

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

Date: 11.05.2023

Subject: Half yearly Environment Clearance (EC) Compliance report of Dalmia Cement (Bharat) Limited, Bokaro for the period of October 2022 to March 2023.

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 2022 to March '2023 for your kind perusal.

Thanking you.

Yours Sincerely,

For **Dalmia Cement (Bharat) Limited, Bokaro**



Authorized Signatory

Copy:

1. The Director, Ministry of Environment, Forest and Climate Change,
2nd Floor, Headquarter-Jharkhand State Housing Board, Hamu Chowk, Ranchi,
Jharkhand - 834002
2. The Member Secretary, Central Pollution Control Board, Parivesh Bhavan,
East Arjun Nagar, Delhi-110032
3. The Member Secretary, Jharkhand State Pollution Control Board, Township
Administration Building, HEC Complex, Dhurwa, Ranchi-834004
4. 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), Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro - 827 014, Jharkhand, India
T +91 6542 253 278 / +91 6542 253 047 Toll Free 1800 2020 W www.dalmiacement.com CIN: U65191TN1996PLC035963
Registered Office: Dalmiapuram, District Tiruchirappalli - 621 651, Tamil Nadu, India
A **Dalmia Bharat Group** company, www.dalmiabharat.com

**DALMIA CEMENT (BHARAT) LIMITED, BOKARO
ENVIRONMENT CLEARANCE COMPLIANCE REPORT
FROM OCTOBER 2022 TO MARCH 2023**

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**

DALMIA CEMENT BHARAT LIMITED.BOKARO

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 2022 TO MARCH 2023

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

	EC Compliance Condition	EC Compliance Status
I	Specific Condition	
	<p>This Environmental Clearance is valid subject to the following condition below —</p> <p>That this project has-</p> <p>a. Obtained all legal rights to operate at concerned place.</p> <p>b. Complied with all existing concerned laws of the land and</p> <p>c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.</p>	<p>Complied with.</p> <p>a. Obtained all necessary statutory clearance to operate our stand-alone cement Grinding Unit.</p> <p>b. Complied all legal law of land with respect to our unit</p> <p>c. Complied with.</p>
II	Statutory Compliance	
1	<p>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.</p>	<p>Not Applicable.</p> <p>The unit is located in notified Industrial area at JIADA, Bokaro, Jharkhand with due allocation through Govt of Jharkhand.</p>
2	<p>The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.</p>	<p>Not Applicable.</p> <p>There is no wild life sanctuary within 10 km radius of our unit.</p>
3	<p>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)</p>	<p>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.</p>

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	Not applicable. 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.	
III	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 9 th 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.
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 2022 to March 2023 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. Continuous AAQM 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 from October 2022 to March 2023 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	Complied. Six monthly environmental monitoring reports from October 2022 to March 2023 is

	manual stack monitoring and manual 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/Nm ³ . 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 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 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, 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 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 preservation:	
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 uses. 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 Annexure-1
4	Adhere to 'Zero Liquid Discharge	Complied with. 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 run-off 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	

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 six-monthly EC Compliance report. Six monthly noise level report (October 2022 to March 2023) 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. We have also initiated to install more solar light in plant.
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 Annexure-3 .
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 1 st May 2018, as applicable, regarding Corporate Environment Responsibility.	<p>Being Complied. we are regularly doing CREP surrounding village area which is as follows:</p> <ol style="list-style-type: none"> 1.Wells & 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. <p>CER report for the year 2022-23 attached as per Annexure: 4</p>
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.	<p>Complied with. DCBL Bokaro have Environmental Management Policy duly approved from Board of Director. copy of Environment policy attached herewith as per Annexure-5</p>
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.	<p>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.</p>
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	<p>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</p>

	plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.	Environment Protection (Capital cost & Recurring cost) from October 2022 to March 2023 is attached as per Annexure-6
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 October 2021 to March 2022.
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	Complied. On-line environment monitoring data is being regularly displayed at factory main gate for the notice of public.

	the website of the company.	
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/21-22/01, Dated 20.09.2022.
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(I)	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 in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act,1986.	Noted & agreed.
10	The SEIAA, Jharkhand or any other competent Authority may alter modify the above condition or stipulated any further condition in the interest of Environment Protection.	Noted & agreed
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, inter-alia 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	Noted & agreed

	Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	
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 of 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 2022 TO MARCH 2023

Ambient air quality monitoring report -Near Time office				
	SO₂	NO_x	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
October,2022	8.1	17.4	52.8	23.6
November,2022	6.7	16.5	53.1	25.1
December,2022	7.5	19.6	54.3	26.4
January,2023	8.1	17.1	51.6	23.6
February,2023	9.0	18.2	54.9	27.8
March,2023	10.2	19.3	56	29.4
Min.	6.7	16.5	51.6	23.6
Max.	10	19.6	56	29.4
Avg.	8.2	18.0	53.8	26.0

Ambient air quality monitoring report FH-3 Building				
	SO₂	NO_x	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
October,2022	6.8	13.7	49.5	21.7
November,2022	5.4	14.1	48.9	23.8
December,2022	6.7	15.5	50.7	24.5
January,2023	7.1	16.2	53.1	22.6
February,2023	8.4	17.0	54.3	29.3
March,2023	9.8	16.9	51.6	26.9
Min	5.44	13.71	48.90	21.70
Max.	9.80	17.03	54.30	29.27
Avg.	7.43	15.53	51.41	24.97

JSPCB Norms

SO₂	NO_x	PM₁₀	PM_{2.5}
(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
80	80	100	60

DALMIA CEMENT BHARAT LIMITED, BOKARO

AMBIENT AIR QUALITY MONITORING REPORT FROM OCTOBER 2022 TO MARCH 2023

Ambient air quality monitoring report: Near Wagon Tippler				
	SO₂	NO_x	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
October,2022	9.0	16.5	51.6	24.0
November,2022	6.8	18.6	52.5	27.0
December,2022	8.1	16.5	53.6	26.4
January,2023	7.6	17.2	54.2	25.2
February,2023	8.4	19.7	53.8	26.3
March,2023	9.7	15.6	54.0	28.4
Min	6.79	15.56	51.59	23.97
Max	9.71	19.73	54.17	28.41
Average	8.26	17.35	53.28	26.23

Ambient air quality monitoring report: Fabrication yard				
	SO₂	NO_x	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
October,2022	5.6	19.0	52.6	25.4
November,2022	7.5	24.0	54.8	24.4
December,2022	8.3	23.1	53.4	27.3
January,2023	6.2	22.1	55.0	26.1
February,2023	9.3	19.3	55.9	30.3
March,2023	7.8	21.8	56.1	31.4
Min	5.6	19.0	52.6	24.4
Max	9.3	24.0	56.1	31.4
Average	7.4	21.6	54.6	27.5

JSPCB Norms

SO₂	NO_x	PM₁₀	PM_{2.5}
(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
80	80	100	60

DALMIA CEMENT BHARAT LIMITED, BOKARO

MANUAL STACK EMISSION MONITORING REPORT OF VRM BAG HOUSE STACK FROM OCTOBER 2022 TO MARCH 2023.

Month	Min. mg/nm3	Max. mg/Nm3	Avg. mg/Nm3
October,2022	11.2	19.9	15.6
November,2022	14.3	25.3	19.8
December,2022	16.4	27.8	22.1
January,2023	12.4	26.8	19.6
February,2023	13.9	27.9	20.9
March,2023	18.3	26.2	22.3
Min.	11.2	19.9	15.6
Max.	18.3	27.9	22.3
Avg.	14.5	25.2	19.7

ONLINE STACK EMISSION MONITORING REPORT OF VRM BAG HOUSE STACK FROM OCTOBER 2022 TO MARCH 2023

Month	Min. mg/nm3	Max. mg/Nm3	Avg. mg/Nm3
October,2022	5.5	23.2	15.2
November,2022	13.6	22.9	20.3
December,2022	7.3	25.7	16.6
January,2023	12.8	24.1	19.7
February,2023	10.5	23.4	18.1
March,2023	12.4	26.5	20.9
Min.	5.5	22.9	15.2
Max.	13.6	26.5	20.9
Avg.	10.1	24.4	18.4

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

DALMIA CEMENT BHARAT LIMITED, BOKARO

NOISE LEVEL REPORT FROM OCTOBER 2022 TO MARCH 2023

Month	Near Time office					
	Day Time dB(A)			Night Time dB(A)		
	Min.	Max.	Avg.	Min.	Max.	Avg.
October,2022	63.1	66.4	64.8	58.7	66.4	62.6
November,2022	62.8	68.3	65.6	53.3	67.1	60.2
December,2022	63.2	64.7	64.0	54.6	62.6	58.6
January,2023	63.5	66.7	65.1	64.1	68.3	66.2
February,2023	60.4	65.1	62.8	58.8	64.9	61.9
March,2023	61.4	64.5	63.0	55.9	61	58.5

Month	Near FH 3&4 Building					
	Day Time dB(A)			Night Time dB(A)		
	Min.	Max.	Avg.	Min.	Max.	Avg.
October,2022	41.3	42.3	41.8	39.4	42.3	40.9
November,2022	43.8	44.5	44.2	41.2	43.1	42.2
December,2022	41.7	43.6	42.7	40.7	42.8	41.8
January,2023	42.0	42.8	42.4	39.1	41.4	40.3
February,2023	43.8	44.2	44.0	42.2	43.9	43.1
March,2023	41.5	43.1	42.3	39.5	43.2	41.4

	Wagan Tripler					
	Day Time dB(A)			Night Time dB(A)		
	Min.	Max.	Avg.	Min.	Max.	Avg.
October,2022	64.3	65.7	65.00	60.9	64.5	62.7
November,2022	63.0	63.8	63.4	59.2	62.4	60.8
December,2022	62.5	67.2	64.9	60.4	65.7	63.1
January,2023	63.3	68.6	66.0	61.8	66.9	64.4
February,2023	65.5	66.1	65.8	62.9	64.8	63.9
March,2023	64.8	69.6	67.2	60.3	63.1	61.7

	Near Fabrication yard					
	Day Time dB(A)			Night Time dB(A)		
	Min.	Max.	Avg.	Min.	Max.	Avg.
October,2022	65.1	70.5	67.8	62.7	65.9	64.3
November,2022	68.4	69.7	69.1	63.6	68.5	66.1
December,2022	65.8	67.9	66.9	61.8	62.9	62.4
January,2023	63.7	68.5	66.1	60.5	65.9	63.2
February,2023	62.5	65.1	63.8	61.9	67.5	64.7
March,2023	64.6	66.3	65.5	62.1	63.9	63.0

DALMIA CEMENT BHARAT LIMITED, BOKARO

FUGITIVE DUST EMISSION MONITORING REPORT FROM OCTOBER 2022 TO MARCH 2023

Sr. No	Date of monitoring	Near Mill area µg/m ³	Near Coal yard µg/m ³	Near Packing plant µg/m ³	Near raw material yard µg/m ³
1	02.10.2022	1254.1	1321.1	1136.6	1067.8
2	13.11.2022	1341.6	1193.7	972.7	1335.4
3	23.12.2022	1072.3	1036.6	1231.5	973.12
4	01.01.2023	1205.6	1243.5	1122.4	1033.75
5	18.02.2023	1315.7	1312.3	1235.7	1225.3
6	13.03.2023	1435.2	1268.5	1093.4	1194.5
	Min.	1072.3	1036.6	972.7	973.12
	Max.	1435.2	1321.1	1235.7	1335.4
	Avg.	1266.50	1216.68	1125.0875	1142.30

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

GROUND WATER LEVEL REPORT OF SURROUNDING VILLAGES FROM OCTOBER 2022 TO MARCH 2023

Location	Coordinate of Site	Distance from Plant site (KM)	Depth from ground (feet)						
			Month	October-2022,	November-2022,	December-2022,	January-2023,	February-2023,	March-2023,
Pakhriatand (Near Anganwadi)	23070'5590"N 86006'2678" E	1		13'9"	14'5"	19'8"	21'7"	21'9"	22'3"
Tupkadi (Near Electric Pole)	23071'3362"N 86006'1573" E	1		12'0"	12'7"	16'9"	19'6"	20'2"	20'8"
Godawali (Near Temple)	23068'7751"N 86006'0031" E	1		3'6"	3'9"	6'3"	8'3"	8'6"	8'9"
Bhutkuru (Near primary School)	23070'4642"N 86005'1418" E	1		13.1"	14'3"	17'1"	18'1"	19'5"	19'8"

DALMIA CEMENT BHARAT LIMITED, BOKARO

STP OUTLET WATER QUALITY ANALYSIS REPORT

STP OUTLET WATER QUALITY ANALYSIS REPORT FROM OCTOBER 2022 TO MARCH 2023						
Sr. No	Parameter	PH	Suspended solids mg/lit	COD	BOD mg/lit	Oil & Grease mg/lit.
				mg/lit		
Norms		5.5-9.0	100	250	30	10

7	October,2022	7.5	73	27	13	5.0
8	November,2022	7.8	85	74	18	4.8
9	December,2022	7.4	11	32	9	5.1
10	January,2023	7.3	12	36	11	5.8
11	February,2023	7.6	11.6	40	19	5.4
12	March,2023	7.6	14	42	8	4.8
	Min.	7.3	11	27	8.1	4.8
	Max.	7.8	85	74	19	5.8
	Avg.	7.5	45	67	15.0	5.7

Ambient Air Quality monitoring report



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	9
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Ambient Air									
Report Issue Date: 25-03-2023									Test Report No.: RN-230308001A01								
Sample ID: 230321AP11001									Sample Description: Ambient Air								
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: 17-03-2023 to 18-03-2023								
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: Near Main Gate																	
Field Meteorological Information			A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW to SE					
Sample Receiving date: 21-03-2023						Testing Started: 21-03-2023						Testing Ended: 24-03-2023					

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	73.34
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	34.61
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	13.49
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	28.19
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	51.31
6.	OZONE (O ₃)	IS 5182 Part 09	µg/m ³	100	27.10
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m ³	----	BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.05
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m ³	----	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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by _____ Authorized Signatory _____ (Shreya Sonali)
	Dy. Quality Manager _____ Director _____ (Dr. 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 - 8407804253, 8407804251, Email - iem2012@rediffmail.com

ISO 9001:2015
ISO 45001:2018



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 25-03-2023	Sample ID: 230321AP11001	Test Report No.: RN-230308001A01
Challan No./P.O. No.: 4548023834/237	Sample Description: Ambient Air	Challan No./ P.No. Date: 17-09-2022
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Sample Drawn by: IEM Team	Customer Representative: Sanjeev Verma
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Main Gate		
Field Meteorological Information	A. Temp. (°C): 25	R.H. (%): 55
	W.C.: Cloudy	W.D.: NW to SE
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Benzo (a) Pyrene (BaP) Particulate phase only	IS 5182 Part 12	ng/m ³	----	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEM/SOP/Air-01:2022	mg/m ³	----	BDL(MDL-1.8)

----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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes :-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- 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 is issued by the Director of the Organization.

Quality Checked by	Authorized Signatory
(Shreya Sonal)	(Dr. S. C. Jain)
Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	1	0
Discipline:	Chemical		Group: Atmospheric Pollution					Sub-Group: Ambient Air									
Report Issue Date:	25-03-2023					Test Report No.: RN-230308001A02											
Sample ID:	230321AP11002					Sample Description: Ambient Air											
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: 17-03-2023 to 18-03-2023												
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: Near Fabrication Yard																	
Field Meteorological Information			A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW to SE					
Sample Receiving date: 21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023							

----Test Results----


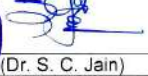
Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	79.25
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	31.00
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	18.88
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	37.91
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	47.30
6.	OZONE (O ₃)	IS 5182 Part 09	µg/m ³	100	22.45
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m ³	----	BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.03
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m ³	----	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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked By	Authorized Signatory
	 (Shreya Sena)	 (Dr. S. C. Jain)
	Dy. Quality Manager	Director

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

Laboratory Site - II.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



Institute for Environmental Management



Accredited by: Jharkhand State Pollution Control Board, ISPCB
 Certified by: ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 25-03-2023	Test Report No.: RN-230308001A02	
Sample ID: 230321AP11002	Sample Description: Ambient Air	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 17-03-2023 to 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Fabrication Yard		
Field Meteorological Information		
A. Temp. (°C): 25	R.H. (%): 55	W.C.: Cloudy
W.D.: NW to SE		
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Benzo (a) Pyrene (BaP) Particulate phase only	IS 5182 Part 12	ng/m ³	----	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEM/SOP/Air-01:2022	mg/m ³	----	BDL(MDL-1.8)

----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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked (Shreya Srivastava) Dy. Quality Manager	Authorized Signatory (Dr. S. C. Jain) Director
---	---	--



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

Laboratory Site - JLN. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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





Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	1	1	
Discipline:	Chemical		Group: Atmospheric Pollution						Sub-Group: Ambient Air										
Report Issue Date:	25-03-2023						Test Report No.: RN-230308001A03												
Sample ID:	230321AP11003						Sample Description: Ambient Air												
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: 17-03-2023 to 18-03-2023										
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series																			
Sampling Location: Near Colony																			
Field Meteorological Information			A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW to SE							
Sample Receiving date: 21-03-2023			Testing Started: 21-03-2023			Testing Ended: 24-03-2023													

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	60.31
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	32.54
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	16.19
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	32.08
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	45.29
6.	OZONE (O ₃)	IS 5182 Part 09	µg/m ³	100	23.70
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m ³	----	BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.04
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m ³	----	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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 25-03-2023	Test Report No.: RN-230308001A03	
Sample ID: 230321AP11003	Sample Description: Ambient Air	
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)4, 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: 17-03-2023 to 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Colony		
Field Meteorological Information	A. Temp. (°C): 25	R.H. (%): 55
	W.C.: Cloudy	W.D.: NW to SE
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Benzo (a) Pyrene (BaP) Particulate phase only	IS 5182 Part 12	ng/m ³	----	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEM/SOP/Air-01:2022	mg/m ³	----	BDL(MDL-1.8)
3.	BENZENE (C ₆ H ₆)	IS 5182 Part 11	µg/m ³	----	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
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dr. S. C. Jain)
	Dy. Quality Manager	Director

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



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





Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	1	2
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Ambient Air									
Report Issue Date: 25-03-2023	Test Report No.: RN-230308001A04																
Sample ID: 230321AP11004	Sample Description: Ambient Air																
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022																
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																	
Type of Industry: Cement	Customer Representative: Sanjeev Verma																
Sample Drawn by: IEM Team	Sampling Date: 18-03-2023 to 19-03-2023																
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: Near Wagon Tippler																	
Field Meteorological Information			A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW to SE					
Sample Receiving date: 21-03-2023			Testing Started: 21-03-2023						Testing Ended: 24-03-2023								

----Test Results----

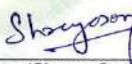

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006	µg/m ³	100	81.24
2.	Particulate Matter (PM _{2.5})	IS 5182 Part 24:2019	µg/m ³	60	35.92
3.	Sulphur Dioxide (SO ₂)	IS 5182 Part-02	µg/m ³	80	14.84
4.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06	µg/m ³	80	29.16
5.	Ammonia (NH ₃)	IS 5182 Part 25	µg/m ³	400	41.28
6.	OZONE (O ₃)	IS 5182 Part 09	µg/m ³	100	40.05
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m ³	----	BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m ³	1.0	0.03
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m ³	----	BDL (MDL-4)
10.	BENZENE (C ₆ H ₆)	IS 5182 Part 11	µg/m ³	----	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
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to involved amount only. 6. 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 is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory
	 (Shreya Sonal) Dy. Quality Manager	 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

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

ISO 9001:2015
ISO 45001:2018



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 25-03-2023	Test Report No.: RN-230308001A04	
Sample ID: 230321AP11004	Sample Description: Ambient Air	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 18-03-2023 to 19-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Wagon Tippler		
Field Meteorological Information	A. Temp. (°C): 25	R.H. (%): 55
	W.C.: Cloudy	W.D.: NW to SE
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

---Test Results---



Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Benzo (a) Pyrene (BaP) Particulate phase only	IS 5182 Part 12	ng/m ³	----	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEM/SOP/Air-01:2022	mg/m ³	----	BDL(MDL-1.8)

---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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.lemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory	
	 (Shreya Sonal)		 (S. C. Jain)
	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com



STACK EMISSION REPORT



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	2	3	
Discipline: Chemical	Group: Atmospheric Pollution						Sub-Group: Stack Emission											
Report Issue Date: 26-03-2023	Test Report No.: RN-23030800151																	
Sample ID: 230321AP14001	Sample Description: Stack Emission																	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022																	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement									Customer Representative: Sanjeev Verma									
Sample Drawn by: IEM Team									Sampling Date: 19-03-2023									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Field Meteorological Information						A. Temp. (°C): 27			R.H. (%): 61			W.C.: Cloudy			W.D.: North to South			
Sample Receiving date: 21-03-2023						Testing Started: 21-03-2023						Testing Ended: 24-03-2023						

General Physical Information

Stack Identification	Grinding Mill Unit Cement mill 1 & 2	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	-
Construction Material	Metal	Production Capacity	-
Sampling Port	Available	Pollution Control Device (if any)	Bag Filter

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Flue Gas Temperature	IS 11255 (Part-3)	°K	383	--
2.	Flue Gas Velocity	IS 11255 (Part-3)	m/s	19.6	--
3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	578871.5	--
4.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	16.9	30.0

Dust	Kg/hr	9.78
------	-------	------

---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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by (Shreya Sonal) Dy. Quality Manager
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Authorized Signatory (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

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

ISO 9001:2015
ISO 45001:2018



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	2	4	
Discipline:	Chemical		Group: Atmospheric Pollution					Sub-Group: Stack Emission										
Report Issue Date:	26-03-2023										Test Report No.: RN-23030800152							
Sample ID:	230321AP14002										Sample Description: Stack Emission							
Challan No./P.O. No.:	4548023834/237										Challan No./ P.No. Date: 17-09-2022							
Issued to:	Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist - Bokaro, Jharkhand 827014																	
Type of Industry:	Cement										Customer Representative: Sanjeev Verma							
Sample Drawn by:	IEM Team										Sampling Date: 19-03-2023							
Protocol:	CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Field Meteorological Information	A. Temp. (°C): 27					R.H. (%): 61					W.C.: Cloudy			W.D.: North to South				
Sample Receiving date:	21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023							

General Physical Information			
Stack Identification	Packing Yard Stack - 4	Stack Height from Ground Level (m)	45
Emission Due to	--	Port Hole Height from Ground Level (m)	41
Plat Form	Permanent	Inner Dimension of Stack (m)	0.55
Stack Description	Single	Type of Fuel Used	-
Shape of Stack	Circular	Quantity of Fuel	-
Construction Material	Metal	Production Capacity	-
Sampling Port	-	Pollution Control Device (if any)	Bag Filter

Test Result					
Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Flue Gas Temperature	IS 11255 (Part-3)	°K	315	--
2.	Flue Gas Velocity	IS 11255 (Part-3)	m/s	17.8	--
3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	14104.2	--
4.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	18.21	30.0


Dust	Kg/hr	0.26
------	-------	------

---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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. 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 is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory
	 (Shreya Soni)	
	Dy. Quality 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



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	2	5																		
Discipline:	Chemical		Group:					Atmospheric Pollution										Sub-Group:		Stack Emission															
Report Issue Date:	26-03-2023								Test Report No.:									RN-23030800153																	
Sample ID:	230321AP14003								Sample Description:									Stack Emission																	
Challan No./P.O. No.:	4548023834/237								Challan No./ P.No. Date:									17-09-2022																	
Issued to:																																			
Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist - Bokaro, Jharkhand 827014																																			
Type of Industry:									Cement									Customer Representative:									Sanjeev Verma								
Sample Drawn by:									IEM Team									Sampling Date:									19-03-2023								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																																			
Field Meteorological Information			A. Temp. (°C):			27			R.H. (%):			61			W.C.:			Cloudy			W.D.:			North to South											
Sample Receiving date:						21-03-2023						Testing Started:						21-03-2023						Testing Ended:						24-03-2023					

General Physical Information

Stack Identification	Packing Yard Stack - 3	Stack Height from Ground Level (m)	45
Emission Due to	--	Port Hole Height from Ground Level (m)	41
Plat Form	Permanent	Inner Dimension of Stack (m)	0.55
Stack Description	Single	Type of Fuel Used	-
Shape of Stack	Circular	Quantity of Fuel	-
Construction Material	Metal	Production Capacity	-
Sampling Port	Available	Pollution Control Device (if any)	Bag Filter

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Flue Gas Temperature	IS 11255 (Part-3)	°K	317	--
2.	Flue Gas Velocity	IS 11255 (Part-3)	m/s	16.0	--
3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	12575.3	--
4.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	16.47	30.0

Dust	Kg/hr	0.21
------	-------	------

---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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	<i>Shreya Sonar</i>	<i>S. C. Jain</i>
	(Shreya Sonar)	S. C. Jain
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	2	6	
Discipline:	Chemical		Group: Atmospheric Pollution						Sub-Group: Stack Emission									
Report Issue Date:	26-03-2023									Test Report No.: RN-23030800154								
Sample ID:	230321AP14004									Sample Description: Stack Emission								
Challan No./P.O. No.:	4548023834/237									Challan No./ P.No. Date: 17-09-2022								
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist - Bokaro, Jharkhand 827014																		
Type of Industry:	Cement									Customer Representative: Sanjeev Verma								
Sample Drawn by:	IEM Team									Sampling Date: 19-03-2023								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Field Meteorological Information	A. Temp. (°C): 27			R.H. (%): 61			W.C.: Cloudy			W.D.: North to South								
Sample Receiving date:	21-03-2023			Testing Started: 21-03-2023						Testing Ended: 24-03-2023								

General Physical Information

Stack Identification	Packing Yard Stack - 2	Stack Height from Ground Level (m)	45
Emission Due to	--	Port Hole Height from Ground Level (m)	41
Plat Form	Permanent	Inner Dimension of Stack (m)	0.55
Stack Description	Single	Type of Fuel Used	-
Shape of Stack	Circular	Quantity of Fuel	-
Construction Material	Metal	Production Capacity	-
Sampling Port	Available	Pollution Control Device (if any)	Bag Filter

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Flue Gas Temperature	IS 11255 (Part-3)	°K	322	--
2.	Flue Gas Velocity	IS 11255 (Part-3)	m/s	18.0	--
3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	13950.0	--
4.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	19.4	30.0

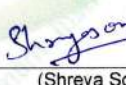

Dust	Kg/hr	0.27
------	-------	------

---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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes :- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.lemeco@gmail.com	Quality Checked	Authorized Signatory
	 	
	(Shreya Sonali)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	2	7										
Discipline:	Chemical		Group:					Atmospheric Pollution										Sub-Group:		Stack Emission							
Report Issue Date:	26-03-2023										Test Report No.:							RN-23030800155									
Sample ID:	230321AP14005										Sample Description:							Stack Emission									
Challan No./P.O. No.:	4548023834/237										Challan No./ P.No. Date:							17-09-2022									
Issued to:	Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																										
Type of Industry:	Cement										Customer Representative:							Sanjeev Verma									
Sample Drawn by:	IEM Team										Sampling Date:							19-03-2023									
Protocol:	CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																										
Field Meteorological Information	A. Temp. (°C): 27					R.H. (%): 61					W.C.: Cloudy					W.D.: North to South											
Sample Receiving date:	21-03-2023					Testing Started:					21-03-2023					Testing Ended:							24-03-2023				

General Physical Information

Stack Identification	Packing Yard Stack - 1	Stack Height from Ground Level (m)	45
Emission Due to	--	Port Hole Height from Ground Level (m)	41
Plat Form	Permanent	Inner Dimension of Stack (m)	0.55
Stack Description	Single	Type of Fuel Used	-
Shape of Stack	Circular	Quantity of Fuel	-
Construction Material	Metal	Production Capacity	-
Sampling Port	Available	Pollution Control Device (if any)	Bag Filter

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Flue Gas Temperature	IS 11255 (Part-3)	°K	318	--
2.	Flue Gas Velocity	IS 11255 (Part-3)	m/s	16.4	--
3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	12865.6	--
4.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	18.1	30.0

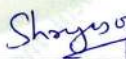

Dust	Kg/hr	0.23
------	-------	------

---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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	 (Shreya Saha) Dy. Quality 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

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

ISO 9001:2015
ISO 45001:2018

STP INLET & OUTLET WATER ANALYSIS REPORT



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Pollution & Environment	Sub-Group: Waste Water
Report Issue Date: 25-03-2023	Test Report No.: RN-230308001WW02	
Sample ID: 230321PE02002	Sample Description: Waste Water (STP)	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: CPCB Guideline & IS Method 3025 Part-01		
Sampling Location: NEAR STP PLANT (INLET)		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Result----

Sl. No.	Tested Parameters	Unit	Method No.	Limits	Results
1.	pH value at 25°C	----	IS 3025 (Part-11)	--	7.23
2.	Total Suspended Solids (TSS)	mg/l	IS 3025 (Part-17)	--	735.0
3.	Biochemical Oxygen Demand (BOD)	mg/l	IS 3025 (Part-44)	--	12.4
4.	Chemical Oxygen Demand (COD)	mg/l	IS 3025 (Part-58)	--	68.0
5.	Oil & Grease	mg/l	IS 3025 (Part-39)	--	7.6

----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	--
Remark	--

Tested By: Punya Harsit Dadel

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dr. S. C. Jain)
	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Pollution & Environment	Sub-Group: Waste Water
Report Issue Date: 25-03-2023	Test Report No.: RN-230308001WW01	
Sample ID: 230321PE02001	Sample Description: Waste Water (STP)	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: CPCB Guideline & IS Method 3025 Part-01		
Sampling Location: NEAR STP PLANT (OUTLET)		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

---Test Result---

Sl. No.	Tested Parameters	Unit	Method No.	Limits	Results
1.	pH value at 25°C	----	IS 3025 (Part-11)	6.5 to 9.0	7.58
2.	Total Suspended Solids (TSS)	mg/l	IS 3025 (Part-17)	100	14.0
3.	Biochemical Oxygen Demand (BOD)	mg/l	IS 3025 (Part-44)	30	8.1
4.	Chemical Oxygen Demand (COD)	mg/l	IS 3025 (Part-58)	250	42.0
5.	Oil & Grease	mg/l	IS 3025 (Part-39)	10	4.8

---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
Remark	Sample Comply with prescribed specification.

Tested By: Punya Harsit Dadel

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	(Shreya Sonal) Dy. Quality 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 - icm2012@rediffmail.com



Fugitive Dust Emission report



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 26-03-2023		Test Report No.: RN-230308001FE01	
Sample ID: 230321AP12001		Sample Description: Fugitive Emission	
Challan No./P.O. No.: 4548023834/237		Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014			
Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team		Sampling Date: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Transporting Area			
Field Meteorological Information		A. Temp. (°C): 26	R.H. (%): 59
		W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023		Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	µg/m ³	2000	1562.90

----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 30 th May 2008.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by (Shreya Sonal) Dy. Quality Manager
	Authorized Signatory C. Jain Director
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	



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





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001FE2	
Sample ID: 230321AP12002	Sample Description: Fugitive Emission	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Clinker Silo		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 59
	W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	µg/m ³	2000	1176.88

----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 30 th May 2008.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	<i>Shreya Sonal</i>	<i>S. C. Jain</i>
	(Shreya Sonal)	S. C. Jain
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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 - 8407804254, 8407804251, Email - icm2012@rediffmail.com





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001FE3	
Sample ID: 230321AP12003	Sample Description: Fugitive Emission	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 18-03-2023	
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. (%): 59
	W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

---Test Results---

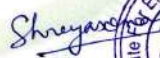

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	µg/m ³	2000	1818.98

---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 30 th May 2008.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked By	Authorized Signatory
		
	(Shreya Sora)	Dr. S. C. Jain
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001FE4	
Sample ID: 230321AP12004	Sample Description: Fugitive Emission	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Packing Loading Area		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 59
	W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

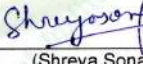
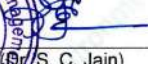
Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	µg/m ³	2000	1480.03

----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 30 th May 2008.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	 (Shreya Sonal)	
	 (S. C. Jain)	
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com



Work place monitoring report



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 ISO 9001:2015 (Quality Management System)
 Certified by ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air	
Report Issue Date: 26-03-2023	Sample ID: 230321AP12005		Test Report No.: RN-230308001FE5
Challan No./P.O. No.: 4548023834/237		Sample Description: Work Zone	
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India		Challan No./ P.No. Date: 17-09-2022	
Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team		Sampling Date: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Truck Loading Area			
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 59	W.C.: Cloudy
			W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023	

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m ³	10	7.02

----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 Factories Act, 1948.(8 hrs. Basis)
Remark	Sample Comply With the Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by _____ Authorized Signatory _____
	(Shreya Sonali) _____ (S. C. Jain)
	Dy. Quality Manager _____ Director _____



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

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

Ph - 8407804274, 8407804251, Email - iem2012@rediffmail.com





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001FE6	
Sample ID: 230321AP12006	Sample Description: Work Zone	
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)4, 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: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Wagon Loading Area		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 59
	W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m ³	10	5.40

----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 Factories Act, 1948.(8 hrs. Basis)
Remark	Sample Comply With the Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes :- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonai) Dy. Quality Manager	(Dr. S. C. Jain) Director
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.		



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





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 ISO 9001:2015 (Quality Management System)
 Certified by ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001FE7	
Sample ID: 230321AP12007	Sample Description: Work Zone	
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)4, 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: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Mill Area		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 59
	W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m ³	10	7.10

----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 Factories Act, 1948.(8 hrs. Basis)
Remark	Sample Comply With the Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm_iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dr. S. C. Jain)
	Dy. Quality Manager	Director

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



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 Sehrai Bhawan, Harmu Housing Colony, Ranchi - 834002, Jharkhand, India

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





Institute for Environmental Management



Accredited by: Jharkhand State Pollution Control Board, JSPCB
 Certified by: ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & Indoor Air
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001FE8	
Sample ID: 230321AP12008	Sample Description: Work Zone	
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)4, 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: 18-03-2023	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Packing Hall		
Field Meteorological Information	A. Temp. (°C): 26	R.H. (%): 71
	W.C.: Cloudy	W.D.: West to East
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m ³	10	7.71

----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 Factories Act, 1948.(8 hrs. Basis)
Remark	Sample Comply With the Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement 4. Any complaint about this report should be communicated in writing within 7 days of its issue 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dr. S. C. Jain)
	Dy. Quality Manager	Director



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

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

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



Noise Level Report



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	1	6
Discipline: Chemical	Group: Atmospheric Pollution					Sub-Group: Ambient Noise Levels (Excluding Vibration)												
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001N1																	
Sample ID:230321AP13001	Sample Description: Ambient Noise																	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022																	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement	Customer Representative: Sanjeev Verma																	
Sample Drawn by: IEM Team	Sampling Date:17-03-2023 to 18-03-2023																	
Protocol: CPCB Guideline & IS Method 9989:1981																		
Sampling Location: Near Main Gate																		
Field Meteorological Information	A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW - SE								
Sample Receiving date:21-03-2023	Testing Started:21-03-2023						Testing Ended: 24-03-2023											

----Test Result----

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	65.7	58.3	D-75 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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes: - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemco@gmail.com	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Quality Checked by (Shreya Sora)</td> <td style="width: 50%; text-align: center;">Authorized Signatory (Dr. S. C. Jain)</td> </tr> <tr> <td style="text-align: center;">Dy. Quality Manager</td> <td style="text-align: center;">Director</td> </tr> </table>	Quality Checked by (Shreya Sora)	Authorized Signatory (Dr. S. C. Jain)	Dy. Quality Manager	Director
Quality Checked by (Shreya Sora)	Authorized Signatory (Dr. S. C. Jain)				
Dy. Quality 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



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	1	7
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Noise Levels (Excluding Vibration)									
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001N2																	
Sample ID: 230321AP13002	Sample Description: Ambient Noise																	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022																	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement									Customer Representative: Sanjeev Verma									
Sample Drawn by: IEM Team									Sampling Date: 17-03-2023 to 18-03-2023									
Protocol: CPCB Guideline & IS Method 9989:1981																		
Sampling Location: Near Fabrication Yard																		
Field Meteorological Information			A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW - SE						
Sample Receiving date: 21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023								

----Test Result----

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	69.3	60.4	D-75 N-70

---End of Reports---

Note: -

- Day time shall mean from 6.00 a.m. to 10.00 p.m.
- Night time shall mean from 10.00 p.m. to 6.00 a.m.
- Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- 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.
- 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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality 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



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	1	8
Discipline: Chemical	Group: Atmospheric Pollution					Sub-Group: Ambient Noise Levels (Excluding Vibration)												
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001N3																	
Sample ID: 230321AP13003	Sample Description: Ambient Noise																	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022																	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement									Customer Representative: Sanjeev Verma									
Sample Drawn by: IEM Team									Sampling Date: 17-03-2023 to 18-03-2023									
Protocol: CPCB Guideline & IS Method 9989:1981																		
Sampling Location: Near Colony																		
Field Meteorological Information			A. Temp. (°C): 25			R.H. (%): 55			W.C.: Cloudy			W.D.: NW - SE						
Sample Receiving date: 21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023								

---Test Result---

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	47.1	43.5	D-75 N-70

---End of Reports---

Note: -

- Day time shall mean from 6.00 a.m. to 10.00 p.m.
- Night time shall mean from 10.00 p.m. to 6.00 a.m.
- Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- 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.
- 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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes: - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked	Authorized Signatory
	<i>(Shreya Sohal)</i>	<i>(Dr. S. C. Jain)</i>
	Dy. Quality Manager	Director

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

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



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	1	9
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Noise Levels (Excluding Vibration)									
Report Issue Date: 26-03-2023	Test Report No.: RN-230308001N4																	
Sample ID: 230321AP13004	Sample Description: Ambient Noise																	
Challan No./P.O. No.: 4548023834/237	Challan No./ P.No. Date: 17-09-2022																	
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement										Customer Representative: Sanjeev Verma								
Sample Drawn by: IEM Team										Sampling Date: 17-03-2023 to 18-03-2023								
Protocol: CPCB Guideline & IS Method 9989:1981																		
Sampling Location: Near Wagon Tippler																		
Field Meteorological Information					A. Temp. (°C): 25				R.H. (%): 55			W.C.: Cloudy			W.D.: NW - SE			
Sample Receiving date: 21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023								

---Test Result---

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	61.9	55.6	D-75 N-70

---End of Reports---

Note: -

- Day time shall mean from 6.00 a.m. to 10.00 p.m.
- Night time shall mean from 10.00 p.m. to 6.00 a.m.
- Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- 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.
- 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
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes: - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory
	(Shreya Sonal)	(Dipak C. Jain)
	Dy. Quality 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

GROUND WATER QUALITY REPORT NEAR VILLAGE AREA



Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	0	5
Discipline: Chemical	Group: Water								Sub-Group: Ground Water									
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW1																	
Sample ID: 230321WA01001	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement										Customer Representative: Sanjeev Verma								
Sample Drawn by: IEM Team										Sampling Date: 19-03-2023								
Protocol: CPCB Guideline & IS Method 3025 Part-01																		
Sampling Location: Bhutkuru																		
Field Meteorological Information			A. Temp. (°C): 27			R.H. (%): 61			W.C.: Cloudy			W.D.: North to South						
Sample Receiving date: 21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023								

---Test Result---

Sl. No.	Tested Parameter	Unit	Method No.	Limit		Results
				Acceptable	Permissible	
1.	pH value at 25°C	----	IS 3025 (Part-11)	6.5 – 8.5	No Relaxation	7.09
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	4.1
3.	Colour	Hazen	IS 3025 (Part-04)	5	15	5.0
4.	Odour	----	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	693.0
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	110.62
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	225.0
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	452.0
9.	Chloride (as Cl ⁻)	mg/l	IS 3025 (Part-32)	250	1000	89.33
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL-2.0)
11.	Sulphate (as SO ₄ ⁻²)	mg/l	IS 3025 (Part-24)	200	400	95.67
12.	Magnesium (as Mg+2)	mg/l	IS 3025 (Part-46)	30	100	42.77

---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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2021
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes :- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by _____ Authorized Signatory (Shreya Sonali) _____ S. C. Jain) Dy. Quality Manager _____ Director
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	

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



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Water	Sub-Group: Ground Water
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW1	
Sample ID: 230321WA01001	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: CPCB Guideline & IS Method 3025 Part-01		
Sampling Location: Bhutkuru		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Result----

Sl. No.	Tested Parameter	Unit	Method No.	Limit		Results
				Acceptable	Permissible	
1.	Taste	----	IS 3025 (Part-07)	Agreeable	Agreeable	Agreeable
2.	Nitrate (as NO ₃)	mg/l	IS 3025 (Part-34)	45	No Relaxation	8.30
3.	Fluoride (as F ⁻)	mg/l	IS 3025 (Part-60)	1.0	1.5	1.09

----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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2021
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	(Shreya Sonal) Dy. Quality 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





Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	7				
Discipline: Chemical	Group: Residues and Contaminants in Water										Sub-Group: Trace Metals elements									
Report Issue Date: 27-03-2023	Sample ID: 230321RC01001										Test Report No.: RN-230308001GW1									
Challan No./P.O. No.: 4548023834/237	Sample Description: Ground Water (Dug well)										Challan No./ P.No. Date: 17-09-2022									
Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																				
Type of Industry: Cement								Customer Representative: Sanjeev Verma												
Sample Drawn by: IEM Team								Sampling Date: 19-03-2023												
Protocol: IS Method & CPCB Guideline																				
Sampling Location: Bhutkuru																				
Field Meteorological Information				A. Temp. (°C): 27				R.H. (%): 61				W.C.: Cloudy				W.D.: North to South				
Sample Receiving date: 21-03-2023				Testing Started: 21-03-2023				Testing Ended: 24-03-2023												

Test Result

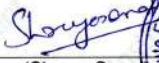

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
1.	Copper	mg/l	APHA 3111 B.2017	0.5-1.5	BDL (MDL - 0.01)
2.	Chromium	mg/l	APHA 3111 B.2017	0.05 - No Relaxation	BDL (MDL - 0.04)
3.	Lead (Pb)	mg/l	APHA 3111 B.2017	0.01 - No Relaxation	BDL (MDL - 0.04)
4.	Manganese (Mn)	mg/l	APHA 3111 B.2017	0.1 - 0.3	BDL (MDL - 0.08)

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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2022
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory
	 (Shreya Sonal) Dy. Quality Manager	 (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

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

ISO 9001:2015
ISO 45001:2018



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Residues and Contaminants in Water	Sub-Group: Trace Metals elements
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW1	
Sample ID: 230321RC01001	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: IS Method & CPCB Guideline		
Sampling Location: Bhutkuru		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Result----

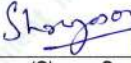

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
1.	Iron (Fe)	mg/l	APHA 3111 B.2017	1.0 - No Relaxation	0.25
2.	Aluminium (Al)	mg/l	IS 3025 Part - 55	0.03 - 0.2	BDL (MDL - 0.01)

----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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2022
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory
		
	(Shreya Sonal)	(S. C. Jain)
	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Biological	Group: Water	Sub-Group: Ground Water
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW01	
Sample ID: 230321MB01001	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: CPCB Guideline & IS Method 3025 Part-01		
Sampling Location: Bhutkuru		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%) : 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Result----

Sl. No.	Tested Parameter	Unit	Method No.	Limit	Results
1.	Total Coliform	mg/l	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
2.	E. Coli	mg/l	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)

----END Report----

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2oC 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 :2022
Remark	Sample Comply with prescribed specification.

Tested By: Khushi

Sample Drawn By: Rajiv Kr. Singh & Team

Specific Contractual Notes :- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	<i>Shreya Sonal</i>	<i>S. C. Jain</i>
	(Shreya Sonal) Dy. Quality Manager	(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

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





Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	0	6
Discipline: Chemical	Group: Water								Sub-Group: Ground Water									
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW2																	
Sample ID: 230321WA01002	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																		
Type of Industry: Cement										Customer Representative: Sanjeev Verma								
Sample Drawn by: IEM Team										Sampling Date: 19-03-2023								
Protocol: CPCB Guideline & IS Method 3025 Part-01																		
Sampling Location: POKHARIA TAND																		
Field Meteorological Information			A. Temp. (°C): 27			R.H. (%): 61			W.C.: Cloudy			W.D.: North to South						
Sample Receiving date: 21-03-2023					Testing Started: 21-03-2023					Testing Ended: 24-03-2023								

---Test Result---

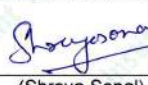


Sl. No.	Tested Parameter	Unit	Method No.	Limit		Results
				Acceptable	Permissible	
1.	pH value at 25°C	----	IS 3025 (Part-11)	6.5 – 8.5	No Relaxation	6.81
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	1.2
3.	Colour	Hazen	IS 3025 (Part-04)	5	15	5.0
4.	Odour	----	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	363.0
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	38.48
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	170.0
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	164.0
9.	Chloride (as Cl-)	mg/l	IS 3025 (Part-32)	250	1000	31.76
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL-2.0)
11.	Sulphate (as SO ₄ ⁻²)	mg/l	IS 3025 (Part-24)	200	400	51.22
12.	Magnesium (as Mg+2)	mg/l	IS 3025 (Part-46)	30	100	16.52

---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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2021
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by
	 (Shreya Sonal)
	 (Dr. H. C. Jain)
	Dy. Quality 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



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
Certified by ISO 9001:2015 (Quality Management System)
ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Water	Sub-Group: Ground Water		
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW2			
Sample ID: 230321WA01002	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014				
Type of Industry: Cement	Customer Representative: Sanjeev Verma			
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023			
Protocol: CPCB Guideline & IS Method 3025 Part-01				
Sampling Location: POKHARIA TAND				
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023		

---Test Result---



Sl. No.	Tested Parameter	Unit	Method No.	Limit		Results
				Acceptable	Permissible	
1.	Taste	---	IS 3025 (Part-07)	Agreeable	Agreeable	Agreeable
2.	Nitrate (as NO ₃)	mg/l	IS 3025 (Part-34)	45	No Relaxation	6.60
3.	Fluoride (as F ⁻)	mg/l	IS 3025 (Part-60)	1.0	1.5	1.03

---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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2021
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Quality Checked by	Authorized Signatory
	 (Shreya Soran)	 Dr. S. C. Jain
	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB
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	3	0	0	0	0	0	0	0	8
Discipline: Chemical	Group: Residues and Contaminants in Water							Sub-Group: Trace Metals elements									
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW2																
Sample ID: 230321RC01002	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014																	
Type of Industry: Cement									Customer Representative: Sanjeev Verma								
Sample Drawn by: IEM Team									Sampling Date: 19-03-2023								
Protocol: IS Method & CPCB Guideline																	
Sampling Location: POKHARIA TAND																	
Field Meteorological Information						A. Temp. (°C): 27			R.H. (%): 61			W.C.: Cloudy			W.D.: North to South		
Sample Receiving date: 21-03-2023				Testing Started: 21-03-2023				Testing Ended: 24-03-2023									

---Test Result---

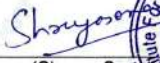
Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
1.	Copper	mg/l	APHA 3111 B.2017	0.5-1.5	BDL (MDL - 0.01)
2.	Chromium	mg/l	APHA 3111 B.2017	0.05 - No Relaxation	BDL (MDL - 0.04)
3.	Lead (Pb)	mg/l	APHA 3111 B.2017	0.01 - No Relaxation	BDL (MDL - 0.04)
4.	Manganese (Mn)	mg/l	APHA 3111 B.2017	0.1 - 0.3	BDL (MDL - 0.08)

---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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2022
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes :- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	 (Shreya Soni)	
	Dy. Quality 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



Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Chemical	Group: Residues and Contaminants in Water	Sub-Group: Trace Metals elements
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW2	
Sample ID: 230321RC01002	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: IS Method & CPCB Guideline		
Sampling Location: POKHARIA TAND		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Result----

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
1.	Iron (Fe)	mg/l	APHA 3111 B.2017	1.0 - No Relaxation	0.22
2.	Aluminium (Al)	mg/l	IS 3025 Part - 55	0.03 - 0.2	BDL (MDL - 0.01)

----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).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2022
Remark	Sample Comply with prescribed specification.

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes :- 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	(Shreya Sonal) Dy. Quality 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

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





Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB
 Certified by ISO 9001:2015 (Quality Management System)
 ISO 45001:2018 (Occupational Health & Safety Management System)

Test Report

Discipline: Biological	Group: Water	Sub-Group: Ground Water
Report Issue Date: 27-03-2023	Test Report No.: RN-230308001GW02	
Sample ID: 230321MB01002	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) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014		
Type of Industry: Cement	Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team	Sampling Date: 19-03-2023	
Protocol: CPCB Guideline & IS Method 3025 Part-01		
Sampling Location: POKHARIA TAND		
Field Meteorological Information	A. Temp. (°C): 27	R.H. (%): 61
	W.C.: Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Started: 21-03-2023	Testing Ended: 24-03-2023

----Test Result----

Sl. No.	Tested Parameter	Unit	Method No.	Limit	Results
1.	Total Coliform	mg/l	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
2.	E. Coli	mg/l	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)

----END Report----

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2oC 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 :2022
Remark	Sample Comply with prescribed specification.

Tested By: Khushi

Sample Drawn By: Rajiv Kr. Singh & Team

Specific Contractual Notes - 1. The laboratory accepts responsibility for content of this report. 2. This report shall not be reproduced except in full, without written approval of the MD. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about this report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com	Quality Checked by	Authorized Signatory
	Shreya Sonali	(Shreya Sonali)
	Dy. Quality 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com



Annexure-2

DALMIA CEMENT (BHARAT) LIMITED, 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	Plantation done in the place of dead tree
11	11 th (2021-2022)	500	
12	12 th (2022-2023)	350	
	Total	25739	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

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

Scope	Categories	UoM	2017-18	2018-19	2019-20	2020-21	2021-22
1	Emissions from Cement Manufacturing	Kg CO2 /Tone of Cement	53.42	58.41	51.92	41.20	42.78

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.

Scope	Categories	UoM	2017-18	2018-19	2019-20	2020-21	2021-22
2	Emissions from Electricity consumed	Kg CO2 /Tone of Cement	58.91	60.58	41.89	44.22	45.73

Summary report of GHG emission last five years in below table

Scope	Categories	UoM	2017-18	2018-19	2019-20	2020-21	2021-22
1	Emissions from Cement Manufacturing	Kg CO2 /Tone of Cement	53.42	58.41	51.92	41.20	42.78
2	Emissions from Electricity consumed	Kg CO2 /Tone of Cement	58.91	60.58	41.89	44.22	45.73

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 onsite 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

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

**CORPORATE RESPONSIBILITY ENVORONMENT PROTECTION (CREP)
ACTIVITIES DONE SURROUNDING VILLAGE AREA FOR THE YEAR 2022-23**

S. N	CREP Activities	Village/Town	Total Amount Rs.
1	Well & Pond renovation	Bhutkuru	554599
2	Stone pitching drain at Badka pond	Gorabali	402380
3	Ghat Construction	Gorabali	533367
4	Tree Planation	Gorabali	6000
5	Water Storage, Sanitation work and MS Grilling work at Manav Sewa Ashram	Bokaro	53287
6	Common hall construction at Govind Vidyalaya including toilets	Balidih	1357000
7	Fire station renovation	Bokaro	212399
8	Vocational training for local youth	Bokaro	2043747
	Total		5162779

DETAILS OF CREP ACTIVITIES DONE FOR THE YEAR 2022-23

A. Well Renovation: -



Before



After

Beneficiary Name: Lakhan Mohli Village Name: Bhutkuru



Before



After

Beneficiary Name: Milan Mohli

Village Name: Bhutkuru



Before
Beneficiary Name: Ramchandra Singh

After
Village: Bhutkuru



Before

After

Beneficiary Name: Roop Lal Singh Village Name : Bhutkuru



Before



After

- Beneficiary Name: Vimlendra Prasad Mohli
- Village Name: Bhutkuru



Before



After

- Beneficiary Name: Wakil Singh
- Village Name: Bhutkuru

B. Stone Pitching: -



- Place: Badka Talab
- Village Name: Gorabali

C. Godat Pond Ghat, Gorabal



C.

Dustbin Construction



- Place: Godat Talab
- Village Name: Gorabali

Lotan Pond Ghat Construction



- Place: Lotan Pond
- Village Name: Gorabal

CORPORATE ENVIRONMENT POLICY

DALMIA BHARAT LIMITED

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

Tel. No.: (04329) 235132 Website: www.dalmiabharat.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 core 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 conducting 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 principles 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 unethical 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, co-processing 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.

BUSINESS RESPONSIBILITY MATRIX

The hierarchical system or administrative order of the Company to address the nine principles prescribed by SEBI and other compliances including regulatory approvals viz Environmental Clearance, Consent to Operate etc.



Annexure-6

CAPITAL COST INVESTMENT ON ENVIRONMENT PROTECTION AT DCBL BOKARO UP MARCH 2023

M/S DALMIA CEMENT (BHARAT) LIMITED, BOKARO				
Plot No. IV/A-7(P),Bokaro Industrial Area,Balidih ,Bokaro Steel City,Jharkhand -827014				
CAPITAL COST INVESTMENT ON ENVIRONMENT PROTECTION AT DCBL BOKARO UP TO March 2023				
S.N	PARTICULARS	Asset no	Investment in Rs.	Investment in Crores
1	INVESTMENT ON AIR POLLUTION CONTROL MEASURES			29.05
a	Bag House cement mill	5500000007	193983042.2	
b	Bag house fan	5500000014	13972406.4	
c	Bag house for cement mill	5500000037	9901023.02	
d	Bag house fan	5500000046	185484.52	
e	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	
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			8.64
a	Construction of Tarpaulin shed near packing plant	5200000052	1741749.73	
f	Road Swapping machine	5900000085	128981	
g	Water spray tanker	5060000016	100000	
h	Delexo Road Swapping Machine	5500000172	2452009.2	
i	Steel Silo for storage of PCC	5500000185	28115894.14	
J	Plant Roads construction	5200000010	53848342.83	
			86386976.9	
3	INVESTMENT IN WATER POLLUTION CONTROL MEASURES			0.78
a	Rain water Harvesting	5200000034	56547.38	
b	Sewar line connected to plant toilet to STP	5200000054	958795.98	
c	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	
f	Toilets & Bathroom for Labour Camp	5200000056	1074911.5	
g	Water treatment plant	5040000013	682090.06	
			7778108.04	

4	ENVIRONMENT POLLUTION MONITORING EQUIPMENT			
1	CAAQM -SO2 & NOx Analyzer	5500000068	1308596	0.61
2	Laboratory balance	5500000074	19244	
3	Opacity meter From Chemtrols industries LTD	5900000033	88889.55	
4	Opacity meter From Chemtrols industries LTD	5900000034	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	
11	Respirable Dust Sampler 460 BL PM -10 ,4no	Environment Lab	280000	
12	Respirable Dust Sampler 460 BL PM- 2.5 ,4no	Environment Lab	300000	
13	Vayubodhan Stack monitoring Kit VSS1	Environment Lab	75000	
14	Spectrophotomer	Environment Lab	280000	
			6120847.34	
	Capital cost Investment from April 22 to September 22			Nil
	Total Capital Cost Investment on Environment measures up to March 2022			39.08

DALMIA CEMENT (BHARAT) LIMITED, BOKARO		
RECURRING EXPENDITURE ON VARIOUS ENVIRONMENTAL ACTIVITIES		
October -2022-March-2023		
S.No.	Environmental activities	Cost (Rs. In Lacs)
1	Operation and maintenance cost of Pollution Control Equipment	
1	Cost on Schedule maintenance	
1	Bags replacement with new bags, Bags cleaning, De dusting line checking, cleaning and repairing work. Bag filters fan maintenance etc)	28.2
2	Power consumption in Pollution control equipment (Bag House & Bag Filter) 13093696 KWH X5.35	700.05
2	Environmental Monitoring & Analysis	0.85
3	AMC of CEMS Data transmission to JSPCB & CPCB	0.15
4	AMC of CAAQMS Maintenance, servicing Calibration,	0.64
5	AMC of CAAQMS Data transmission to JSPCB & CPCB	0.50
5	Calibration of Pollution Monitoring Equipments (CEMS)	1.40
6	Calibration of Pollution monitoring instrument (RDS & Stack VSSI, Noise level meter)	0.15
6	Air Pollution Monitoring Accessories	1.00
7	Water Pollution Management (AMC of STP, R.O Plant, D.M. Plant, & Softener Plant), Cleaning of Nala,	0.15
8	STP Operation & Maintenance	1.94
9	Road Sweeping Machine Operation & Maintenance	2.09
8	Disposal of Bio medical waste	0.09
9	Fuel consumption in water sprinkling tanker of water on dusty area	2.50
10	Green Belt Development	6.79
TOTAL COST (Rs)		746.50

Annexure-7

DALMIA CEMENT (BHARAT) LIMITED, BOKARO

Environment Internal audit report

October 2022-March-2023

Date: 26.02.2023

Sr. No	Environment internal audit observation points	Auditee Status	Auditor 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.	Complied. Timely submitted Hazardous waste return Form-IV JSPCB Ranchi & Dhanbad.	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

Advertisement in newspaper for receiving of EC from SEIAA

hindustantimes | **region** | **03** | HINDUSTAN TIMES, RANCHI
THURSDAY, OCTOBER 03, 2019

DALMIA CEMENT (BHARAT) LIMITED
BOKARO INDUSTRIAL AREA
BOKARO-JHARKHAND

PUBLIC NOTICE

State level Environment Impact Assessment Authority (SEIAA), Jharkhand has accorded Environment Clearance vide their letter no EC/SEIAA/2018-19/2138/2019/474, dated 23.09.2019 for "Upgradation of Technology at existing Standalone Cement Grinding Unit (From 3.0 MTPA to 3.70 MTPA) of M/s Dalmia Cement (Bharat) Limited at Plot No: IV/A-7(P), Bokaro Industrial Area, Bokaro.

Copies of clearance letter have been made available with the State Level Environment Impact Assessment Authority office and may also be seen at website of the Ministry of Environment Forest and Climate Change (MoEF & CC) at <http://envior.nic.in>

Unit Head & Authorized Signatory

आज | www.ajhindidaily.com | रांची (धनबाद) ४ अक्टूबर २०१९

डालमिया सीमेंट (भारत) लिमिटेड
बोकारो औद्योगिक क्षेत्र
बोकारो (झारखण्ड)
सार्वजनिक सूचना

राज्यस्तरीय पर्यावरण प्रभाव आकलन प्राधिकरण (SEIAA), झारखण्ड के द्वारा पर्यावरण स्वीकृति पत्र संख्या EC/SEIAA/2018-19/2138/2019/474 रांची, दिनांक 23.09.2019 डालमिया सीमेंट (भारत) लिमिटेड बोकारो को प्लॉट नंबर: IV/A-7(P) बोकारो इंडस्ट्रियल एरिया, बोकारो में प्रौद्योगिकी के उन्नयन के लिए मौजूदा स्टैंड अलोन सीमेंट ग्राइंडिंग यूनिट (3.0 एमटीपीए से 3.70 एमटीपीए तक) को पर्यावरण स्वीकृति दी गई है।

पर्यावरण स्वीकृति पत्र की प्रतिलिपि राज्यस्तरीय पर्यावरण प्रभाव आकलन प्राधिकरण (SEIAA) के कार्यालय में उपलब्ध है और इसे पर्यावरण वन और जलवायु परिवर्तन मंत्रालय (MoEF&CC) की वेबसाइट <http://envior.nic.in> पर भी देखा जा सकता है।

इकाई प्रमुख एवं अधिकृत हस्ताक्षरकर्ता

Annexure-9

EC Copy submitted to local authority & other Govt. Department

1

o/c



Dalmia
Bharat Cement

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)

Encl A/a


मुकुन्दग्या
ग्राम पञ्चायत गोरबाली दंड
प्रखण्ड-चाम (शुक्रगते)
4.10.2019

Dalmia Cement (Bharat) Limited
Works : Plot No. - IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City - 827014, Jharkhand, India
CIN : U65191TN1986PL0035063
t: 91 8542 253278 / 253047 | w: www.dalmiacement.com
Registered Office : Dalmiapuram, Dist, Tiruchirappalli, Tamil Nadu 621651, India
A Dalmia Bharat Group company
www.dalmiabharat.com

To,

Date: 03.10.2019

03.10.19
Regional Director
Jharkhand Industrial Area Development Authority (JIADA)
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"

Dear Sir,

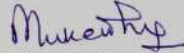
At the outset we extend our sincere thanks for the cooperation extended to us by the JIADA for seamless operation of our cement plant at Bokaro. We had applied for grant of Environment Clearance for enhancement of production capacity from 3.0 MTPA to 3.7 MTPA for which finally **EC has been granted** 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)

Encl A/a