "Upgradation of Technology at existing standalone Cement Grinding unit from 3.0 MTPA to 3.70 MTPA of M/s Dalmia Cement (Bharat) Ltd. at Plot no.-IV/A-7(P), Bokaro Industrial Area Bokaro"

Dear Sir,

At the outset we extend our sincere thanks for the cooperation extended to us by the Gorabali(S) GP for seamless operation of our cement plant at Bokaro. We had applied for grant of Environment Clearance for enhancement of production capacity from 3.0 MTPA to 3.7 MTPA for which finally EC has been granted by State Level Environment Assessment Authority (SEIAA) vide letter no. EC/SEIAA/2018-19/2138/2019/474 dated 23rd September 2019 (Copy of EC enclosed)

This is submitted for your kind information & record please

Thanks & Regards

Yours sincerely

For Dalmia Cement (Bharat) Limited

Mukesh Kumar Garg

(Unit Head & Assistant Executive Director)

8145

Encl A/a

पाम पन्नायत गोडावाली द० प्रखण्ड-चास । बाकारो।

Dalmia Cement (Bharat) Limited

Works: Plot No. - IV/A-7(P) Bokaro Industrial Area, Balidth, Bokaro Steel City - 827014. Iharkhand, India
(IN: U651917N1956PLC035963

(- 91 6542 253278 / 253067) is wive dalmiacement.com

Registered Office: Dalmiapurom, Dist. Turchirapolli, Tamil Nadu 621651, India

A Dalmia Baruat Group company

www.dalmiabharat.com





newthink! cement! sugar! refractories! power!

To,

Date: 03.10.2019

পুল পদা udRegional Director

3 Tharkhand Industrial Area Development Authority (JIADA)

3.40 Bokaro Industrial Area

**Bokaro Steel City** 

Bokaro - 827014

Sub: Environment Clearance for "Upgradation of Technology at existing standalone Cement Grinding unit from 3.0 MTPA to 3.70 MTPA of M/s Dalmia Cement (Bharat) Ltd. at Plot no.-IV/A-7(P), Bokaro Industrial Area Bokaro"

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This is submitted for your kind information & record please

Thanks & Regards

Yours Sincerely

For Dalmia Cement (Bharat) Limited

Mukesh Kumar Garg

(Unit Head & Assistant Executive Director)

经

Encl A/a

Dalmia Cement (Bharat) Limited

Works: Piot No. - IV/A-7(P) Bokara Industrial Area, Balidih, Bokara Steel City - 827014. Jharkhand, India
CIN. + 1651917N1996PLC035963

t-91-6542-253278 / 253047 | www.clalmiacement.com

Registered Office: Dalmiaguram, Dist. Truchiropalli, Tamil Nada 621651, India
A Dalmia Bharat Group company

www.clalmiabharat.com