Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	SIA/JH/IND/105812/2017
Compliance ID	562085178
Compliance Number(For Tracking)	EC/M/COMPLIANCE/562085178/2025
Reporting Year	2025
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	29-11-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.

Dalmia cement

cement| sugar| refractories| power|

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

Date: 28.11.2025

Subject: Half yearly Environment Clearance (EC) Compliance report of Dalmia Cement (Bharat) Limited, Bokaro for the period of April 2025 to September 2025.

Ref: EC Letter no. EC/SEIAA/2018-19/2136/2019/474, 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 April 2025 to September 2025 for your kind perusal.
We have also uploaded EC Compliance report in Parivesh 2.0 Portal of MoEF and CC website and the soft copy of EC Compliance report is also being sent through email to following authorities:
msseiaa.jhk@gmail.com, ro.ranchi-mef@gov.in, ranchispcb@gmail.com, ccb.cpcb@nic.in dhanbadspcb@gmail.com, info@seiaa.org.in, shi-seiaa.hr@gov.in

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, Harmu 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, HID-1, Sardar Patel Nagar, Hirapur Dhanbad-826001

Enclosed: EC Compliance Report

DALMIA CEMENT (BHARAT) LIMITED, BOKARO

Environment Clearance compliance report of Dalmia Cement (Bharat) Limited from April 2025 to September 2025.

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 APRIL 2025 TO SEPTEMBER 2025

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

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

4	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	**Complied with**. Our Unit has obtained CTE from JSPCB Ranchi vide letter no JSPCB/HO/RNC/CTE-11785214/2022/96 Dated 06.03.2022. CTO obtained and renewed vide letter no JSPCB/HO/RNC/ CTO-14970501/2023/503, Dated15.03.2023 for the plant expansion from 3.7 MTPA to 4.50 MTPA from JSPCB Ranchi and CTO valid up to 31.03.2027 attached as CTE **Annexure-1 & CTO Annexure-2**
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**. The permission for water connection has been obtained from JIADA Bokaro vide Agreement dated 17.03.2011. The same agreement copy is attached herewith as per **Annexure 3**.
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.Copy of the same attached as per **Annexure 4**
7	No mining /activity shall be undertaken in the forest land or deemed forest without obtaining prior forestry clearance.	Not Applicable to our unit.
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 accrue to them unless all clearance are	**Not applicable**. The unit is located in notified Industrial area at BIADA, Bokaro, Jharkhand with due allocation through Govt of Jharkhand.

	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 9th May 2016 (Cement) and connected to SPCB and CPCB online server and calibrate these system from time from time to according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.	**Complied with**. Unit has already installed on line continuous emission monitoring system in our process stack and connected to JSPCB & CPCB server. On line stack emission monitoring data continuously transmitted to CPCB & JSPCB server. Regular maintenance and calibration are being done of stack emission monitoring equipment. CEMS Calibration done every three months. Fugitive emission is being regularly monitored in the plant premises and data is being regularly submitted to JSPCB & CPCB as a part of EC Compliance report. On line CEMS and Manual stack emission monitoring data and CEMS Calibration certificate for the period of April 2024 to September 2025 attached as per **Annexure-5**
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 Inhouse and JSPCB & NABL approved laboratory. Copy of fugitive emission monitoring reports from April 2025 to September 2025 is attached as per **Annexure-6**
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 plant the plant boundary location of the unit. CAAQM equipment's regularly 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 manual AAQM monitoring station at 120-degree direction of a plant boundary location six monthly average AAQM report for the period of April 2025 to September 2025 attached as per **Annexure-7**
4	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality/fugitive emissions to	**Complied.** Six monthly environmental monitoring reports from April 2025 to September 2025 is attached as per **Annexure-6 &7**

	Regional office of MoEF&CC, Zonal office of CPCB and Regional of SPCB along with six monthly monitoring report	
5	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	**Complied.** We have installed 2 nos Bag house in VRM mills for the control of air pollution. The Bag house stack emission maintained below 30 mg/Nm3. Apart from this 33 nos of nuisance bag filter installed in all material transfer points to control the fugitive dust emission. List of APC system installed in plant attached as per **Annexure:8** 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. CREP compliance report attached as per **Annexure: 9**
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 the plant premises area. Photographs of road sweeping machine with cleaning of roads/floor and log book of road sweeping machine (April-2025-September 2025) attached as per **Annexure :10**
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 constructed boundary wall between plant and hostels which act as wind shields. We have also constructed walls around packing unit and raw material yard, which act as wind shelter. Raw materials stored in covered sheds and silos. Slag stored covered tarpaulin sheet. Plant boundary walls and plant inside boundary walls wind shelter photographs attached as per **Annexure-11**
11	Have separate truck parking area and monitor vehicular emissions at regular interval.	**Complied.** Separate truck parking facility provided to park trucks. Regular checking of vehicles PUC certificates which entering in plant to control of vehicular emission.
12	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport.	**Complied** All raw materials and products are being transported in covered trucks, bulker, covered conveyor belts/railways to reduce the fugitive dust emission. Regular water sprinkling and road sweeping 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.	**Not Applicable.** No Ground water withdrawal from our plant. The permission for water connection has been obtained from BIADA. There will not be any effluent generation from the plant. Domestic waste water treated in STP, treated water is being used within plant for greenbelt development and dust suppression. however, we are regularly monitoring ground water quality and depth level in surrounding village wells. Ground water quality & water depth level reports of surrounding village for the period of April 2025 to September 2025 is attached as per **Annexure-12**
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.	**Not applicable** There is no effluent generation from our unit as it does not require water for its process. Our unit has STP 100 KLD for the treatment of domestic waste water. STP treated water quality analysis report from April 2025 to September 2025 attached as per **Annexure 13.** STP Treated water is being used in greenbelt development and dust suppression. 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-12**
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 quality analysis report from April 2025 to September 2025 attached as per **Annexure-13**
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 plant area to accumulate run off water in a settling pit. clay, sand silt barrier / collection pits are existing in the plant area to accumulate run off water during heavy rains. **Annexure-14**

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. Vide letter no 320 Ranchi Dated 06.09.2013. attached as per **Annexure: 15**. 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, water flow meter photographs attached as per **Annexure: 16**
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 our 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 (April 2025 to September 2025) attached as per **Annexure-17**
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. Photographs of Solar light attached as per **Annexure:18**
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	**Complied with.** Slag and fly ash are being used as a raw material for cement

	Standards. Waste management	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 from JSPCB/CPCB.
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 are being utilized by nearby villagers to fed to the animals.
VIII	**Green Belt :**	
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-19**
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-20**.
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. Approval copy from Chief Inspector Factories attached as per **Annexure: 21**
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. PPEs issued for the period of April

		2025 to September 2025 attached as per **Annexure :22** 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 year. reports are being maintained as per Factory Act. Few reports attached as per **Annexure-23**
X	**Corporate Environment Responsibility**	
1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	**Being Complied.** we are regularly doing CER surrounding village area which is as follows 1.Wells & Pond renovation done surrounding village area and maintaining for water conservation. 2. Street light & solar light installed in village 3.Tree plantation done surrounding village 4 Toilet constructed in schools 5. Renovation of school building, community hall and Aganwadi surrounding village area. CER report for the period April 2025 to September 2025 attached as per **Annexure: 24**
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	**Complied with**. DCBL Bokaro have Environmental Management Policy duly approved from Board of Director. copy of Environment policy attached herewith as per **Annexure-25.**

	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.	
3	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of Senior Executive, who will directly to the head of the organization.	**Complied**. Environment Management Cell has been established at our plant as well as at Corporate headquarter for the management of environmental activities with qualified person. Environment management cell is headed by Executive Director (Plant Head) in our unit. Environment Management Cell organization structure attached as per **Annexure :26**
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 plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.	Action plan for EMP implementation and Environmental responsibility matrix is in place. Separate budget allocated for Environment Protection. It is ensured that budget shall not be diverted for any other purpose. Expenditure on environmental protection is being regularly submitted to Ministry and his Regional Office as a part of EC compliance report. Expenditure on Environment Protection (Capital cost & Recurring cost) from April 2025 to September 2025 is attached as per **Annexure-27**
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 performance in our plant. Self-Environment audit report and Third-party Environment audit report attached as per **Annexure-28**.
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	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-29.**

	project proponent's website permanently.	
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-30**
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.** EC Compliance report uploaded in company official website copy of the same is attached as per **Annexure -31**
4	The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NO_x (Ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	**Complied**. On-line environment monitoring data is being regularly displayed at factory main gate for the notice of public. Display board photographs attached as per **Annexure-32**
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 with.** Six monthly EC Compliance report uploaded in website of the Ministry of Environment Forest and Climate Change at Environment Clearance portal Parivash 2.0 Portal. Acknowledgement copy from MoEF and CC attached **as per Annexure :33**
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 Ranchi office & JSPCB Regional office Dhanbad. Last Environment Statement was submitted vide our letter no. DCBL/ENV-ES/24-25/01, Dated 20.09. 2025 Environment Statement (Form -V) uploaded in company official website attached as per **Annexure-34**
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)	Complied with.
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.	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.	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).	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.	Agreed.
13	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions not satisfactory.	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.	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.	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 Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Complied. DCBL Public Liability Insurance policy copy attached as per **Annexure :35**
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 and Agreed.
18	This environmental clearance is valid for seven years from the date of issue.	Noted and Agreed.

Annexure-1

Consent to Establish (CTE) received from JSPCB Ranchi

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No.: JSPCB/HO/RNC/CTE-11785214/2022/96 Dated: 2022-03-06

Consent to Establish (CTE) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Reference: Application (s) No.- 11785214 / dated : 29/12/2021 of Dalmia Cement (Bharat) Limited, Venkatesan Thyagarajan for consent under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

2. **Documents Relied Upon:**

(a) The content of Inspection Report (I/R) checklist 28.12.2021 issued vide Ref. No. 1436 dated 28.12.2021 of R.O-Cum-Laboratory, J.S.P.C Board, Dhanbad.

(b) The content of copy of Environmental Clearance granted vide letter No. EC/SEIAA/2018-19/2138/2019/474 dated 23.09.2019 for "Upgradation of technology at existing standalone cement Grinding unit of M/s Dalmia Cement (Bharat) Ltd., at Bokaro Industrial Area, Balidih, Bokaro, Jharkhand from 3.0 MTPA to 3.7 MTPA" with compliance report.

(c) The content of Copy of CTE issued vide Ref No. : JSPCB/HO/RNC/CTE-6897145/2020/71 Dated : 07.01.2021 for production of Portland Slag Cement and Composite Cement –3.0 MTPA to 3.7 MTPA

(d) The content of copy of CTO issued vides Ref No. JSPCB/HO/RNC/CTO-7428223/2020/560 dated 04.03.2020 for the period of 31.03.2022 for production of Portland Slag Cement and Composite Cement - 3.0 MTPA to 3.7 MTPA and its compliance report.

(e) The content of Copy of the No Increase In Pollution Load Certificate issued by the Board vide letter ref. no. B-1998 dated 22.11.2021.

(f) The content of Executive Summary related to No Increase in Pollution load with increase in production capacity to 4.5 MTP. Although change in Product Mix and Modernisation in Technology in Existing Standalone Grinding Unit of M/s Dalmia Cement (Bharat) Limited, at Bokaro Industrial Area(BIADA), Bokaro

(g) The content of unit has installed CAAQMS in the single stack and has assured to comply most of the conditions as mentioned in EC.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to establish the project in Mauza- Kanari, P.S.-Bokaro Steel City, District-BOKARO as follows:

Project	Site-Area		Investment (Rs)/ Year	Product & Capacity	Period of CTE
	Plot Nos.	Area			

In Expansion	Mauza -Katari, Plot No. IV/A-7(P), - Industrial area, BIADA, Bokaro	280002 Sq. Mtrs or 20.24 Hectare as per CTO	55.66 Crore	Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per EC Exp.)	date of issue to six months

(A) Specific Conditions:

1. That, the occupier shall make Work area and transport roads and approach road off the main road concrete/ black top before commissioning of the project.

2. That, the occupier shall install fixed type water sprinklers to cover all dusty places in the premises to impart water spraying intermittently.

3. That, the occupier shall make all roads pucca and shall maintain a good house keeping by regular cleaning and wetting of the roads and dust prone areas.

4. That, the occupier shall store all raw materials and products under shed and shall as far as practicable, do their processing and transfer under foolproof cover(s).

5. That, the occupier shall install online certified PM10 analyzer with onsite display and connectivity to JSPCB server.

6. That, the occupier shall ensure that there shall be no leakage from the doors of the ovens and doors must remain sealed in order to minimize the fugitive emissions;

7. That, the occupier shall collect and treat the effluent in foolproof latest system and shall recycle treated effluent to the system for reuse and shall ensure no discharge of effluent out side the premises.;

8. That, the occupier shall install air pollution control devices such as Dust Catcher, Cyclone Separator, Bag filters, Venturi Scrubber, ESP etc. in suitable combination to control the emission.

9. That, the occupier shall use fly ash and or fly ash bricks in construction of the project.

10. That, the occupier shall implement all pollution control measures as recommended in HA/EMP.

11. That, the occupier shall comply the recommendations of CREP;

12. That, the occupier shall comply all the conditions of Environmental Clearance issued by MOEF, Govt. of India, New Delhi

13. That, the occupier shall use all solid wastes as resource as a raw material or a product.

In Expansion	Mauza -Kanari, Plot No. IV/A-7(P), - Industrial area, BIADA, Bokaro	280002 Sq. Mtrs or 20.24 Hectare as per CTO	55.66 Crore	Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per HC Exp.)	date of issue to six months

(A) Specific Conditions:

1. That, the occupier shall make Work area and transport roads and approach road off the main road concrete/ black top before commissioning of the project.

2. That, the occupier shall install fixed type water sprinklers to cover all dusty places in the premises to impart water spraying intermittently

3. That, the occupier shall make all roads pucca and shall maintain a good house keeping by regular cleaning and wetting of the roads and dust prone areas.

4. That, the occupier shall store all raw materials and products under shed and shall as far as practicable, do their processing and transfer under foolproof cover(s).

5. That, the occupier shall install online certified PM10 analyzer with onsite display and connectivity to JSPCB server.

6. That, the occupier shall ensure that there shall be no leakage from the doors of the ovens and doors must remain sealed in order to minimize the fugitive emissions;

7. That, the occupier shall collect and treat the effluent in foolproof latest system and shall recycle treated effluent to the system for reuse and shall ensure no discharge of effluent out side the premises.;

8. That, the occupier shall install air pollution control devices such as Dust Catcher, Cyclone Separator, Bag filters, Venturi Scrubber, ESP etc. in suitable combination to control the emission.

9. That, the occupier shall use fly ash and or fly ash bricks in construction of the project.

10. That, the occupier shall implement all pollution control measures as recommended in EIA/EMP.

11. That, the occupier shall comply the recommendations of CREP;

12. That, the occupier shall comply all the conditions of Environmental Clearance issued by MOEF, Govt. of India, New Delhi

13. That, the occupier shall use all solid wastes as resource as a raw material or a product.

14. That, as a stake holder in Dhanbad Action Plan the occupier shall ensure the compliance of action to be taken to reduce the pollutants as suggested in Dhanbad Action Plan by them.

(B) General Conditions :

(1)That, the occupier shall construct pucca (i) minimum ten feet high boundary wall and (ii) approach road and internal roads and shall keep the premises neat and clean and tidy.

(2)That, the occupier shall install comprehensive enclosure (s) to cover the places of unloading of raw materials, the equipments of their processing & transferring, the places of loading of products, by products and wastes for prevention of fugitive emission and shall install such automatic inbuilt system(s) that in house dust/ gases collect(s) and undergo (es) cleaning and clean air goes out.

(3)That, the occupier shall install such automatic inbuilt system(s) that process flue gas(es) / process gas(es) and undergo(es) cleaning and clean air go(es) out through the chimney(s), having height(s) as per Central Pollution Control Board norm.

(4)That, the occupier shall have D G Set(s) of the standard as laid in the Environment (protection) Rules, 1986 and shall install it (them) within acoustic enclosure (s) and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.

(5)That, the occupier shall impart treatment as per Central Pollution Control Board test to wastewater and shall keep process effluent in close-circuit and effluent from other sources in conformity with the standard (s).

(6) That, the occupier shall install Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge.

(7) That, the occupier shall create new water body (ies) / rejuvenate deposit(s) of existing water body(ies) and nearby stream(s) and pond(s) and shall maintain the wholesomeness of water.

(8)That, the occupier shall grow greenery in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(9)That, this CTE is valid subjected to the validity of mining Lease / Mining Plan / Ecofriendly / Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, the consent shall be treated as revoked automatically.

(10)That, this CTE is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time being in force, rests with the industry/ unit/ occupier.

(11)That, this CTE shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(12)That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules there under.

4. **That, this CTE shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.**

5. **That, this CTE is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTE will be revoked if any of the information/ documents/ certificates/ undertaking given by the occupier is found false/fictitious/forged in future.**

6. **This order shall be valid subject to compliance of all other legal requirements applicable to the unit.**

7. **The State Board reserves the right to revoke, withdraw or make any reasonable variation / change / alteration in condition of this consent.**

This is issued with the approval of the competent authority

Yatindra Kumar Das

Digitally signed by Yatindra Kumar Das
Date: 2022.03.06 11:24:28 +05'30'

(Yatindra Kumar Das)
Member Secretary

Memo No. : JSPCB/HO/RNC/CTE-11785214/2022/96

Dated : 2022-03-06

Copy to : Sri. Venkatesan Thyagarajan, Director of M/s Dalmia Cement (Bharat) Limited, At- Plot No. IV/A-A-7(P), Bokaro Industrial Area Development Authority, Bokaro Steel City, Dist- Bokaro / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Bokaro/ Director of Mines, Government of Jharkhand, Ranchi/ Chief Inspector of Factories, Ranchi/ D.F.O., Bokaro/D.M.O., Bokaro / R.O., Dhanbad for information & ensuring compliance of the above.

Yatindra Kumar Das

Digitally signed by Yatindra Kumar Das
Date: 2022.03.06 11:23:51 +05'30'

(Yatindra Kumar Das)
Member Secretary

Annexure-2

Consent to operate (CTO) received from JSPCB Ranchi

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401843/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-14970501/2023/503 Dated : 2023-01-15

Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Application (s) dated 2022-12-15 of Dalmia Cement (Bharat) Limited, Occupier Name :Venkatesan Thyagarajan for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981.

2. **Documents Relied Upon:**

(a) The content of Consent to Establish (CTE), Ref No.-JSPCB/HO/RNC/CTE-11785214/2022/96 Dated : 06.03.2022 for Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per EC Exp.) with compliance report.

(b) The content of copy of Environmental Clearance granted vide letter No. EC/SEIAA/2018-19/2138/2019/474 dated 23.09.2019 for "Upgradation of technology at existing standalone cement Grinding unit of M/s Dalmia Cement (Bharat) Ltd., at Bokaro Industrial Area, Bokaro, Jharkhand from 3.0 MTPA to 3.7 MTPA" with compliance report.

(c) The content of Copy of the No Increase in Pollution Load Certificate issued by the Board vide letter ref. no. 8-1998 dated 22.11.2021.

(d) The content of Executive Summary related to No Increase in Pollution load with increase in production capacity to 4.5 MTPA through change in Product Mix and Modernization in Technology in Existing Standalone Grinding Unit of M/s Dalmia Cement (Bharat) Limited, at Bokaro Industrial Area(HIADA), Bokaro.

(e) The content of Self-declaration for procurement of Raw Material from valid source.

(f) The content of Consent to Operate (CTO), vide ref. no. JSPCB/HO/RNC/CTO-13089032/2022/837, dated 12.06.2022 for the production of Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per EC Exp.) for the period upto 31.03.2023.

(g) The content of authorization under HoWM Rules' 2016 vide ref. no. JSPCB/HO/RNC/HWM-9675664/2021/26, dated 09.04.2021.

(g) The content of Inspection Report (I/R), Ref No.-1513 dated 31.12.2022 of R.O., JSPCB, Dhanbad.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -Kanad , P.S -Bokaro Steel City , District -BOKARO , as follows:

Project	Site-Area	Investment (Rs)	Product & Capacity	Period of CTO

	Plot Nos.	Area			Date of issue To
In Expansion	At- Industrial area, BIADA, Bokaro, Plot No. IV/A-7(P)	200002 Sq. Mtrs or 20.24 Hactare	55.86 Crore	Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per EC Exp. and previous CTO)	31/03/2027

(A) Specific Conditions:

1. That, the occupier shall install, operate and maintain dust containment cum suppression system.

2. That, the occupier shall carry out grinding and packing under covered area.

3. That, the occupier shall maintain the new emission guideline as prescribed by CPCB/MoEF for cement industry.

4. That, the occupier shall cover the truck/dumpers used for transportation of Limestone, Gypsum, Coal, Cement and other materials and shall use least habitation route for their movement.

5. That, the occupier shall install & maintain fixed type water sprinkler all along the road and the points of loading & unloading points.

6. That, the occupier shall construct pucca approach road and internal roads and shall do sprinkling of water along these area.

7. That, the occupier shall harvest rain water of the premises and recharge it to the ground by the method of Central Ground Water Board that fits most to each project.

8. That, the occupier shall keep surface run off within the premises and should construct garland drain and settling pit for this purpose.

9. That, the occupier shall transport the product by leak proof and covered vehicles with tarpaulin sheet.

10. That, the occupier shall establish and operate well equipped environmental laboratory with facilities to monitor at least all regulatory parameters and duly accredited by NABL.

11. That, the occupier shall operate and maintain air pollution control devices to such as bag filters to control fuel dust emission.

12. That, the occupier shall submit the disposal and utilization of fly ash generated in the plant.

13. That, the occupier shall comply conditions of the CHIP and shall report to the Board regularly.

14. That, occupier shall maintain the operation of Pollution control system installed at Ball Mills and Silos. Also the power supply to production units & Silos shall be interlinked with pollution control arrangement.

15. That, the occupier shall operate and maintain the pollution control equipments such as bag filters and others.

16. That, the occupier shall operate and maintain the CAAQMS and PM 10 analyzer and ensure transmission of data to JSPCB and CPCB server uninterruptedly.

17. That, the occupier shall comply all the conditions of EC and CTO and submit six monthly compliance report to Board and other relevant documents alongwith the analysis reports successively.

18. that, the occupier shall dispose the solid waste as per prescribed norms.

19. That, the occupier shall dispose the hazardous waste as per HoWM Rules' 2016 and shall obtain authorization under HoWM Rules' 2016.

20. That, the occupier shall submit online application for renewal of consent under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent with documents showing compliance of all of the above conditions.

21. That, this CTO supersedes the CTO granted earlier vide ref. no. JSPCB/HO/RNC/CTO-13089032/2022/837, dated 12.06.2022.

(B) General Conditions :

(1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

S.N.	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulpher Dioxide (SO2), µg/m3	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO2), µg/m3	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM10, µg/m3	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM2.5, µg/m3	Annual 24 hours	40 60	40 60
5.	Ozone(O3), µg/m3	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m3	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m3	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH3) µg/m3	Annual 24 hours	100 400	100 400
9.	Benzene (C6H6) µg/m3	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m3	Annual	01	01
11.	Arsenic (As) ng/m3	Annual	06	06
12.	Nickel (Ni) ng/m3	Annual	20	20

Note : Serial no. 1 to 4 – Mandatory
Serial no. 5 to 12 As applicable for specific type of industry.

(2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S.N	Parameter	Standard
1	Particulate Matter	150 mg/Nm³

(3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S.N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

(4) That, the occupier shall dispose of solid wastes as follows:

S.N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of soil or Mineral

(5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.

(6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.

(7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analysis reports, every year latest by 30th September of the next financial year.

(9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

(10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.

(12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding , if any, initiated in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.

4. **That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.**

5. **That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.**

6. **The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.**

7. **The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.**

This is issued with the approval of the Competent authority

Yatindra Kumar Das

Digitally signed by Yatindra Kumar Das
Date: 2023.03.15 21:30:17 +05'30'

(Yatindra Kumar Das)
Member Secretary

Memo No. : JSPCB/HO/95SC/CTO-14970501/2023/503

Dated : 2023-03-15

Copy to: M/s Dalmia Cement (Bharat) Limited, At- Plot No. IV/A-A-7(P), Bokaro Industrial Area Development Authority, Bokaro Steel City, Dist- Bokaro / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Bokaro/ Director of Mines, Government of Jharkhand, Ranchi/ Chief Inspector of Factories, Ranchi/ D.F.O., Bokaro/D.M.O., Bokaro / R.O., Dhanbad for information & ensuring compliance of the above.

Yatindra Kumar Das

Digitally signed by Yatindra Kumar Das
Date: 2023.03.15 21:27:17 +05'30'

(Yatindra Kumar Das)
Member Secretary

Annexure-3

Water agreement copy from BIADA, Jharkhand

भारतीय गैर न्यायिक

पचास रुपये FIFTY RUPEES

रु.50 Rs.50

INDIA

INDIA NON JUDICIAL

झारखण्ड JHARKHAND A 459112

AGREEMENT BOND FOR INDUSTRIAL

METERED WATER SUPPLY SERVICE CONNECTION

An Agreement made this 17thday of March 2011 between the Bokaro Industrial Area Development Authority (Hereinafter called the owner) on the first part and **M/s Bokaro Jaypee Cement Limited, "JA House", 63 Basant Lok, Vasant Vihar, New Delhi-110057** hereinafter called "THE CONSUMER" on the second part.

The particulars of the industrial plot to which supply is to be given in the factory premises.

Description of premises

(a) Industrial Plot No.: IV/A – 7(P)
(b) Chauhadi of the industrial plot: As per Annexure 01
(c) Industrial Plot No.: IV/A – 7(P)
(d) Revenue plot & No.: As per Annexure 02

Whereas the consumer desired to obtain supply of water for industrial purposes for his Premises as described from the distribution mains of the Authority and has made a written application to the Authority for this purpose and the Authority has decided to grant it, it is hereby covenanted and agreed as under:-

for BOKARO JAYPEE CEMENT LTD.

(Authorised Signatory)

17/3/11

Chief Accounts Officer

BIADA

1) The Authority shall provide a connection and turn on the water to this premise, on the completion of the communication pipes laid by the 2nd part by the Authority at the cost of the consumer or on receipt of D.O. certificate of satisfactory completion of the communication pipes by the consumer. The sanctioned plan with details noted over it regarding no. of tap and size of water meter, Ferrule or storage tank etc. by the Authority.

2) The consumer shall pay water rate/water tax to the Authority as per rates fixed by the Authority from time to time. The rates effective from 01.11.95 are as under:-

i) Rs. 14/- Per 1000 liters of water supplied.

3) a) The meter of required size shall be purchased by the consumer at his own cost which shall be approved by the Authority before its installation. Whenever meter will be found stolen or defective it will be replaced at the cost of the consumer. Every new metre shall be approved by the Authority. In case the meter is not installed, billing will be on the basis of Water requirement plus 10%.

b) The register of meter reading shall be prima-facie evidence of the quantity of water consumed and bills for water rates shall be based on the meter reading taken monthly, a copy of which will be supplied to the consumer on demand.

c) Provided that if any meter is out of order and if in the opinion of the D.O it is not registering correctly the Authority may estimate the quantity to be billed for, for the period of defective meter as certified by the DO/DDO/ADO in the manner terms and conditions laid down on the allotment of land/lease deed. The defective water meter will have to be replaced at the cost of consumer to policed by the consumer. The water meter of required size and make to be approved by the Authority shall be purchased by the consumer.

4. Bills of water rates shall be presented by the Authority monthly and shall be paid by consumer within seven days of presentation. For this purposes the date of presentation shall mean the date of issue of the bill on the address of the unit.

5. Security Deposits Water requirement per day X 90 i.e $\frac{5,50,000 \text{ liter} \times 90 \times 14}{1000}$

- Rs. 6,93,000.00(Rupees Six Lakh Ninety Three Thousand) only will be deposited by the party in Authority fund.

6. The cost of stamping this agreement shall be borne by the unit concerned.

7. This agreement may be terminated with the cancellation of the plot allotted.

For BOKARO JAYPEE CEMENT LTD.

(Authorised Signatory)

17/2/11

Witness

8. The Authority will have right to shut off the supply temporarily for purposes of necessary repairs/maintanance of water supply pipelines etc. giving a prior notice to the concerned unit.

9. That the meter chamber shall be the property of the Authority even, if it is constructed by the consumer at his own cost but it will be got repaired by consumer or if Authority get it repaired, the cost will be received from consumer. The safety of water meter will be with consumer.

10. That the consumer shall take proper care for the safety of the meter which will be installed in the meter chamber situated within the premises of the unit and that in case of its theft he will be responsible and be liable for replacement of the meter within a week time.

11. In case of any dispute regarding this water connection, the decision of Bokaro Industrial Area Dev. Authority will be final and binding upon the party.

12. If the consumer fails to pay the water charges due under this agreement within seven days of the date on which the payment falls due, the consumer shall be liable to pay interest @ 10% simple per annum on earlier bill amount.

13. Every sum that may become due from the consumer to the Authority under or in pursuance of the provisions of this agreement shall be payable to the Authority and shall be recoverable as public demand under the Bihar & Orissa public Recovery Act, 1914.

14. In case the consumer desires to increase/decresse connected demand the Authority may require to be given 3 months notice in writing standing the required demand.

15. If the consumer uses the water supplied or deals with it in any manner so as unduly or improperly to interfere with the efficient supply of water to any person by the Authority or sells or diverts water to premises other than his/her own, the Authority may discontinue the supply with prior notice.

16. The consumer shall not cause or permit any such repairs additions or alternations to be done otherwise than by the Authority shall when any such repairs are required to be done, inform such officers of the Authority for this purpose.

17. All payment referred to above shall unless otherwise direct by the Authority to be made by the consumer by cash/draft in the office of M.D. BIADA.

M/ BOKARO JAYPEE CEMENT CO.

(Authorised Signatory)

Chief Accounts Officer
B I A D A

The Authority shall be at liberty at any time to alter charges, minimum guarantee, any terms and conditions in the agreement bond etc. as set out in such hereafter and the same shall be binding on the consumer.

18. Point of supply : From Water Tank No: 02 to Plot No:IVA-7(P)

19. Connected fitting (a) Water meter with enclosure

(b) 200 N.B. Pipe with valve

20. Qty of water required per month in 1.65 Crores Liters.

21. Minimum guarantee by the consumer (25% of above connected load)

(i) Tariff Rs.14/- only per 1,000 liters up to 1.65 Crores liters per Month. (i.25% of monthly demand)

(ii) Charge for additional quantity.....NIL.....per 0.00 gall./lit.(provisional and subject to revision)

22. Building plans in triplicate showing pipeline and all fixtures including index plan showing size of ferrule, meter pipeline and stop cock etc. duly signed by the licensed plumber. Asstt. Engineer.

In witness where of the said parties hereunder set & subscribed their respective hands and seals the day and year first above written.

Signed by the consumer

For BIRLA JAYPEE CEMENT LTD.

Authorised Signatory

In presence of 1) ANADHESH KUMAR PANDEY

2) RAJEEV KUMAR SINHA

Signed for and on behalf of the BIADA.

Designation

Asstt. Engineer

BIADA

In presence of 1)

2)

Annexure-4

Hazardous waste Authorization copy from JSPCB Ranchi

JHARKHAND STATE POLLUTION CONTROL BOARD
T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004
Phone :2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

FORM 2
[See rule 6(2)]

FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES

1. No. of authorization and date of issue: JSPCB/HO/RNC/5(WM-9675664/2021/26 09/04/2021

2. Reference of application(No. and date): 9675664 30/12/2020

3. Dalmia Cement (Bharat) Limited of Venkatesan Tiruparajan is hereby granted an authorization based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilization, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Distt. Bokaro

Details of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	5.1 Used Oil/Spent oil	Sold to authorised recycler	1.5 KL/Annum
2	5.2 Used Oil Cotton	Sold to authorised recycler	1.0 KL

(1) The authorisation shall be valid for a period of date of issue to 31.12.2026 years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A. General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.

6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"

7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.

8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.

10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.

11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.

12. An application for the renewal of an authorisation shall be made as laid down under these Rules.

13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B Specific conditions:

(1)That, the occupier shall comply the provisions of the Environment Protection Act and Rules.

(2)That, the authorization shall be produced at the time of inspection.

(3)That, the occupier authorized shall not sell/sell or otherwise transport the H/W without obtaining prior permission of the Board.

(4)That, any un-authorization change shall constitute a breach the authorization.

(5)That, it is the duty of authorized person to take prior permission of the Board to close down the facility.

(6)That, the renewal of authorization shall be made as laid down in the rules.

(7)That, any other condition for compliance as per the guidelines issued by the MoEF for CPCB.

(8)That, the occupier shall submit annual return for the financial year before 30th June, every year.

(9)That, the occupier shall comply all the conditions.

(10)That, the occupier shall submit quarterly and annual information on hazardous wastes consumed its source, products generated or resources conserved (specifying the details like type and quantity of resources conserved) to the concerned SPCB.

(11)That, the occupier shall complied all directions given by standard operating and procedure.

DILIP KUMAR

Digitally signed by DILIP KUMAR
Date: 2021.04.09 12:19:28 +05'30'

Dilip Kumar
Environmental Engineer

Memo No:JSPCB/HO/RNC/HWM-9675664/2021/26
Date: 09/04/2021

Copy To:

Sri Sunil Kumar Gupta, Executive Director (Manufacturing Head East) of M/s Dalmia Cement (Bharat) Limited, At/ Plot No. IV/A A-7(P), Bokaro Industrial Area Development Authority, Bokaro Steel City, Dist/ Bokaro / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Bokaro/ Chief Inspector of Factories, Ranchi/ R.O., Dhanbad for information & ensuring compliance of the above.

DILIP KUMAR Digitally signed by DILIP KUMAR Date: 2021.04.29 12:29:38 +05'30'

Dilip Kumar
Environmental Engineer

Annexure-5

DALMIA CEMENT BHARAT LIMITED, BOKARO

Manual Stack emission monitoring report from April 2025 to September 2025

Month	Min.	Max.	Avg.
April-2025,	10.7	19.0	14.0
May-2025,	7.5	15.6	8.9
June-2024,	10.3	16.9	13.4
July-2025,	8.4	14.0	11.1
August-2025,	9.3	22.0	15.4
September-2025,	11.4	20.2	16.3
Min.	**7.5**	**14.0**	**8.9**
Max.	**11.4**	**22.0**	**16.3**
Avg.	**9.6**	**17.9**	**13.1**

On Line CEMS report from April 2025 to September 2025

Month	Min.	Max.	Avg.
April-2025	7.1	27.8	20.9
May-2025	4.1	23.7	11.8
June-2024	5.2	10.9	7.4
July-2025	4.9	12.1	8.6
August-2025	3.0	14.5	10.13
September-2025	3.5	20.6	13.8
Min.	**3.0**	**10.9**	**7.4**
Max.	**7.1**	**27.8**	**20.9**
Avg.	**4.7**	**18.5**	**12.6**

JSPCB Norms	**30 mg/Nm3**

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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 - 8407804251, 8407804251, E mail - iem2012@rediffmail.com

TC-16125

TEST REPORT

ULR No.: T C 1 6 1 3 5 5 5 0 0 0 0 0 0 2 5 0			
Discipline: Chemical	**Group:** Atmospheric Pollution		**Sub-Group:** Stack Emission
Report Issue Date: 27-06-2025		**Test Report No.:** IEM-241100045/1	
Sample ID: 2506234,P20001		**Sample Description:** Stack Emission	
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024	
Name and Contact Details of Customer: Sanjeev Verma, (9264447745) Email Id. - verma.sanjeev.2@dalmiacement.com Dalmia Cement Bharat Limited, Plot No IV/A-7(P), Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India			
Type of Industry: Cement		**Condition of Sample:** Fit for Test	
Sampling Protocol: IS:11255: 2000		**Sampling Date:** 22-06-2025	
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series			
Sampling Location: Cement Mill Bag House Stack			
Field Meteorological Information	**A. Temp. (°C):** 29	**R.H. (%):** 62	**W.C.:** Partly Sunny **W.D.:** SW to NE
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi			
Sample Receiving Date: 23-06-2025	**Testing Started:** 23-06-2025	**Testing Ended:** 27-06-2025	

Information obtained from Customer

Stack Identification	Cement Mill Bag House Stack	**Sampling Port**	Available
Plat Form	Permanent	**Stack Height from Ground Level (m)**	50
Stack Description	Common for cement mill -1 & 2	**Port Hole Height from Ground Level (m)**	30
Shape of Stack	Circular	**Inner Dimension of Stack (m)**	3.7
Construction Material	MS	**Pollution Control Device (if any)**	Bag House

Flue Gas Temperature (K): 375	**Flue Gas Velocity (m/s):** 18.2	**Flue Gas Volumetric Flow Rate (Nm^3/hr):** 543484.7

--Test Result--

SL NO.	Parameters	Test Methods	Unit	Result	Limits
1	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	6.4	30.0

Dust	Kg/hr	3.5

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196: 1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms is Specified**	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Sonanth.
Sample Drawn by	Aniket Mandu & Team
Disclaimers	• The results relate only to the item tested, calibrated or sampled. • Additions in, deviations, or exclusions from the method is not practised if not mentioned. • Results from external providers are not valid if not specified.

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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 iem.ranchi@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.

Reviewed by	Authorized Signatory
(Tauqeer Ahmad)	[Dr. S. C. Jain]
Technical Manager	Director

---End of Report---

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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

TEST REPORT

ULR No.: T C 1 6 1 3 5 2 5 0 0 0 0 0 0 0 8 0 8			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Stack Emission	
Report Issue Date: 09-09-2025	**Test Report No.:** RN-241/050085		
Sample ID: 250906AP04001	**Sample Description:** Stack Emission		
Challan No./P.O. No.: 4548043344/277	**Challan No./ F.No. Date:** 05-11-2024		
Name and Contact Details of Customer: Sanjeev Verma, (9264447745) Email id. - verma.sanjeev2@dalmiacement.com Dalmia Cement Bharat Limited, Plot No IV/A-7(P), Bokaro Industrial Area BoEdfi Bokaro Steel City, Bokaro-827014 Jharkhand India			
Type of Industry: Cement	**Condition of Sample:** Fit for Test		
Sampling Protocol: IS:11255, 2009	**Sampling Date:** 05-09-2025		
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series			
Sampling Location: Cement Mill Bag House Stack			
Field Meteorological Information	**A. Temp. (°C):** 30	**R.H. (%):** 65	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi			
Sample Receiving Date: 06-09-2025	**Testing Started:** 06-09-2025	**Testing Ended:** 09-09-2025	

Information obtained from Customer

Stack Identification	Cement Mill Bag House Stack	**Sampling Port**	Available
Plat Form	Permanent	**Stack Height from Ground Level (m)**	50
Stack Description	Common for cement mill -1 & 2	**Port Hole Height from Ground Level (m)**	30
Shape of Stack	Circular	**Inner Dimension of Stack (m)**	3.7
Construction Material	MS	**Pollution Control Device (if any)**	Bag House

Flue Gas Temperature (K): 365	**Flue Gas Velocity (m/s):** 15.8	**Flue Gas Volumetric Flow Rate (Nm^3/hr):** 422227.1

--Test Result--

SL NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	11.1	30.0

Dust	Kg/hr	4.69

Env. Condition of Lab.	Laboratory is maintaining Temperature 25± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196: 1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms is Specified**	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specifications.
Opinion & Interpretation	Not Practiced.
Tested by	Akanksha Saurabh
Sample Drawn by	Ankur Mundu & Team
Disclaimers	• The results relate only to the item tested, calibrated or sampled. • Additions to, deviations, or exclusions from the method is not practiced if not mentioned. • Results from external providers are not used if not specified.

Specific Contractual Notes	Reviewed by	Authorized Signatory
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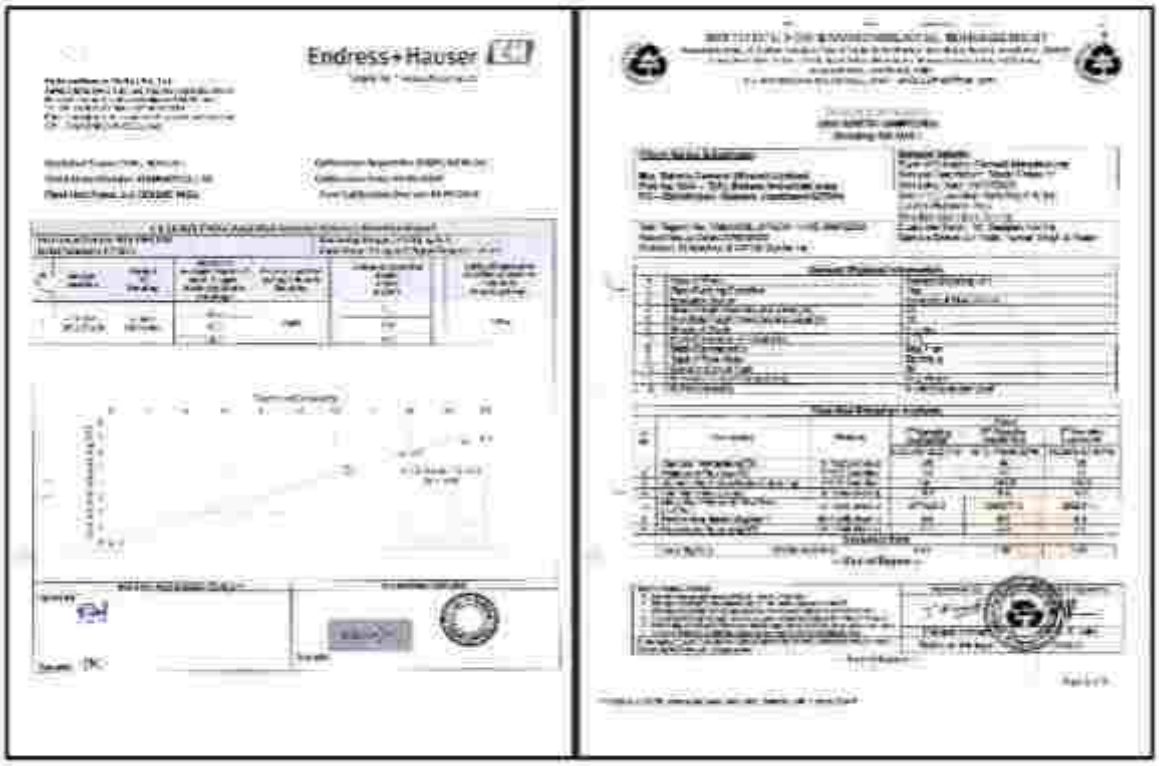
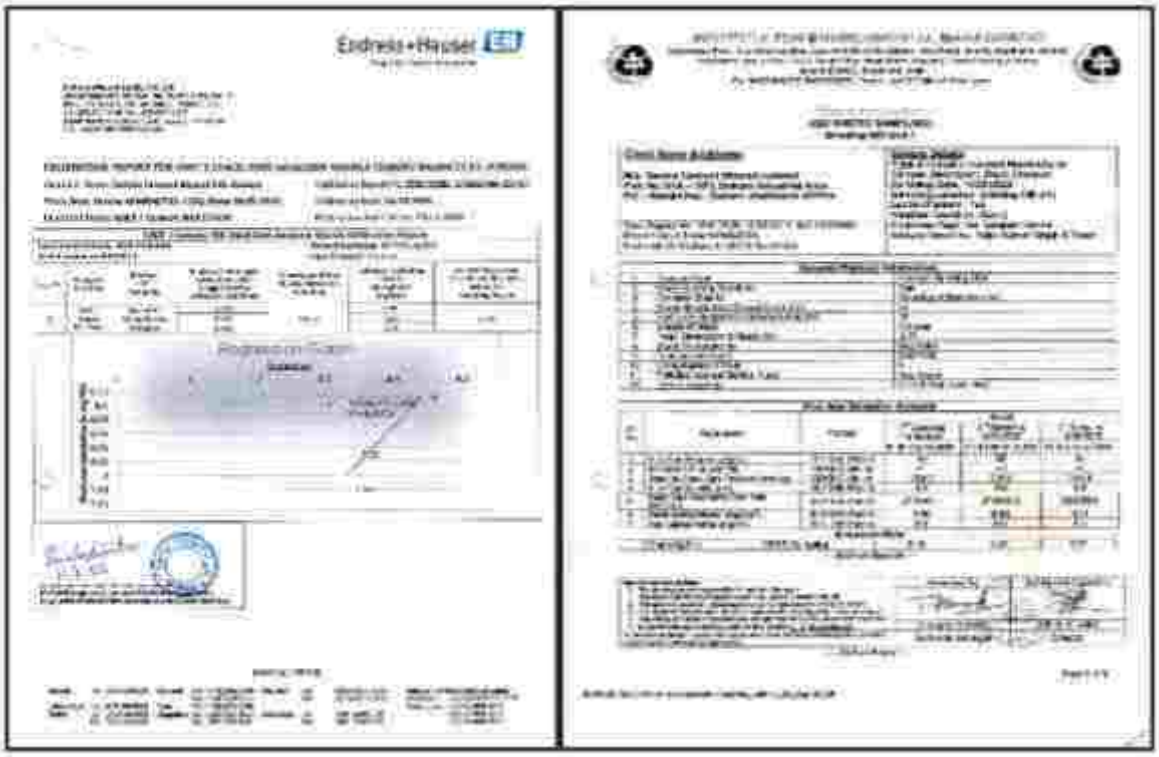
----End of Report----

CEMS Calibration certificate





Annexure-6

DALMIA CEMENT BHARAT LIMITED, BOKARO

Fugitive dust emission monitoring report from April 2025 to September 2025

Sr. No	Date of monitoring	Near Mill area µg/m3	Near Coal yard µg/m3	Near Packing plant µg/m3	Near raw material yard µg/m3	Truck parking area µg/m3
1	12.04.2025	865.3	627.3	587.6	664.8	464.8
2	21.05.2025	914.1	541.7	681.9	737.4	582.1
3	27.06.2025	693.5	576.6	539.5	554.1	504.2
4	15.07.2025	519.3	416.2	579.4	409.7	419.8
5	21.08.2025	627.6	459.7	635.7	605.3	485.3
6	26.09.2025	734.2	679.3	763.4	751.8	627.5
	Min.	**519.3**	**416.2**	**539.5**	**409.7**	**419.8**
	Max.	**914.1**	**679.3**	**763.4**	**751.8**	**627.5**
	Avg.	**723.4**	**549.5**	**636.3**	**610.6**	**516.4**

JSPCB Norms	**2000 µg/m^3**

Fugitive dust emission monitoring report month of June 2025 from NABL/JSPCB approved lab

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

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Fugitive dust emission monitoring report month of September 2025 from NABL/JSPCB approved lab

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Annexure-7

DALMIA CEMENT BHARAT LIMITED, BOKARO

Continuous Ambient air quality monitoring report from April 2025 to September 2025

DALMIA CEMENT (BHARAT) LIMITED CAAQMS-1 REPORT						
Date	PM10_St01	PM25_St01	SO2_Dalmia1	NO_Dalmia1	NO2_Dalmia1	NOX_Dalmia1
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
4/1/2025	44.2	29.4	9.8	2.48	24.5	26.8
4/2/2025	40.3	21.6	10.1	2.6	24.15	24.4
4/3/2025	38.9	21.6	10.7	2.47	23.88	22.4
4/4/2025	38.8	18.6	9.5	2.37	24.98	27.6
4/5/2025	38.7	23.2	10.3	2.52	24.11	12.9
4/6/2025	41.9	16.8	10.8	2.48	22.95	16.4
4/7/2025	55.6	27.7	10.01	2.42	15.44	16.6
4/8/2025	50.5	22.3	9.5	2.45	12.29	21.8
4/9/2025	38.9	18.9	10.9	2.5	12.28	16.5
4/10/2025	32.4	13.3	10	2.52	12	16.8
4/11/2025	32.7	16	8.99	2.54	12.18	16.5
4/12/2025	49.4	26.7	10.01	2.5	11.98	16.6
4/13/2025	37.5	22.4	9.97	2.51	12.12	16.8
4/14/2025	52.4	25.1	10.8	2.72	12.16	16.5
4/15/2025	31.3	16.2	9.6	2.52	12	16.9
4/16/2025	47.1	22.8	10	2.73	11.93	17.7
4/17/2025	50.7	20.4	10.3	2.83	13.3	15.4
4/18/2025	41.9	19.7	9.7	2.33	13.99	16.3
4/19/2025	35.9	16.9	10.5	2.86	14.76	15.3
4/20/2025	31.8	13.9	7.48	2.84	15.3	16
4/21/2025	43.9	20.4	4.5	2.56	14.05	16.3
4/22/2025	41.8	24.6	4.9	2.45	15.01	16.3
4/23/2025	34.9	19.8	5.1	2.62	14.91	16.1
4/24/2025	37.4	16.8	4.5	2.38	15	16.1
4/25/2025	49	29.6	5.3	2.45	14.67	16.7
4/26/2025	64.1	39.9	4.5	2.54	15.09	16.4
4/27/2025	49.7	30.1	5.1	2.45	15.09	16.3
4/28/2025	50.6	35.1	4.8	2.41	15.04	16.9
4/29/2025	55.7	35.9	5.5	2.59	15.35	16.6
4/30/2025	50.9	30.4	4.6	2.51	15.14	17.8
Min	**31.3**	**13.3**	**4.5**	**2.33**	**11.93**	**12.9**
Max	**64.1**	**39.9**	**10.9**	**2.86**	**24.98**	**27.6**
Avg	**43.88**	**23.67**	**8.22**	**2.54**	**16.02**	**17.90**

DALMIA CEMENT (BHARAT) LIMITED CAAQMS-1 REPORT						
Date	PM10_St01	PM25_St01	SO2_Dalmia1	NO_Dalmia1	NO2_Dalmia1	NOX_Dalmia1
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
5/1/2025	45.1	23.9	4.5	2.6	15.1	17.7
5/2/2025	44.8	16.9	4.7	2.44	15	17.4
5/3/2025	50	22.9	4.8	2.54	15.3	17.8
5/4/2025	40.5	20	5.3	2.45	15.4	17.8
5/5/2025	42.4	28.7	3.9	2.47	19.1	21.6
5/6/2025	45	26.9	5.3	2.49	21.4	23.9
5/7/2025	53.4	23.3	4.5	2.48	21	23.4
5/8/2025	51.9	37.7	8.4	2.6	21.5	24.1
5/9/2025	30.8	27.2	9.3	1.56	21.4	23
5/10/2025	42.5	21.3	4.8	2.34	20.8	23.1
5/11/2025	46.7	25.3	3.9	2.42	20.9	23.4
5/12/2025	57.7	25.6	5.4	2.4	21.4	23.8
5/13/2025	51.2	22.7	6.2	2.41	21.4	23.8
5/14/2025	59	9.7	7.5	2.45	20.5	22.9
5/15/2025	53.5	8.6	8.4	1.72	21.3	23
5/16/2025	25.9	11.3	6.3	2.43	20.5	22.9
5/17/2025	70.7	16.7	5.1	2.45	21.5	24
5/18/2025	47.5	9.9	4.7	2.66	21	23.6
5/19/2025	45.8	13	6.8	2.6	22.3	24.9
5/20/2025	39.3	10	7.3	1.59	21.3	22.9
5/21/2025	36.9	10.6	6.5	2.66	21.1	23.8
5/22/2025	28.9	17	4.3	2.56	21	23.5
5/23/2025	35.8	12.1	5.3	2.46	21.2	23.7
5/24/2025	44	9.4	5.8	2.47	21.1	23.6
5/25/2025	50.4	8.2	6.9	2.52	21.2	23.8
5/26/2025	38.3	9.9	4.5	2.48	21.4	23.9
5/27/2025	49.3	19.7	5.3	2.54	20.9	23.4
5/28/2025	47.4	22.8	7.4	3.16	22.3	25.5
5/29/2025	19.4	15.5	6.1	2.62	21.2	23.8
5/30/2025	40.3	16.2	4.4	2.5	22	24.5
5/31/2025	72	17	4.7	2.59	19.9	22.5
Min	**19.4**	**6.6**	**3.8**	**1.56**	**15**	**17.4**
Max	**72**	**37.7**	**9.3**	**3.16**	**22.3**	**25.5**
Avg	**45.39**	**18.25**	**5.74**	**2.44**	**20.26**	**22.72**

DALMIA CEMENT (BHARAT) LIMITED CAAQMS-1 REPORT						
Date	PM10_St01	PM25_St01	SO2_Dalmia1	NO_Dalmia1	NO2_Dalmia1	NOX_Dalmia1
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
6/1/2025	43.3	17	3.8	2.49	21.4	22.01
6/2/2025	47.8	18.3	4.5	2.35	21.05	21.17
6/3/2025	45.8	16.7	6.2	2.66	22.08	23.69
6/4/2025	32.2	14.8	4.3	2.5	21.15	22.11
6/5/2025	45.7	20.3	3.7	2.45	21.33	22.04
6/6/2025	53.1	19.4	4.9	2.43	21.11	21.8
6/7/2025	45.8	17.6	4	2.58	21.18	22.37
6/8/2025	69.5	15.5	5.7	2.49	21.36	22.4
6/9/2025	80.1	18.3	6.3	2.57	21.27	22.27
6/10/2025	57.7	24	7.8	2.51	21.81	22.2
6/11/2025	48.8	22.9	6.9	2.55	21.69	22.6
6/12/2025	44.1	23.3	7.1	2.48	21.18	21.98
6/13/2025	53.5	15.6	4.7	2.42	21.57	22.14
6/14/2025	85.3	22.3	5.3	3.13	19.74	21.9
6/15/2025	74.6	25.6	4.7	1.98	16.56	18.54
6/16/2025	26.4	19.4	8.01	1.55	10.65	12.27
6/17/2025	17.7	14	3.51	2.6	20.56	20.69
6/18/2025	11.4	8	4.25	2.67	19.64	20.47
6/19/2025	10.9	6.9	2.29	2.18	23.27	21.94
6/20/2025	18.5	6.5	3.6	2.37	21.85	21.28
6/21/2025	48	18.6	2.25	2.62	20.72	22.22
6/22/2025	45.9	19.9	3.7	2.56	21.17	22.09
6/23/2025	49.6	25.5	5.25	2.64	20.93	22.72
6/24/2025	44.8	9.8	4.27	2.17	22.56	21.46
6/25/2025	53.8	9.4	6.4	2.71	14.89	16.22
6/26/2025	56.9	19.8	2.5	2.5	3.13	5.43
6/27/2025	64.7	17.2	3.83	2.72	3.01	5.7
6/28/2025	48.5	14.2	5.7	1.91	2.89	4.65
6/29/2025	14.9	9.5	6.8	2.4	3.05	5.33
6/30/2025	15.1	9	5.6	2.33	3.07	5.32
Min	**10.9**	**6.5**	**2.25**	**1.55**	**2.89**	**4.65**
Max	**85.3**	**25.6**	**8.01**	**3.13**	**23.27**	**23.69**
Avg	**45.33**	**16.61**	**4.94**	**2.44**	**17.25**	**18.28**

DALMIA CEMENT (BHARAT) LIMITED CAAQMS-1 REPORT						
Date	PM10_St01	PM25_St01	SO2_Dalmia1	NO_Dalmia1	NO2_Dalmia1	NOX_Dalmia1
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
7/1/2025	24.8	10.8	5	2.8	3.06	5.8
7/2/2025	41.7	12.1	4.9	3.25	4.34	7.5
7/3/2025	24.1	10.1	6.56	4.61	7.95	12.3
7/4/2025	36.9	23.1	7.5	4.13	8.19	12
7/5/2025	22.6	11.3	7.28	4.32	8.13	12.4
7/6/2025	27.6	12.1	7.05	4.26	8	12.2
7/7/2025	18.7	8.9	7.5	5.03	8.37	13.1
7/8/2025	17.6	6.7	6.75	4.69	8.3	12.9
7/9/2025	18.6	8.3	6.74	3.95	8.08	11.9
7/10/2025	21.3	12.8	6.48	4.26	7.9	12
7/11/2025	29.7	13.4	7.55	5.33	8.15	13.4
7/12/2025	29.8	16.4	7.92	4.5	8.05	12.5
7/13/2025	41	14.2	6.57	4.5	8.08	12.5
7/14/2025	20.4	19.5	7.07	4.32	7.83	12
7/15/2025	13.2	11.8	6.8	4.71	7.98	12.7
7/16/2025	32	14.3	6.4	4.72	8.1	12.7
7/17/2025	33.5	13.3	7.3	4.12	8.15	12.1
7/18/2025	29.9	14.2	7.69	4.82	7.91	12.7
7/19/2025	23.5	14.1	8.45	4.72	7.89	12.5
7/20/2025	26.1	12.1	9.11	4.49	7.8	12.3
7/21/2025	40.3	13.2	9.5	4.53	7.75	12.3
7/22/2025	34.1	14.8	8.62	4.49	7.98	12.4
7/23/2025	31.1	14.4	6.71	4.54	8.16	12.4
7/24/2025	22.8	13.7	7.99	4.93	7.83	12.5
7/25/2025	27.8	12.5	7.78	4.5	8.44	12.9
7/26/2025	21.6	12.3	6.5	4.17	7.61	11.3
7/27/2025	39.2	14.1	6.8	4.63	7.59	11.9
7/28/2025	16.3	11.6	6.5	4.33	8.13	12.1
7/29/2025	22.4	12.6	7.63	4.75	8.94	13.5
7/30/2025	42.3	14.1	7.72	5.79	7.44	13.1
7/31/2025	24.6	12.4	7	4.76	8.11	12.8
Min	**13.2**	**6.7**	**4.9**	**2.8**	**3.06**	**5.8**
Max	**42.3**	**23.1**	**9.5**	**5.79**	**8.94**	**13.5**
Avg	**27.61**	**13.18**	**7.21**	**4.48**	**7.64**	**11.95**

DALMIA CEMENT (BHARAT) LIMITED CAAQMS-1 REPORT						
Dated	PM10_St01	PM25_St01	SO2_Dalmia1	NO_Dalmia1	NO2_Dalmia1	NOX_Dalmia1
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
8/1/2025	12.1	3.3	7.4	4.39	8.22	12.6
8/2/2025	26.5	3.6	8	4.52	7.94	12.4
8/3/2025	35.4	3.5	6.8	4.43	8.26	12.7
8/4/2025	19.7	4.5	6.9	4.28	7.68	12
8/5/2025	30.6	22.9	6.7	5.07	8.12	13.1
8/6/2025	24.9	19.5	5.5	4.13	8.34	12.4
8/7/2025	20.2	14.7	6.3	4.14	8.21	12.1
8/8/2025	20.4	9.7	7.7	4.51	8.08	12.6
8/9/2025	26.6	13.8	7.5	4.72	8.38	13
8/10/2025	21.3	7.5	7.5	6.45	7.25	12.5
8/11/2025	24.4	7.4	7.5	7.39	8.45	14.8
8/12/2025	45.6	13.2	7.5	5.58	9.34	14
8/13/2025	49.7	12.7	6.9	4.46	8.33	12.6
8/14/2025	34	9.4	6.8	4.05	8.74	12.2
8/15/2025	36.7	8.5	7	4.42	7.32	11.7
8/16/2025	30.5	11.5	6.9	4.73	8.11	12.4
8/17/2025	31.5	14.5	7.1	4.37	9.42	12.8
8/18/2025	30.3	9.4	7.5	3.69	8.11	10.9
8/19/2025	25.5	7.5	6.4	5.16	9.4	12.9
8/20/2025	19.9	8.8	6.4	6.16	9.52	14.6
8/21/2025	33.7	17.7	6.6	5.13	8.25	12.5
8/22/2025	21	6.8	8.8	4.14	9.02	12.7
8/23/2025	13.5	5.9	8.9	3.88	9.7	12.8
8/24/2025	42.5	37	4.1	6.7	9.25	14.8
8/25/2025	49.2	21	2.8	4.85	8.61	12.6
8/26/2025	45.2	14.8	3	4.97	7.92	12.5
8/27/2025	41.9	15	2	4.38	7.63	11.6
8/28/2025	20.5	10.5	3.2	4.37	8.18	12.4
8/29/2025	29.9	11.7	5	4.64	8.32	12.5
8/30/2025	30.7	10.8	5	6.97	8.68	16
8/31/2025	24.2	19.2	6	5.04	8.67	15.9
Min	**12.1**	**3.3**	**2**	**3.69**	**7.25**	**10.9**
Max	**49.7**	**37**	**8.9**	**7.39**	**9.7**	**16**
Avg	**29.6**	**12.6**	**6.3**	**4.9**	**8.4**	**13.0**

DALMIA CEMENT (BHARAT) LIMITED CAAQMS-1 REPORT

Date	PM10_St01	PM25_St01	SO2_Dalmia1	NO_Dalmia1	NO2_Dalmia1	NOX_Dalmia1
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
9/1/2025	13.2	29.4	6.97	5.64	8.52	17.1
9/2/2025	33.5	22.8	9.24	4.69	8.06	16.56
9/3/2025	32.8	23.8	8.79	4.55	8.02	16.95
9/4/2025	26.1	13.5	7.88	4.58	8.06	17.69
9/5/2025	36.5	24.7	7.86	4.33	8.03	17.27
9/6/2025	31	17	7.58	4.48	8.12	17.63
9/7/2025	33.6	17.3	9.09	4.69	8.11	18.18
9/8/2025	33.3	14.7	8.66	4.74	8.07	17.91
9/9/2025	33.4	13.9	8.19	4.8	8.33	18.34
9/10/2025	27	11.4	8.02	4.54	8.04	17.56
9/11/2025	26.1	11.1	7	4.58	8.02	17.65
9/12/2025	39.4	19.2	8.27	4.71	7.98	17.74
9/13/2025	33.3	13	10.06	4.59	8.1	17.76
9/14/2025	30.6	13.3	7.88	4.55	8	17.56
9/15/2025	19.6	14	4.52	4.45	8.04	17.48
9/16/2025	37.2	17.8	6.37	4.2	8.12	17.15
9/17/2025	26.4	8.8	7.52	4.47	7.92	17.27
9/18/2025	24.9	10.9	7.25	4.49	8.03	17.48
9/19/2025	34	16.8	7.55	4.36	7.95	17.2
9/20/2025	34.4	14.6	7.72	4.42	7.97	17.31
9/21/2025	27.5	10.5	9.25	4.31	8.19	17.49
9/22/2025	25.3	13.1	9.34	4.55	8.02	17.58
9/23/2025	30.1	15.2	8.64	4.42	7.93	17.25
9/24/2025	41.7	21.5	8.49	4.6	8	17.6
9/25/2025	42.3	17.5	7.25	4.69	7.87	17.47
9/26/2025	25.5	9.8	7.3	4.34	8.07	17.34
9/27/2025	29.8	13.2	10.29	4.51	7.99	17.45
9/28/2025	30.1	16.3	10.59	4.43	7.83	17.08
9/29/2025	37.7	15.2	8.47	4.28	8.04	17.19
9/30/2025	29	13.3	7.59	4.57	7.97	17.52
Min	**13.2**	**8.8**	**4.52**	**4.2**	**7.83**	**16.56**
Max	**42.3**	**29.4**	**10.59**	**5.64**	**8.52**	**18.34**
Avg	**30.65**	**15.99**	**8.09**	**4.58**	**8.05**	**17.46**

Calibration certificates of CAAQMS

envea

Calibration Certificate of CAAQMS-1 & CAAQMS-2 at Dalmia Cement Bharat Ltd (Bokaro)

Name of Client: Dalmia Cement Bharat Ltd

W.O. No.: 4548009232 Date: 01.06.2024

Calibration Date: 25.06.2025

ANALYZER & SPAN GAS DETAILS			
ANALYZERS	MODEL & SL NO	CAL. CLY.	SPAN GAS SL.NO.
PM10	MP101M-3683	Ref. Gauge	844 µg/cm³
PM2.5	MP101M-3685	Ref. Gauge	845 µg/cm³
SO_2	AF22M -2139	SO_2	
NOX	AC32M -04-2489	CO	
PM 10	MP101M-3683	Ref. Gauge	847 µg/cm³
PM2.5	MP101M-3692	Ref. Gauge	838 µg/cm³

ANALYZER CALIBRATION DETAILS									
Date	Parameter	Units	Shut.	Zhen.	Shhen.	Zero	Factor	SDHPN	Status
25.06.2025	PM10CAAQMS1	µg/cm³	844	NA	857.94	0	0.8772	-1.55	Valid
25.06.2025	PM2.5CAAQMS1	µg/cm³	845	NA	848.43	0	0.672	0.41	Valid
25.06.2025	SO_2 CAAQMS1	ppb	200	0.06	202	0	4.9404	0.55	Valid
25.06.2025	NOX CAAQMS1	ppb	200	0.13	200.9	0	4.2203	0.45	Valid
25.06.2025	PM10 CAAQMS2	µg/cm³	829	NA	809.0	0	0.818	-2.41	Valid
25.06.2025	PM2.5 CAAQMS2	µg/cm³	852	NA	842.67	0	0.8115	-1.10	Valid

Room temperature while doing calibration was 26°C.

Calibration Date: - 25th June, 25.
Next Due Date: - 26th Sept. 25.

Calibrated by: Kailash Prasad Mahato

Kailash Mahato
Sr. Engineer
Envea

Calibration certificates of CAAQMS

envea

Calibration certificate of CAAQMS1 & CAAQMS2 at Dalmia cement Bharat LTD (Bokaro, Jh.)

Name of Client : Dalmia cement Bharat LTD
WO No : 4546049733 Date-20.08.2025
Calibration Date : 22.08.2025

ANALYZER&SPANGAS DETAILS			
ANALYZERS	MODEL&SL.NO.	CAL.CLY.	SPANGAS CONC
PM10(CAAQMS1)	MP101M	Ref.Gauge	829µg/cm³
PM2.5(CAAQMS1)	MP101M	Ref.Gauge	870µg/cm³
NO(CAAQMS1)	AC32M	NO	15PPM
SO2(CAAQMS1)	AF22M	SO2	10 PPM
PM10(CAAQMS2)	MP101M	Ref.Gauge	859µg/cm³
PM2.5(CAAQMS2)	MP101M	Ref.Gauge	840µg/cm³

ANALYZER CALIBRATION DETAILS									
Date	Parameter	Units	Sref.	Zmes.	Smes.	Zero	Factor	SD/FS%	Status
22.08.2025	PM10(CAAQMS1)	µg/cm³	829	NA	815	0	0.98	-1.69	Valid
22.08.2025	PM2.5(CAAQMS1)	µg/cm³	870	NA	858	0	0.98	-1.38	Valid
22.08.2025	NO(CAAQMS1)	µg/cm³	60	0.011	61.10	0	1.41	1.83	Valid
22.08.2025	SO2(CAAQMS1)	µg/cm³	300	0.74	305.2	0	2.07	1.73	Valid
22.08.2025	PM10(CAAQMS2)	µg/cm³	859	NA	841	0	0.79	-2.09	Valid
22.08.2025	PM2.5(CAAQMS2)	µg/cm³	840	NA	858	0	0.83	2.14	Valid

Roomtemperature(filledbeforecalibrationwas=24°C.

Calibration date:-22nd Aug.2025.
Next Due date:-22nd Nov.2025.

Calibratedby:-Sonu Kumar Jha

Sr. Executive CSD

8/21/2025 3:31 PM Veenia Sanjeev2 Dalmia calibration report Aug 25.pdf

DALMIA CEMENT BHARAT LIMITED, BOKARO

Manual Ambient air quality monitoring report from April 2025 to September 2025

Near Time Office				
Month	SO2	NOx	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
Apr-2025	18.0	20.1	56.6	26.4
May-2025	12.1	13.6	42.2	18.9
Jun-2025	9.5	10.6	48.7	19.0
Jul-2025	7.7	12.8	42.6	20.1
Aug-2025	4.9	14.0	39.1	17.7
Sep-2025	6.7	13.7	53.2	18.6
Min	4.9	10.6	39.1	17.7
Max	18.0	20.1	56.6	26.4
Avg	10.2	14.5	47.3	20.6

Near FH-2 Building				
Month	SO2	NOx	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
Apr-2025	12.3	17.0	52.1	23.4
May-2025	8.4	9.8	34.7	17.1
Jun-2025	8.1	12.7	46.8	16.0
Jul-2025	6.5	11.2	41.2	15.8
Aug-2025	6.7	12.0	42.9	16.2
Sep-2025	7.3	15.1	50.5	19.1
Min	6.5	9.8	34.7	15.8
Max	12.3	17.0	52.1	23.4
Avg	8.5	13.1	44.4	18.4

JSPCB Norms

SO_2	NO_X	PM_{10}	$PM_{2.5}$
(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
80	80	100	60

DALMIA CEMENT BHARAT LIMITED, BOKARO

Manual Ambient air quality monitoring report from April 2025 to September 2025

Near Wagon Tripler				
Month	SO2	NOx	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
Apr-25	17.1	19.7	55.2	25.1
May-25	9.3	11.4	41.6	20.1
Jun-25	13.6	13.8	51.7	20.3
Jul-25	11.7	12.5	52.5	18.9
Aug-25	9.6	17.3	53.6	21.5
Sep-25	10.4	17.0	56.4	21.7
Min	9.3	11.4	41.6	18.9
Max	17.1	19.7	56.4	25.1
Avg	12.2	15.3	51.1	21.5

Near Fabrication Yard				
Month	SO2	NOx	PM-10	PM-2.5
	µg/m³	µg/m³	µg/m³	µg/m³
Apr-25	13.6	16.5	57.1	28.7
May-25	10.0	12.2	43.4	20.1
Jun-25	8.4	9.8	47.0	21.1
Jul-25	7.2	10.2	44.3	22.7
Aug-25	8.2	16.2	49.2	18.9
Sep-25	8.5	16.0	51.2	22.5
Min	7.2	9.8	43.4	18.9
Max	13.6	16.5	57.1	28.7
Avg	9.6	13.4	49.1	22.7

JSPCB Norms

SO_2	NOx	PM_{10}	$PM_{2.5}$
(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
80	80	100	60

Ambient air quality report from NABL/JSPCB approved lab of month of June 2025

Ambient air quality monitoring report from NABL/JSPCB approved lab of month of June 2025

Ambient air quality monitoring report from JSPCB /NABL approved lab with in the norm's month of September 2025

Ambient air quality monitoring report from JSPCB /NABL approved lab with in the norm's month of September 2025

Annrexure-8

List of air pollution control device installed in plant

Dalmia Cement (Bharat) Limited, Bokaro					
Sl. No.	Location	Equipment No.	Capacity in m^3/hr	No. of Bags	Standard
1	Cement Sillo Top	591 BF1	7500	64	30 mg/Nm³ (New CPCB norms for Stack emission)
2	Cement Sillo Top	591 BF2	7500	64	
3	Cement Sillo Top	591 BF3	7500	64	
4	C.S.Bin Dedusting	611BF1	3664	25	
5	C.S.Bin Dedusting	611BF2	3664	25	
6	C.S.Bin Dedusting	611BF3	3664	25	
7	Nuisance Dedusting	611BF4	18000	144	
8	Packing Plant	641BF1	34000	256	
9	Packing Plant	641BF2	16000	121	
10	Packing Plant	642BF1	34000	256	
11	Packing Plant	642BF2	16000	121	
12	Reclaiming Tunnel For Slag & Gypsum Conv.	K91 BF1	12500	100	
13	Clinker Silo Bottom	511BF2	9000	72	
14	Clinker Silo Bottom	511 BF1	9000	72	
15	Cement Mill Hopper	K91 BF2	12500	100	
16	Coal Crusher	L31 BF1	5000	60	
17	FBC	L32 BF1	5000	60	
18	Bag House-1	521BF7	16000	121	
19	Bag House-2	522 BF7	3664	25	
20	Bag House - 1	521 BF6	714240	5632	
21	Bag House - 2	522 BF6	714240	5632	
22	C. Mill Hopper Top	511 BF3	9000	72	
23	C. Mill Hopper Bottom	521 BF1	14880	100	
24	C. Mill Hopper Bottom	521 BF2	13680	100	
25	Cement Mill - 1	521 BF4	15540	121	
26	Reject Building	521 BF5	7500	64	
27	Cement Mill - 2	522 BF4	15540	121	
28	Reject Building	522 BF5	7500	64	
29	Transfer Point Dedusting In Hopper Building	522 BF1	14880	100	
30	Transfer Point Dedusting In Hopper Building	522 BF2	13680	100	
31	Transfer Tower-1	491 BF1	9000	72	
32	Clinker Sillo Top	491 BF2	9000	72	
33	Packing Plant	643 BF-1	40000	308	
34	Packing Plant	643 BF-2	20000	154	
35	Outside Cement Silo	643 BF-3	7500	57	

Annexure-9

Compliance of CREP Conditions

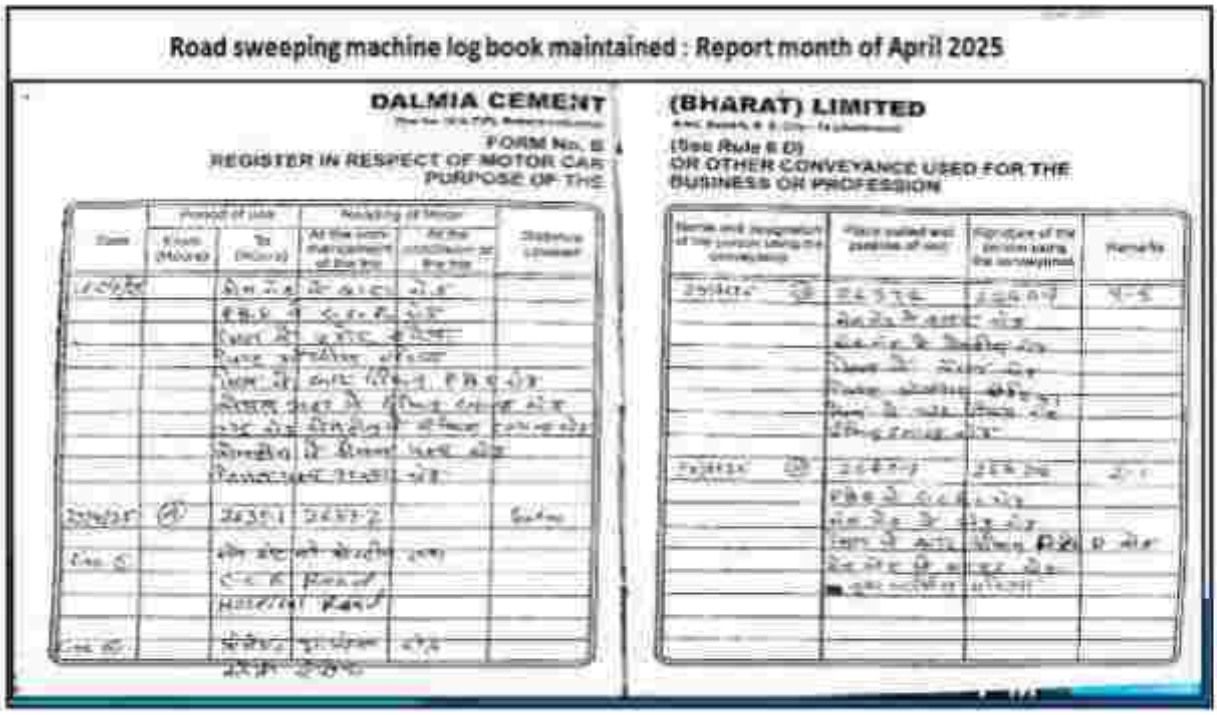
DALMIA CEMENT BHARAT LIMITED, BOKARO		
COMPLIANCE STATUS OF C.R.E.P. ACTION POINTS		
SN.	**CREP CONDITION**	**CREP COMPLIANCE STATUS**
1	Cement plant, which are not complying with notified standards shall do the following to meet the standards	Not applicable
	1- Augmentation of existing Air pollution Control Devices by July 2003.	The plant has been commissioned in the month May 2011. It's complying with notified standards of 30 mg/Nm^3 for Stack particulate emission.
	2- Replacement of existing Air Pollution Control Devices by July 2004.	
2	Cement Plant located in critically polluted or urban areas (including 5 km distance outside urban boundary) will meet 100-mg/Nm^3 limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter emissions.	The plant is located at notified industrial area Balidih Industrial Area Development Authority, Bokaro, Jharkhand. As stated above, the Air Pollution Control Devices are designed to maintain the emission of particulate matter from stack less than 30 mg/Nm^3
3	The New cement Kilns to be accorded by NOC / Environmental Clearance w.e.f. 01-04-2003 will meet the limit of 50 mg / Nm^3 for particulate matter emission.	Not Applicable
4	CPCB will evolved load based standards by December 2003.	Not Applicable
5	CPCB and NCCBM will evolved SO2 and NOx emission standards by June 2004.	Not Applicable
6	The Cement industry will control fugitive emission from all the raw materials and products storage and transfer points by December 2003. However the feasibility for the control of fugitive emission from limestone and coal storage area will be decided by the National Task Force (NTF) The NTF shall submit its recommendations within three months.	Dalmia Cement (Bharat) Limited is a cement grinding unit. Raw materials like Gypsum and Coal are stored in the covered shed. Clinker is stored in Clinker silo. Slag having moisture stored in slag yard covered tarpaulin. Cement stored in Cement Silo. Bag filters have been installed at every transfer point of raw material and product transport circuits.
7	CPCB, NCCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in cement kiln by July 2003.	Not Applicable

8	After performance evaluation of various types of continuous monitoring equipments and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/ sections for installation of continuous monitoring systems(CMS) by December 2003.	On line continuous stack monitoring station have already installed at Cement Mill Stack (ID-U00127) of our plant with direct connectivity to JSPCB server Ranchi & CPCB, Delhi.
9	Tripping in the ESP to be minimized by July 2003 as per the recommendations of NTF.	Not Applicable (We have only Bag Houses/Bag Filters).
10	Industries will submit the target date to enhance the utilization of Waste material by April, 2003.	We are utilizing Slag as a raw material in cement manufacturing which is one of the waste by-product of SAIL.
11	NCCBM will carry out a study on Hazardous Waste utilization in cement kiln by December, 2003	Not Applicable
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	DCBL is a cement grinding unit, required 120-150°C temperature only for slag drying purpose.

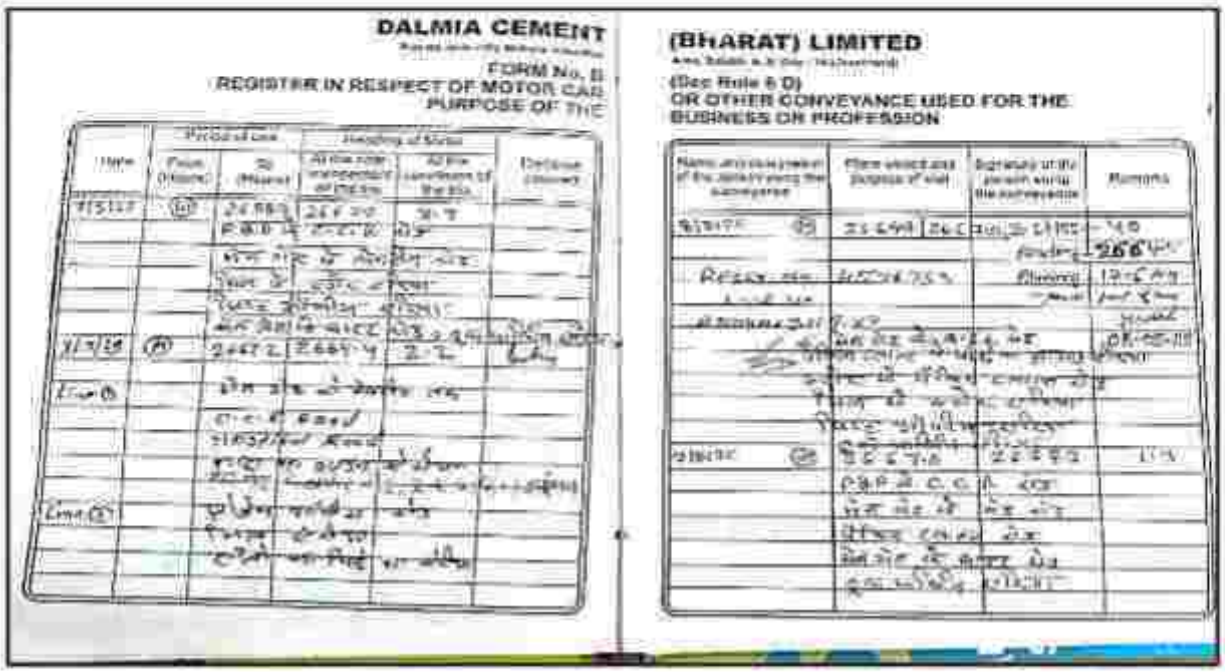
All plant internal roads are concreted and cleaned by vacuum road sweeping machine

Log book maintained of road sweeping machine

Road sweeping machine log book: Report month of April 2025

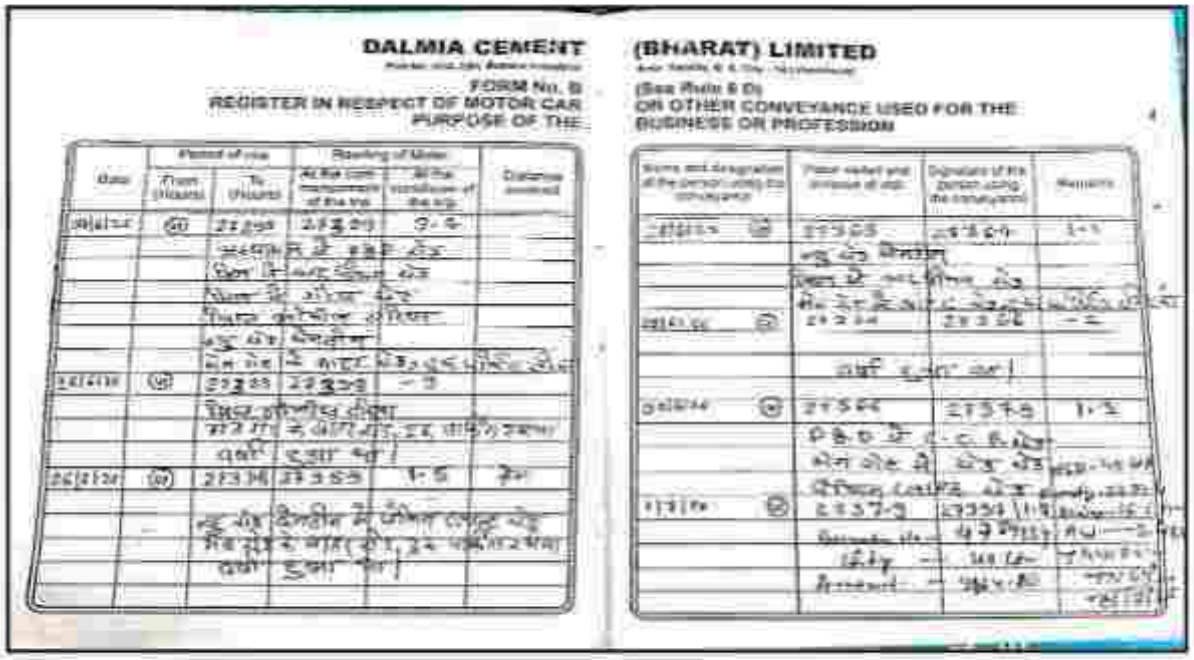


Road sweeping machine log book: Report month of May 2025



Log book of running hours of road swapping machine

Road sweeping machine log book: Report month of June 2025



DALMIA CEMENT (BHARAT) LIMITED

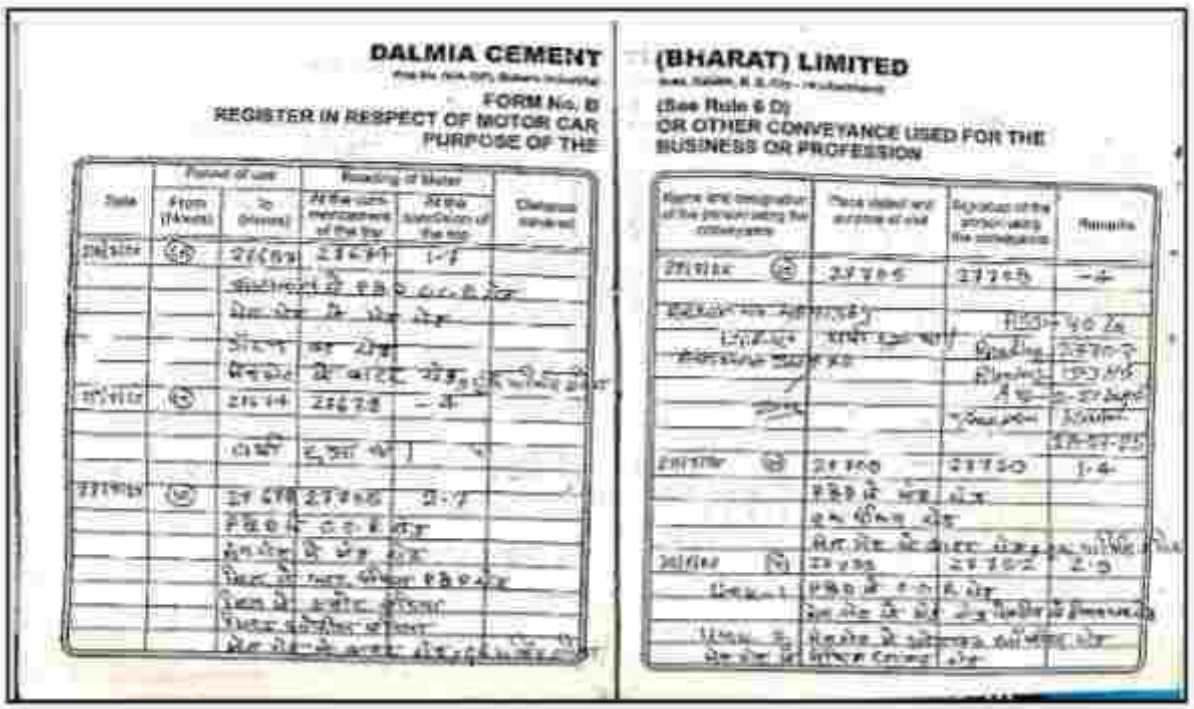
FORM No. B

REGISTER IN RESPECT OF MOTOR CAR PURPOSE OF THE

(See Rule 6 D)

OR OTHER CONVEYANCE USED FOR THE BUSINESS OR PROFESSION

Road sweeping machine log book: Report month of July 2025



DALMIA CEMENT (BHARAT) LIMITED

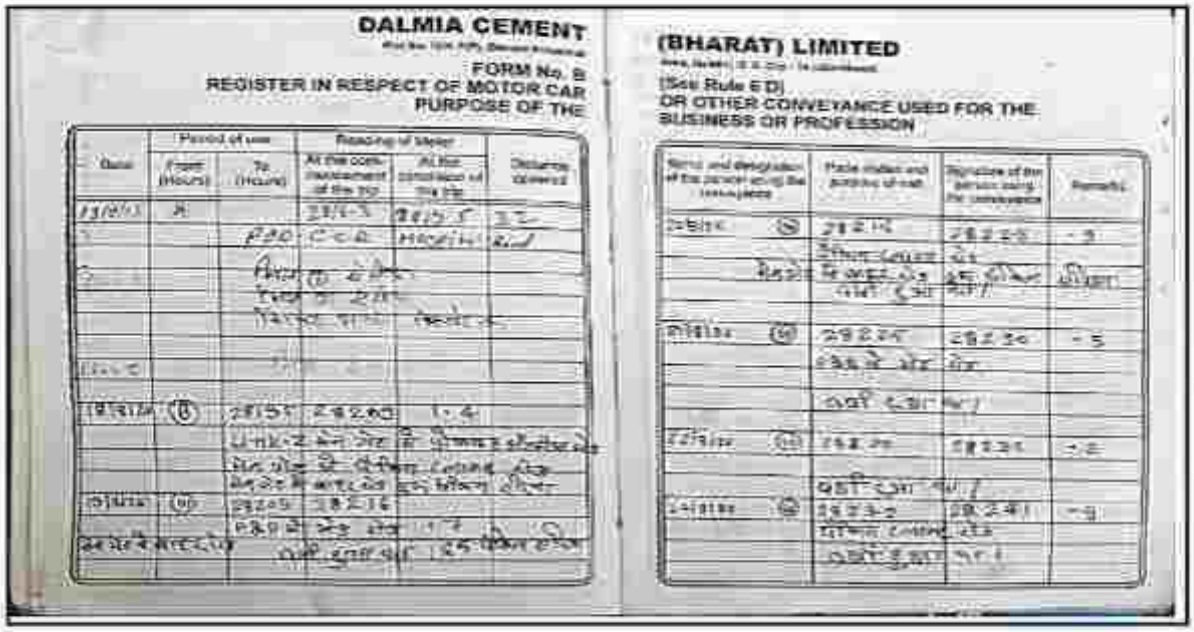
FORM No. B

REGISTER IN RESPECT OF MOTOR CAR PURPOSE OF THE

(See Rule 6 D)

OR OTHER CONVEYANCE USED FOR THE BUSINESS OR PROFESSION

Road sweeping machine log book: Report month of August 2025



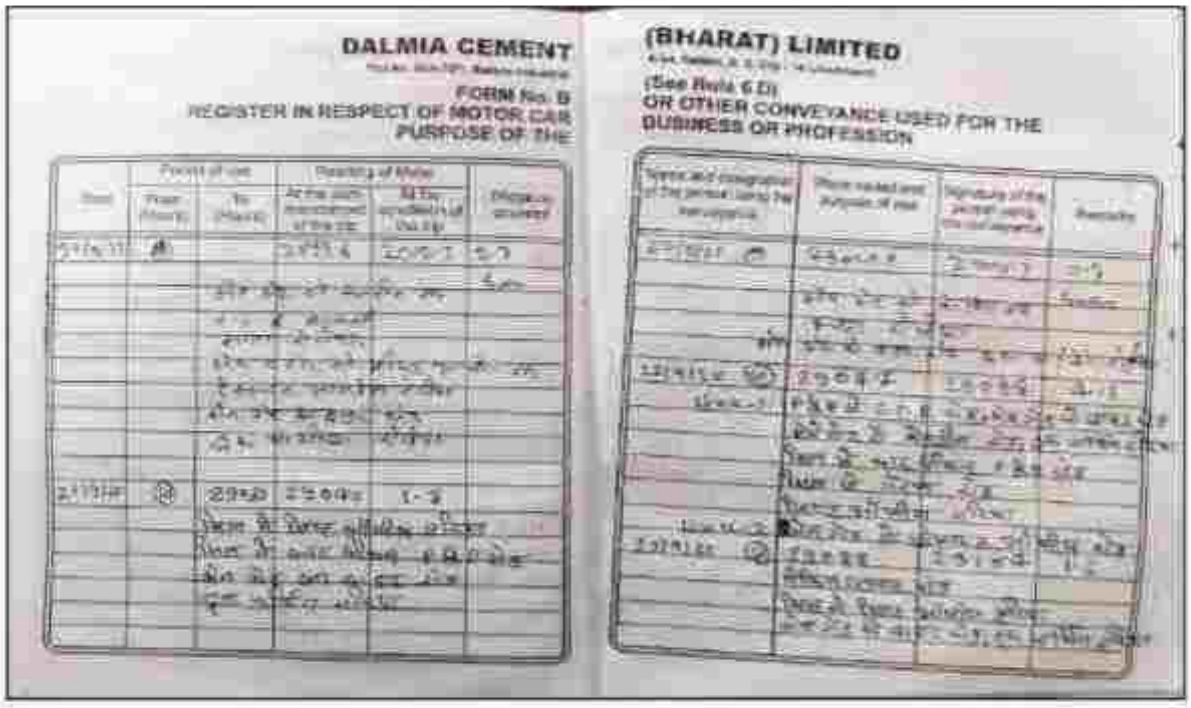
DALMIA CEMENT (BHARAT) LIMITED

FORM No. B

REGISTER IN RESPECT OF MOTOR CAR OR OTHER CONVEYANCE USED FOR THE PURPOSE OF THE BUSINESS OR PROFESSION

(See Rule 6 D)

Road sweeping machine log book: Report month of September 2025



DALMIA CEMENT (BHARAT) LIMITED

FORM No. B

REGISTER IN RESPECT OF MOTOR CAR OR OTHER CONVEYANCE USED FOR THE PURPOSE OF THE BUSINESS OR PROFESSION

(See Rule 6 D)

Annexure-11

Boundary walls constructed around the plant and inside the plant area along with thick green belt development act as wind shelter

Boundary wall constructed in around the plant

Boundary wall constructed in packing plant area act as wind shelter

Boundary wall and thick greenbelt developed in between Plant and hostels

Annexure-12

Ground water level report of surrounding village area from April 2025 to September 2025

Location	Coordinate of Site	Distance from Plant site (KM)	Depth from ground (feet)					
		Month	April-2025,	May-2025,	June-2025,	July-2025,	August-2025,	September-2025,
Pakhriatand (Near Anganwadi)	23070'5590"N 86006'2678" E	1	8'7"	9'2"	16'1"	17'9"	18'4"	19'8"
Tupkadi (Near Electric Pole)	23071'3362"N 86006'1573" E	1	8'3"	9'8"	13'3"	15'1"	16'0"	17'4"
Godawali (Near Temple)	23068'7751"N 86006'0031" E	1	2'6"	3'4"	5'2"	7'3"	8'1"	9'3"
Bhutkuru (Near primary School)	23070'4642"N 86005'1418" E	1	10'2"	11'6"	15'4"	17'7"	18'5"	19'2"

GROUND WATER QUALITY ANALYSIS REPORT MONTH OF JUNE 2025

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

GROUND WATER QUALITY ANALYSIS REPORT MONTH OF JUNE 2025

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

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TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

GROUND WATER QUALITY ANALYSIS REPORT MONTH OF SEPTEMBER 2025

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

GROUND WATER QUALITY ANALYSIS REPORT MONTH OF SEPTEMBER 2025

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

Annexure-13

STP Outlet water quality analysis report from April 2025 to September 2025

S.N	Month	PH	Suspended solids mg/lit.	COD mg/lit.	BOD mg/lit	Oil & Grease mg/lit.
1	Apr-2025	8.1	28	72	13.3	BDL
2	May-2025	8.2	32	80	15	BDL
3	Jun-2025	7.8	36	88	16	BDL
4	Jul-2025	8.1	41	96	18.5	BDL
5	Aug-2025	8.3	47	104	20	BDL
6	Sep-2025	8.5	38	68	20.5	BDL
	Min.	**7.8**	**28**	**68**	**13.3**	BDL
	Max.	**8.5**	**47**	**104**	**20.5**	BDL
	Avg.	**8.1**	**37.1**	**85**	**17.1**	BDL

STP Outlet water quality analysis report from NABL/JSPCB approved lab

Institute for Environmental Management

Test Report

Institute for Environmental Management

Test Report

Institute for Environmental Management

Test Report

Institute for Environmental Management

Test Report

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

Annexure-14

DALMIA CEMENT (BHARAT) LIMITED

Garland drainage constructed all around the plant for the collection of surface run of water. Pit constructed

Settling pit

Annexure-15

DALMIA CEMENT BHARAT LIMITED, BOKARO

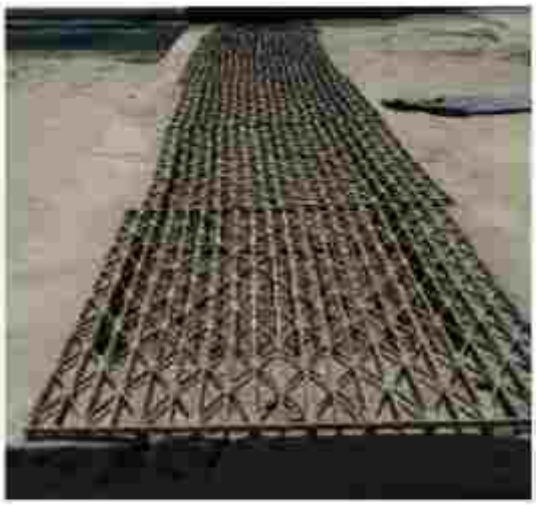
RAIN WATER HARVESTING SYSTEM

Roof top Rain Water Harvesting System have installed in CCR, Raw Material Hopper Building, Cement Mill, Bag House & Packing Plant Building in our plant area. Rain water collected from roof top through gutter and carrying by pipe lines in recharge tranches. Recharge Pits are also connected with recharge trench. In plant area depth of ground water level is varying between 3 to 5 meter and no hard rock strata are available above ground water level. Rain water easily percolated and recharges ground water level. Inspection of Rain water Harvesting System has done by Regional Officer, JSPCB, and Ranchi on 30.05.2013 and approved from Ground Water Board, Ranchi vide latter no. GWD 320/ Ranchi Dated:06.09.2013

RAINWATER HARVESTING SYSTEM DISPLAY INSIDE THE PLANT

Rain water harvesting recharge pit constructed in railway siding & Cement mill area

Rain water harvesting recharge pit near FH3 Hostel & Rain water recharge trench In-front of CCR main building



Rainwater harvesting recharge trench near bag house and near cement mill 2 area

Rainwater harvesting recharge trench near CCR building & near E type quarter

Wells renovation done by Dalmia Cement (Bharat) Limited near surrounding village area

Pond renovation near surrounding village area by DCBL Bokaro to conserve the rain water

Annerxure-16

DALMIA CEMENT BHARAT LIMITED, BOKARO

Water Flow meter installed at the main gate of the factory

Annexure-17

DALMIA CEMENT BHARAT LIMITED, BOKARO

Noise level report from April 2025 to September 2025

Near Main Gate						
	Day Time			Night Time		
	Min.	Max.	Avg.	Min.	Max.	Avg.
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Apr-2025	58.8	64.7	61.6	40.7	53.9	47.9
May-2025	59.4	65.9	62.3	45.3	57.4	52.1
Jun-2025	54.9	60.8	57.4	45.6	52.8	49.6
Jul-2025	53.4	59.7	56.5	46.9	53.6	50.2
Aug-2025	56.9	65.7	62.1	47.2	55.7	51.7
Sep-2025	57.3	66.4	61.5	46.3	54.3	50.9

FH-3 Building						
	Day Time			Night Time		
	Min.	Max.	Avg.	Min.	Max.	Avg.
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Apr-2025	42.3	45.0	43.8	30.3	43.4	37.1
May-2025	40.3	44.1	42.9	31.8	40.2	35.7
Jun-2025	35.9	45.8	41.3	36.6	38.1	37.5
Jul-2025	40.5	43.6	42.4	39.3	41.7	40.4
Aug-2025	41.2	44.5	43.6	38.4	42.5	39.9
Sep-2025	38.9	43.9	41.2	31.8	39.1	35.7

Near Fabrication Yard						
	Day Time			Night Time		
	Min	Max	Avg	Min	Max	Avg
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Apr-2025	56.8	62.9	59.3	41.3	54.2	46.7
May-2025	57.6	64.2	61.2	42.1	55.6	49.3
Jun-2025	50.8	57.7	53.7	41.8	49.5	44.8
Jul-2025	51.6	54.5	53.4	46.7	50.6	48.6
Aug-2025	53.9	58.9	55.9	47.3	49.7	49.1
Sep-2025	56.1	61.3	59.1	48.7	55.1	51.9

Near Wagon Tippler						
	Day Time			Night Time		
	Min	Max	Avg	Min	Max	Avg
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Apr-25	54.7	61.1	58.59	38.4	50.1	44.13
May-25	56.7	62.4	60.00	43.3	52.9	48.51
Jun-25	50.1	59.9	55.24	40.4	52.5	46.3
Jul-25	52.9	58.4	56.04	40.4	51.8	46.79
Aug-25	52.9	60.8	56.96	43.4	51.8	47.64
Sep-25	58.4	65.9	62.23	50.7	56.6	53.51

Noise level monitoring report month of June 2025 from NABL/JSPCB approved lab

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

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TEST REPORT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

TEST REPORT

Noise level monitoring report month of September 2025 from NABL/JSPCB approved lab

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TEST REPORT

Annexure-18

DALMIA CEMENT BHARAT LIMITED, BOKARO

Solar lights installed at different location of the plant

CCR BUILDING

ADMIN BUILDING

CIVIL OFFICE

ENVIRONMENT OFFICE

NEAR TOILET

Annexure-19

DALMIA CEMENT (BHARAT) LIMTED, BOKARO

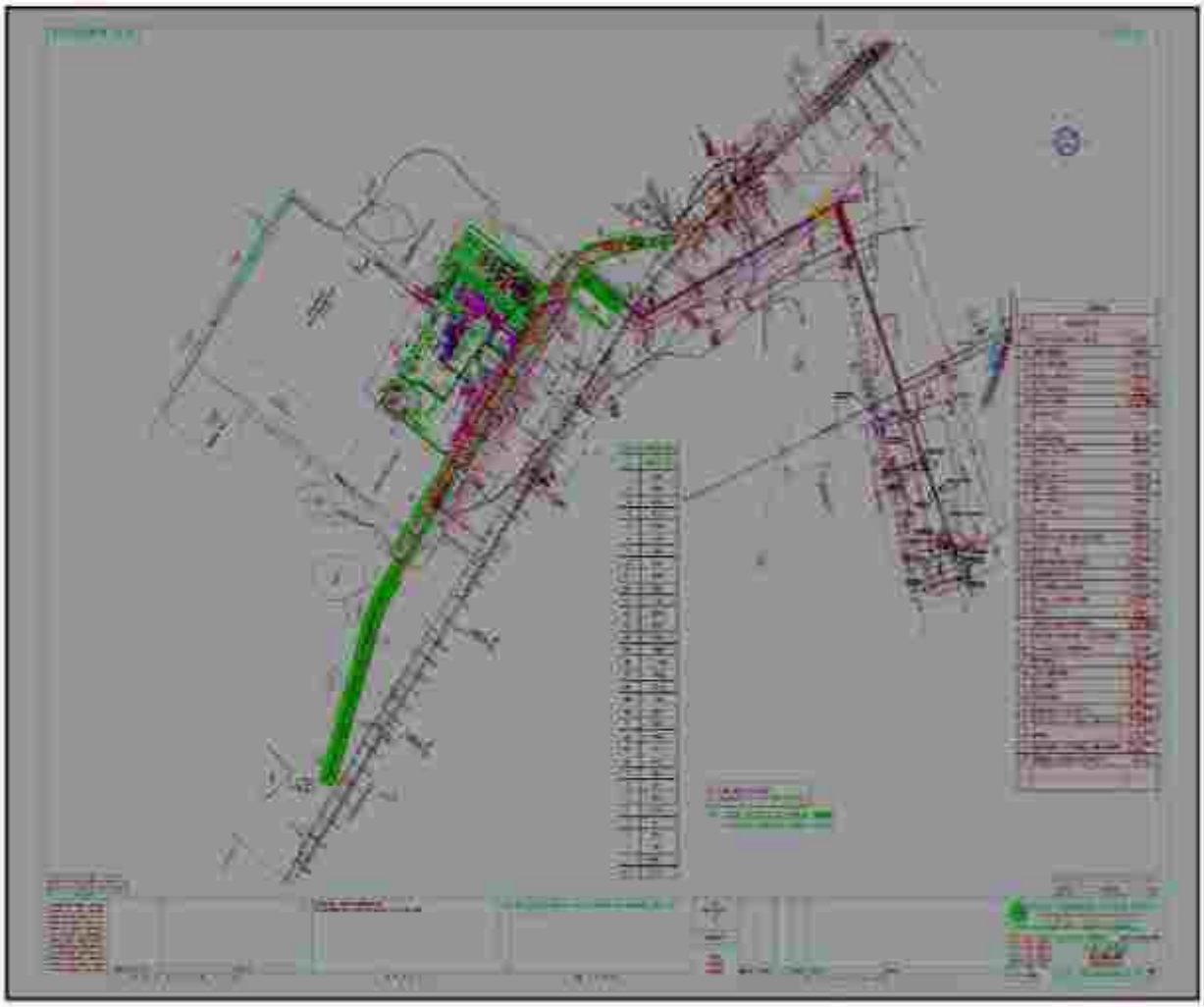
TREE PLANTATION DETAILS

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

YEAR WISE TREE PLANTATION DETAILS GIVEN AS FOLLOWS

SL. No	Year	Number of plants	Area (in Acres)
1	1st (2011-2012)	5000	5
2	2nd (2012-2013)	2030	4
3	3rd (2013-2014)	2820	3
4	4th (2014-2015)	7620	5
5	5th (2015-2016)	5100	4
6	6th (2016-2017)	1500	1
7	7th (2017-2018)	500	0.55
8	8th (2018-2019)	69	0.3
9	9th (2019-2020)	100	0.4
10	10th (2020-2021)	150	Plantation done in the place of dead tree
11	11th (2021-2022)	500	
12	12th (2022-2023)	350	
13	12th (2023-2024)	400	
14	13th (2024-2025)	225	
15	13th (2025-2026) (April-September)	150	
	Total	**26514**	**23.25**

S.N	Year	Name of Species tree planted
1	2011-2012	Gulmohar,Amaltash,Neem,Mihigini,shisham,Ashoka,Teak, Mango,Amala, Shiv Babool, Chatni
2	2012-2013	Gulmohar,Amaltash,Neem,Mihigini,shisham,Ashoka,Teak,Mango, Amala
3	2013-2014	Ashoka,Chatni,Gulmohar,Amaltash,Neem,Mihigini, Shisham
4	2014-2015	Ashoka,Chatni,Gulmohar,Amaltash,Neem,Mihigini, Shisham
5	2015-2016	Chatni,Gulmohar,Neem,Mehegani,Shisham,Pipal,Teak,
6	2016-2017	Gulmohar,Chatni,Neem,Guava,Shiv Baboo,Mango,Jamun
7	2017-2018	Chatni,Gulmoha,Amaltash,Neem,shisham,Guava,Pipal
8	2018-2019	Chatni,Gulmohar,Neem,Mihigini,Guava,Mango,Amala,Neem
9	2019-2020	Chatni,Mihigini,Botal Pam,Mango,Amala,Lemon,Jamu
10	2020-2021	Chatni,Mihigini,,Mango,Kaaju.
11	2021-2022	Chatni,Mihigini,,Mango,Kaaju,Amala, Neem, Gulmohar
12	2022-2023	Chatni,Mihigini,,Mango, Neem, Gulmohar
13	2023-2024	Chatni,Mihigini,,Mango, Neem, Gulmohar
14	2024-2025	Chatni,Gulmohar,Neem,Mihigini,Guava,Mango,Amala,Neem
15	2025-2026	Chatni, Mihigini, Neem, Gulmohar, Mango



Greenbelt pics at DCBL Bokaro

Tree plantation done railway siding

Annexure:20

DALMIA CEMENT (BHARAT) LIMITED, BOKARO

Carbon Emission Reduction program

The MoEFCC Gazette Notification dated 08th October 2025 has set carbon-emission reduction targets for 186 cement plants, including Dalmia Cement (Bharat) Limited, Bokaro. Our baseline GHG intensity for FY 2023–24 is 0.0217 tCO_2e/tonne of major equivalent product, with compliance targets of 0.0215 for FY 2025–26 and 0.0210 for FY 2026–27. We have accordingly initiated multiple process-level interventions to reduce emissions.

DCBL Bokaro is a 4.5 MTPA (Unit-1) cement grinding unit in Bokaro, Jharkhand. The plant consumes a small quantity of coal in the HAG for slag drying and electricity for plant operations and material movement.

Sources of GHG Emissions

Scope 1 (Direct Emissions):

- Coal consumption in FBC
- Company-owned vehicles and hired equipment

Scope 2 (Indirect Emissions):

Purchased grid electricity

GHG Reduction Targets (as per MoEFCC Gazette letter vide dated 08.10.2025)

Categories	UOM	Baseline (2023-24)	Target (2025-26)	Target (2026-27)
Scope-1 + 2	tCO2e/Tonne of major equivalent product	0.0217	0.0215	0.0210

Mitigation Plan for GHG Reduction

1. Process Optimization and Energy Efficiency

Key measures include reducing coal usage in the FBC, lowering clinker consumption, increasing rail transport, minimizing vehicle movement, and optimizing operating hours of major equipment.

Examples of completed improvements:

- Coal consumption reduced 46,451 MT (2023–24) to 42,505 MT (2024–25)
- Increased clinker silo storage to reduce road transport
- Optimized slag circuit, packing plant compressors, pneumatic systems, and blower usage
- Reduced mill start-stops through better silo-level management

2. Future Process Optimization Initiatives

Planned technical measures includes:

- Baghouse DP reduction in CVRM units
- Wagon loading system optimization
- Feed chute modifications to avoid stoppages
- Energy-efficient impeller replacements
- Installation of VFDs, pneumatic valves, and compressed-air optimization
- Replacement of old fans, lighting optimization, and reduction of pressure drops

3. Energy-Efficiency Improvements

We are implementing targeted energy-efficiency programs, including benchmarking studies for high-consuming equipment, fan optimization, and compressor efficiency improvements. These actions directly reduce GHG emissions by lowering overall energy demand.

ISO 50001:2018 Implementation

DCBL Bokaro has implemented ISO 50001 to systematically manage and improve energy performance across the plant.

4. Increasing Renewable Energy Sourcing

The plant is working to significantly increase the share of renewable electricity through rooftop solar, off-site RE procurement, and long-term renewable PPAs. The long-term goal is to transition toward 100% renewable electricity, eliminating grid-related emissions.

Additional initiatives include:

- Installation of solar and LED lighting in the plant and colony
- Regular tree plantation and green-belt development.

5. Regular GHG Assessment and Inventory Strengthening

We conduct annual, third-party–assured GHG inventories to identify reduction opportunities from major emission sources and continuously track performance.

6. Objectives of GHG Reduction Program

- Drive innovation through cross-functional involvement
- Improve cost efficiency through energy and resource savings
- Set ambitious reduction targets and track progress
- Conduct internal and external energy audits
- Enhance awareness among employees and stakeholders
- Regularly evaluate, prioritize, and implement GHG-reduction opportunities

Annexure-21

On Site Emergency plan approved from Chief Inspector of Factories Jharkhand

Letter No. [illegible] 932

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES, JHARKHAND, RANCHI

LABOUR BUILDING, DORANDA, RANCHI-834002

From,

Chief Inspector of Factories, Jharkhand,
Ranchi.

To,

The Occupier,
M/s Dalmia Cement (Bharat) Limited,
Plot No. IV-A-7(P), Bokaro Industrial Area,
Bokaro, Bokaro Steel City-827014

Ranchi, Dated [illegible]

Subject: Recommendation of On Site Emergency Plan M/s Dalmia Cement (Bharat) Limited, Plot No. IV-A-7(P), Bokaro Industrial Area, Bokaro, Bokaro Steel City-827014.

Reference: Your letter dated 01.03.2021.

Sir,

This has reference to the submitted on Site Emergency Plan having [illegible] pages with letter dated [illegible] 2021. The submitted emergency response plan has been vetted and examined. The above on site emergency plan is recommended subject to the following conditions:-

1. Regular Mock-drill shall be carried out in the factory at least once in every year and the report shall be made available to the area inspector of Factories and Chief Inspector of Factories.
2. The safety audit shall be conducted by experienced competent person/ Agency/Institution. The safety audit report, health & safety policy, Hazard analysis report & fire load calculation report shall be adopted.
3. The Emergency Plan will be up dated and its updated as per modification in the plan.
4. Adequate arrangement of medical relief facilities (first aid appliances etc.) shall be provided and maintained in the emergency control room.
5. Telephone numbers of key persons to be noted and displayed at the control room.
6. The independent posts, Safety for Emergency Control Room Staff to provided.

Encl: A copy of the recommended plan is enclosed herewith.

Yours faithfully,

Chief Inspector of Factories, Jharkhand,
Ranchi

Annexure-22

Dalmia Cement (Bharat) Limited, Bokaro

PPEs Issues for the period of April 2025- September-2025

Description of PPEs	PPEs Issued
Heat Resistant suit	6
safety Helmet	600
Reflective jacket	2665
Load carrying Helmet	50
Earplug	500
Safety shoes	263
Dust Mask	10000
Hand Gloves	18361
Clear Glass	1300

Annexure-23

MEDICAL HEALTH CHECKUP REPORT FY 2025-2026

DALMIA CEMENT (BHARAT) LIMITED, BOKARO						
MEDICAL HEALTH CHECKUP REPORT FY 2025-2026						
SL NO.	Name (Shri)	Designation	Deptt.	Testing Date	Due Date	Blood Group
1	Dinesh Kumar Ram S/O Late Ramashankar Ram	Welder	Mechanical	4/23/2025	4/23/2026	O+ve
2	Isamail Khan S/O Md. Asgar Khan	Welder	Mechanical	4/22/2025	4/22/2026	B+ve
3	Chaman Kumar Gope S/O Sri Laxman Gope	Junior Rigger	Mechanical	4/24/2025	4/24/2026	B+ve
4	Dhano Manjhi S/O Late Saraban Manjhi	LABOUR	INFRA & FACILITY	4/23/2025	4/23/2026	B+ve
5	Basudev Singh S/O Late Adhanu Singh	LABOUR	MECHANICAL	4/24/2025	4/24/2026	B+ve
6	Diwakar Manjhi S/O Lakhan Manjhi	LABOUR	MECHANICAL	4/23/2025	4/23/2026	A+ve
7	Shatrughan Dom S/O Late Sanatan Dom	SWEEPER	INFRA & FACILITY	4/24/2025	4/24/2026	O+ve
8	Gobind Kalindi S/O Sri Mantu Kalindi	SWEEPER	INFRA & FACILITY	4/23/2025	4/23/2026	B+ve
9	Sarju Kumar Mahali S/O Late Dhanu Mahli	MESS HELPER	INFRA & FACILITY	4/23/2025	4/23/2026	AB+ve
10	Vishal Kalindi S/O Mutuk Lal Kalindi	Sweeper	Infra & Facilities (Plant Cleaning)	4/22/2025	4/22/2026	AB+ve
11	Jawala Singh S/O Manbharan Singh	Labour	Mechanical, Wagon Tippler	4/23/2025	4/23/2026	O-ve
12	Vishal Kumar Ravidas S/O Ganesh Ravidas	Labour	Mechanical, Wagon Tippler	4/24/2025	4/24/2026	AB+ve

Annexure-24

Corporate Environment Responsibility & CSR report for the period of April 2025 to September 2025

Dalmia Cement (Bharat) Limited, Bokaro

Sl. No	Name of Activity	Place of Activity/ Village	Expense (in Rs.)
1	Tailoring Training	Parsadih and Kanari	50000.0
2	Beautician Training	Bishunpur, Gorabali South	40000.0
3	Distribution of Paddy Seeds	Gorabali South	55000.0
4	Distribution of Chairs for Old age homes	Gorabali South	51000.0
5	General Medicine and Gynecology Camp	Gorabali South and Marafari	24500.0
6	Digital Literacy through WoW Bus	Tantri, Jainamore	325000.0
7	EDP Training	Gorabali South	300000.0
8	Vaccination of Livestock's (Goat)	Gorabali North, South, Khuntri, Kanari, Marafari	12000.0
9	Plantation and Distribution of Disposable Carry Bags	Gorabali North, South, Khuntri, Kanari, Marafari	57000.0
10	Well Renovation	Kanari	387000.0
11	Independence Day	Bokaro Diksha	25000.0
12	Yoga Day	Bokaro Diksha	37000.0
13	Skill training to local youths at Bokaro Diskha	Bokaro	1200000.0
14	Dental Camp	Bokaro Diksha	15000
15	Sewa Diswas	Gorabali North, Marafari	75000.0
	Total Expense (in Rs.)		**2653500.0**

CSR details for the period of April 2025 to September 2025

Tailoring Training

Beautician Training

Distribution of Paddy Seeds

Distribution of Chairs for Old age homes

General Medicine and Gynecology Camp

Digital Literacy through WoW Bus

EDP Training

Vaccination of Livestock's (Goat)

Dental Camp

Plantation and distribution of disposable carry bags

Celebration of Yoga Day at Bokaro Diksha

Well Renovation

Skill Training to local youths and Independence Day Celebration at Bokaro Diksha

Celebration of Sewa Diswas

Annexure: 25

CORPORATE ENVIRONMENT POLICY

DALMIA BHARAT LIMITED

Regd. Office: Dalmiapuram – 621651, Dist: Tiruchirapalli, Tamil Nadu
[CIN: L40109TN2006PLC058818]
Tel. No.: (04329) 235132 **Website:** www.dalmiabl.com; **E-mail:** mrhelp1@dalmiabharat.co

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 one 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 form 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 fulfilment of listed entities and a description of the main 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 stakeholders, to the following:

- Promote values as well as demonstrate commitment to uphold co 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 unusualmary 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 via Environmental Clearance, Consent to Operate etc.

Annexure: 26

DALMIA CEMENT (BHARAT) LIMITED, BOKARO

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

Dalmia Cement (Bharat) Limited, Bokaro having Environmental Management Cell both at the Plant and Company Head Quarter level which is controlled by Sr. Executive Director /Unit Head by adequate nam of technically qualified personal apart from the operative staff of skilled, semi-skilled, unskilled and other categories for fulfil the following objectives. Environment Management Cell Responsibility as follows:

1. Preparation & submission of fresh consent application, Hazardous waste authorization application, and renewal of all consent.
2. Timely submission of Statutory reports (Monthly, half-yearly and annually to JSPCB, CPCB, MoEF.
3. Ambient air quality monitoring (PM_{10}, $PM_{2.5}$, and fugitive emission in Cement Plant.
4. Measurement of both work place & ambient noise level in various locations in plant.
5. Assessments of water consumption Industrial and Domestic.
6. Keeping Plant clean through Housekeeping initiatives.
7. Performance evaluation of air pollution control system.

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

DCBL Environment Monitoring Equipment's Details

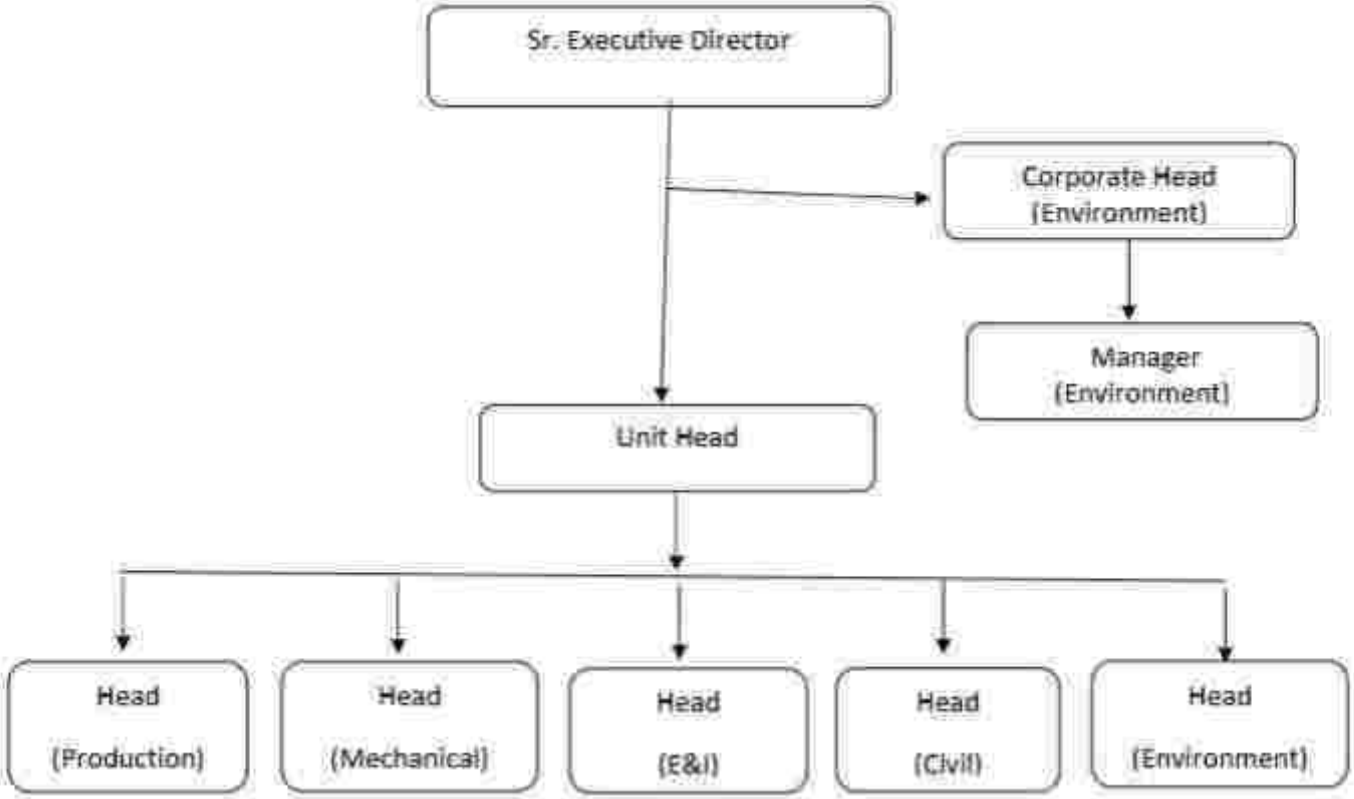
S. N.	Name of Equipment's	No. of Equipment's
A.	**Ambient Air Quality Monitoring**	
1.	Respirable Dust Sampler (RDS) PM-10	04
2.	Respirable Dust Sampler PM10-2.5	04
3.	Portable DG Sets	01
4.	Continuous Ambient Air Monitoring System (CAAQMS)	02
B.	**Stack Monitoring**	
5.	Stack Monitoring Kit	01
6	Continuous Stack Emission System (CEMS)	01
C.	**Workplace Monitoring**	
8.	Sound Level Meter	01
9.	Personal Sampler APM 800	01
D.	**Water Quality Monitoring**	
10.	Spectrophotometer-Model DR/2700 (Hach-USA)	01
11.	Turbidity Meter	01

E.	Others	
12.	Hot Air Oven	01

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

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

ENVIRONMENT MANAGMENT CELL ORGANIZATION CHART



Annexure: 27

Dalmia Cement (Bharat) Limited, Bokaro

Capital cost investment on Environment protection up to September 2025

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 2025				
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 system implemented	5200000034	56547.38	
b	Sewer 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 -S02 & NOx Analyzer	5500000068	1308596	
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	**0.61**
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 V551	Environment Lab	75000	
14	Spectrophotomer	Environment Lab	280000	
			6120847.34	
	Capital cost Investment from April 2025 to September 2025			**Nil**
	Total Capital Cost Investment on Environment measures up to September 2025			**39.08**

Recurring cost expenditure on Environment protection activities from April 2025 to September 2025		
S.N	**Description**	**Rs.Lakhs**
1	Cost on Schedule maintenance of Air Pollution control equipments Bags replacement with new bags, Bags cleaning, De dusting line checking, cleaning and repairing work. Bag filters fan maintenance etc)	65.2
2	Power consumption in Pollution control equipment (Bag House & Bag Filter) 9973612 KWH X Rs 6.04	602.4
2	Third Party Environmental Monitoring & Analysis	0.6
3	AMC of CEMS Data transmission to JSPCB& CPCB	0.17
4	AMC of CAAQMS Maintenance, Servicing and Calibration,	0.64
5	AMC of CAAQMS Data transmission to JSPCB & CPCB	0.5
6	Calibration of Pollution Monitoring Equipment's (CEMS)	1.5
7	Calibration of Pollution monitoring instrument (RDS &Stack VSSI,Noise level meter)	0.15
8	Air Pollution Monitoring Accessories' Pump maintenance kit & PM-10 & 2.5 Filter paper	1.1
10	STP Operation & Maintenance	3.8
11	Road Sweeping Machine Operation & Maintenance	4.36
12	Disposal of Bio medical waste	0.09
13	Fuel consumption and manpower cost of water sprinkling tanker	2.48
14	Green Belt Development	0.68
TOTAL RECURRING COST EXPENDITURE FROM APRIL 2025 TO SEPTEMBER 2025 in (Rs) Lakhs		**683.67**

Annexure:28

Dalmia Cement (Bharat) Limited, Bokaro

Half Yearly Environment Internal audit report for the period of April 2025-September-2025

Date: 28.08.2025 (2.30 PM -5.30 PM)

Following below members present in Environment Audit:

1. Sunil Kumar Bhusari (Unit Head)
2. Debi Prasad Das (Technical Head)
3. Arvind Kumar: (Head Mechanical)
4. LR Patel: (Head E&I)
5. Drigpal Singh: (Asst. Manager Quality)
7. Sagar Sharma: Head (Safety)
8. Sohan Lal (Head Civil)
9. Shubham (Unit Head Office)
10. Sanjeev Verma (Head Environment)

Following below point discussed and reviewed of Environment performance of Dalmia Cement (Bharat) Limited, Bokaro

Sr. No	Environment internal audit observation points	Compliance Status of observation points	Auditor Observation
1.	Review status of Statutory compliance - Consent to Operate (CTO) & Environment Clearance (EC) compliance condition	Complied. Timely submitted EC Compliance report to MOEF&CC, JSPCB /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 Ranchi & Regional Office Dhanbad.	Complied
4.	Review status of Statutory compliance Condition of OHC, CTO and Authorization of Bio medical waste compliance condition under	Complied. Timely submitted Hazardous waste return Form-IV JSPCB Ranchi & Dhanbad.	Complied

	Bio- Medical Waste Management.		
5	Checked On Line CEMS & CAAQMS data at JSPCB & CPCB Server	Complied, On line CEMS & CAAQMS Data continuous transmitted to JSPCB & CPCB server and emission data maintained within the norms.	Complied
6	Checked Calibration certificate record of Pollution monitoring equipment.	Complied. On line CEMS & CAAQMS instrument 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 and all Environment monitoring data available in Environment Department	Complied.
9	Checked Drinking water quality	Complied, drinking water quality regularly checked on monthly basis all parameter with in the norms.	Complied.
10	Checked status validity of CTO and HWA.	Complied. within time limit	Complied.
11	Checked fugitive dust emission records	Fugitive dust emission monitoring done by NABL/JSPCB approved lab record available at Environment Department and fugitive emission control measures taken.	Complied
12	Status of Green belt development	Complied Green belt maintained 33% of the plant. Also instructed to horticulture department for regular sprinkling of water on trees during dry season.	Complied
13	Rain water harvesting system	Complied Rain water harvesting system constructed and maintained also instructed to Civil department for cleaning of all drainage of RWH System	Complied
14	Status of Bag filter /Bag house	Complied All plant Bag filter and bag house is running condition and also instructed to Maintenance team for preventive maintenance with in time	Complied

		period	
15	Submission of Environment statement to JSPCB	Complied Environment Statement submitted with in time for the year 2024-2025	Complied
16	Statue of water spray tanker for control of fugitive dust emission	Complied Water spray tanker regular water spray on the outside roads and dust prone area for the control of fugitive dust emission and record maintained	Complied
17	Status of road sweeping machine	Complied Regular cleaning of the roads and concreated area by road swapping machine and record maintained. also discussed preventive maintenance of road sweeping machine to control of breakdown of road sweeping machine	Complied
18	Status of Solar light	Complied Solar light installed at different location in the plant . instruct Electrical Department for preventive maintenance of Solar light.	Complied
19	Status of Water sprinkler	Water sprinklers and water fog system working condition in plant gate main road	Complied
20	Status of Raw material covering	Raw material are covered with tarpaulin sheet for control of fugitive dust emission	Complied
21	Maintenance of plant main inertance road	Regular plant outside road maintenance done as when required	Being done
22	PPEs provide to all workers and employee's	It is observed that all workers employees are wearing PPEs in plant area. PPEs are regularly provided to all employee's .	Complied
23	Awareness done on Safety and Environment protection.	Daily discussion done on GRT (Grass Root Team) meeting to awareness for safety and Environment for all employees.	Complied
24	Few places belt conveyers open	Covering of conveyers belt work is under progress and will completed one week.	Work is under progress
25	Water leakage near FBC area	Damage pipe line change with new pipe line. Presently no water leakage	Complied.

26	Tree plantation required in plant vacant place area	Instructed to Horticulture team for native tree plantation in Monsoon season	Complied 150 no's trees planted in monsoon season
27	Ground water level and ground water quality report	Ground water level checked and Ground water quality analysis regularly done and reports are available in Environment Department of surrounding village area.	Complied
28	Medical health checkup record	Medical health checkup regularly done and Medical Health checkup report available at Plant OHC.	Complied
29	Disposal of Bio Medical Waste	Bio Medical Waste dispose off through authorized vendor from JSPCB /CPCB M/s Bio Genetic PVT Limited Dhanbad	Complied
30	Disposal of Used Oil /Waste oil	Used oil /Waste oil dispose of through authorized vendor from SPCB/CPCB M/s M/s Plus Lubricants Gul Authorization No.MPCB/RO(HQ)HSMD/Autho/19/H&OW-26	Complied
31	Checking of Vehicle PUC Certificate	Regular PUC certificate checked by Security team of PUC of all vehicle entering in plant area	Complied
32	Disposal of Kitchen Waste	Bachler hostel kitchen waste collected and dispose of by nearby villagers to fed there animals.	Complied
33	Status of Water meter	All water meter working condition	Complied

Third Party Environment Audit Report

Final Report – March, 2025

ENVIRONMENTAL COMPLIANCE AUDIT REPORT

FOR

DALMIA CEMENT (BHARAT) LIMITED
(JHARKHAND CEMENT WORKS)
AT
PLOT: IV/A -7(P), BOKARO INDUSTRIAL AREA
PO – BALIDIH, BOKARO JHARKHAND-827014

Prepared By:

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT
A-13, Saket Vihar, Harmu Housing Colony
Ranchi, Jharkhand, India

NABET certificate no.: QCI/NABET/ENV/ACO/24/3193
Valid up to: February 7, 2027

Declaration by experts contributing to the Environmental Compliance Audit report for Dalmia Cement Bharat Limited, located at Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand.

We, hereby, certify that we were the part of the **Environment Compliance Audit** team in the following capacity that developed the above **Report**, submitted to client.

Endorsed by:

Name: Dr. S. C. Jain

(Director)

Signature:

Project Coordinator:

Name: Ms. Shreya Sonal

(Assistant General Manager)

Signature:

Period of Involvement: March 2025 to till date

Contribution of Experts Team:

S. No.	Name of the experts	Involvement (Task &Period)		Signature
		Task	Period	
1.	Dr. S.C. Jain	Finalization of the report.	March 2025 to till date	
2.	Ms. Shreya Sonal	Development of Audit Findings and Compliance Report. Preparation of Compliance Summary for Audit Requirements	March 2025 to till date	
3.	Mr. Abhigyan Rohan	Evidence gathering through documents and photographs at site	March 2025 to till date	
4.	Mr. Rajiv Kumar Singh	Evidence gathering through documents and photographs at site	March 2025 to till date	

5.	Ms. Akanksha Sourabh	Coordination and Assistance in Report Preparation.	March 2025 to till date	
6.	Ms. Meher Fatmi	Coordination and Assistance in Report Preparation.	March 2025 to till date	

Declaration by the Head of the accredited consultant organization/ authorized person

I, Mrs Seema Jain, hereby, confirm that the above-mentioned experts were involved in the, Environmental compliance Audit report preparation for **Dalmia Cement Bharat Limited, located at Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand.** I also confirm that the consultant organization shall be fully accountable for any mis-leading information mentioned in this statement.

The report has been prepared on the basis of the maps, documents, details provided by the Dalmia Cement Bharat Limited, Bokaro.

Signature:

Name: Mrs Seema Jain

Designation; Managing Director

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CHAPTER 1 – INTRODUCTION

1.1 BACKGROUND

This Environmental Audit Report has been prepared to assess the environmental performance of Dalmia Cement Bharat Limited, located at Plot No. IV/A-7(P) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand. The audit aims to evaluate the project's compliance with applicable environmental regulations, standards, and best practices, as well as identify areas for improvement in environmental management.

The cement project has the potential to impact the environment in various ways. This audit was conducted to ensure that the project is being implemented in an environmentally responsible manner and to identify opportunities for minimizing its environmental footprint.

The audit was conducted on **21 March 25** by IEM Team and involved a thorough review of documents, observations, and interviews with key personnel. This report presents the findings, observations, and recommendations arising from the audit, with the objective of promoting environmental sustainability and minimizing the project's adverse environmental impacts.

1.2 SCOPE OF WORK

The scope of environmental auditing, as per Dalmia's mandate, includes:

- To review the conditions stipulated in the Environmental Clearance (EC) granted to the cement plant and its associated units, specifically focusing on measures for controlling air pollution, fugitive emissions, noise levels, and wastewater/solid waste management.
- To assess compliance with the EC conditions, Consent to Establish/Operate (CTE/CTO) conditions, and other statutory approvals relevant to cement manufacturing processes such as raw material handling, cement grinding.
- To conduct detailed site inspections and verify on-ground environmental performance, including stack emissions from grinding units; fugitive dust concentrations at transfer points. This also includes reviewing on-site documentation, monitoring reports, and the adequacy of sampling and analytical procedures.
-

- To engage in discussions with concerned plant personnel regarding statutory compliance, operational practices, environmental infrastructure bag filters, bag houses, dust extraction systems), and effectiveness of systems installed to meet EC and regulatory requirements.
- To evaluate the overall environmental performance of the cement plant in relation to EC stipulations, Consent conditions, Hazardous and Other Waste Rules, Solid Waste Management Rules, and guidelines.
- To assess compliance and adequacy of environmental management practices, including dust management in material handling areas, clinker and fly ash storage, greenbelt development, storm water management, and occupational health and safety provisions.

To provide recommendations for improving environmental performance, including upgrades in pollution control systems, dust suppression measures, energy efficiency improvements, and strengthening of environmental monitoring and management systems.

To prepare a detailed Environmental Audit Report outlining compliance against each EC and Consent condition, along with corrective actions, recommendations, and improvements required for strengthening environmental management and monitoring at the cement plant.

1.3 OBJECTIVES

The key objectives of the audit were:

1. To assess compliance:

Evaluate adherence to Environmental Clearance (EC) conditions, Consent to Operate/Establish (CTO/CTE), and other statutory requirements applicable to cement manufacturing operations.

2. To evaluate environmental performance:

Assess the effectiveness of the plant's environmental management systems—covering air emissions, fugitive dust control, solid and hazardous waste handling, noise control, and greenbelt development—and identify areas needing improvement.

3.To ensure environmental protection:

Verify that adequate mitigation measures are implemented to minimize environmental impacts such as particulate emissions, dust dispersion, noise, and impacts on local water resources, biodiversity, and the surrounding community.

4. To promote sustainable development:

Encourage sustainable cement manufacturing practices by assessing energy efficiency, alternative fuel and raw material utilization, resource conservation, and overall carbon footprint reduction strategies.

5. To identify areas for improvement:

Provide actionable recommendations to improve plant operations, environmental monitoring systems, pollution control equipment efficiency and ensure best environmental practices across all units.

6. To support informed decision-making:

Offer a comprehensive evaluation of the plant's environmental performance to help management make data-driven decisions, improve sustainability outcomes, and ensure continuous compliance and environmental stewardship.

1.4 CONDUCT OF ENVIRONMENTAL AUDIT WORK & REPORTING

The environmental audit involved a document review, site inspection, and stakeholder consultation. A draft report was prepared and submitted to Dalmia for comments, followed by incorporation of responses and preparation of this final audit report.

1.5 STRUCTURE OF THE REPORT

The final environmental audit report is structured into the following five chapters:

Chapter 1- Introduction and Background information on Dalmia Cement Bharat Limited.

Chapter 2- Audit Methodology: A detailed description of the audit process and scope of the audit.

Chapter 3- Environmental Compliance Audit: An overview of the findings of the audit, including descriptions of compliance and findings from the site inspection in compliance to the EC conditions.

Chapter 4- Audit Findings: The draft report of audit finding was submitted to Dalmia for verified and comments. The comments of the PP on IEM observation were recorded, which were discussed and finalized.

Chapter 5- Post Audit comments and clarifications.

CHAPTER 2 – AUDIT METHODOLOGY

2.1 METHODOLOGY

The methodology for the environmental audit involves a comprehensive approach to assess compliance and environmental performance. It begins with a thorough document review, examining relevant documents such as Environmental Clearance approvals, other statutory clearances, and environmental monitoring reports. A site visit is then conducted to observe environmental management practices, inspect facilities, and gather data on environmental parameters. Interviews and discussions with key personnel, including plant management and environmental staff, provide valuable insights into environmental management practices and procedures. Data collection and analysis are also crucial, involving the examination of environmental data such as air and water quality monitoring data and waste management records. The audit culminates in a comprehensive report detailing findings, recommendations, and conclusions, highlighting areas of compliance and non-compliance, and providing opportunities for environmental performance enhancement.

2.2 OPENING MEETING

The audit process commenced with an opening meeting on **21st March 2025** with the Dalmia Team which includes other concerned officials to introduce the audit scope and their responsibility in facilitating the process. The purpose, depth and the scope of the audit were outlined and the methods were explained. Further, requirement of documents to review such as various management plans, project report, and periodical reports submitted to various regulatory agencies to address specific compliance requirement particularly those relevant to address the scope of the study were discussed and deliberated.

2.2.1 CONSULTATION

Interactive meetings were conducted with the concerned officials and staff dealing with the project to understand the regulatory and statutory process followed for the plant.

2.2.2 DESK REVIEW

The available documents were exhaustively desk reviewed for generation of information and the gaps in compliance to environmental clearance conditions, relevant information generated was

used for detailed discussion with the concerned officials.

2.3 DATA COLLECTION AND VERIFICATION

The audit team reviewed the following statutory and project-related documents, as listed in **Table 2.1**, to assess environmental compliance.

This review enabled the team to evaluate the project's adherence to relevant environmental regulations and standards.

Table 2.1- Document reviewed by IEM

Sl. No	Documents	Letter no. & Dated
1	NBFC 3.70 MTPA to 4.5 MTPA	JSPCB Reference no B-1998, Dated 22.11.2021
2	Environment Clearance (EC) 3.7 MTPA	EC SEIAA/2018-2019/2018/2019-474, Dated-23.10.2019
3	Environment Clearance (EC) 3.0 MTPA	EC Fr. SEIAA/2016-2017/1969/2017/295 Dated-08-12-2018
4	Environment Clearance (EC) Cottigadhiru	SEIAA Letter no. 65 Dated 14.02.2019
5	Transfer of EC from Dalmia Cement East Limited to Dalmia Cement (Bharat) Limited 2.1 MTPA to 3.0 MTPA	SEIAA Letter no 273, Ranchi dated 17.06.2019
6	Environment Clearance 2.1 MTPA	F.No 3-110/1/823/2006-IA II (I) MoEF (IA Division) New Delhi Dated 1st January 2009
7	Environment Clearance 2.1 MTPA	F. No 3-110/1/823/2006-IA II (I) MoEF (IA Division) New Delhi Dated 13th July 2009
8	Amendment of Environment Clearance 2.1 MTPA	F.No.3-110/1/823/2006-IA II (I) MoEF (IA Division) New Delhi Dated 18 April 2012

Sl. No	Documents	Letter no. & Dated	Validity
1	Consent for Establishment for 3.7 MTPA to 4.5 MTPA	JSPCB/HO/BSK/CTE-117052/2022/96, Dated 9-05-2022	Six months from issue date
2	Consent for Establishment for 3.0 MTPA to 3.70 MTPA	JSPCB/HO/BSK/CTE-88971/2020/11, Dated 07.01.2020	Six months from issue date
3	Consent for Establishment for 2.10 MTPA to 3.0 MTPA	JSPCB/HO/BSK/CTE-22001/2018/72, Dated 13-01-2019	Six months from issue date
4	Consent for Establishment for 2.10 MTPA	1363/3 Ranchi, Dated 19.10.2009	Six months from issue date
5	Renewal of Consent to operate 3.70 to 4.50 MTPA (PSC/ PCC/PPC) under Air &Water Act	JSPCB/HO/BSK/CTO-149070/01/2021/501, Dated 15.01.2021	31.03.2027

6	Consent to operate 3.70 to 4.50 MTPA (PSC/ PCC/PPC) under Air &Water Act	JSPCB/HO/RNC/CTO-15089052/2022/837, Dated 12.06.2022	31.10.2023
7	Renewal of Consent to operate 3.70 MTPA (PSC/ PCC/PPC) under Air &Water Act	JSPCB/HO/RNC/CTO-11629180/2022/241, Dated 06.03.2022	31.03.2027
8	Consent to operate 3.0 MTPA to 3.70 MTPA (PSC/PCC/PPC) under Air &Water Act	JSPCB/HO/RNC/CTO-7420223/2020/560, Dated 04.03.2020	31.03.2022
9	Consent to operate 2.10 MTPA to 3.0 MTPA (PSC/ PCC) under Air &Water Act	JSPCB/HO/RNC/CTO-6316472/2019/2307, Dated 14.11.2019	31.03.2022
10	Consent to operate 2.10 MTPA to 3.0 MTPA (PSC/ PCC) under Air &Water Act	JSPCB/HO/RNC/CTO-4441970/2019/400, Dated 25.02.2019	31.03.2022
11	First CTO (Consent to Operate) 2.10 MTPA	JSPCB Memo no 1295 Dated- 18.05.2011	17.05.2013
12	Authorization of Hazardous Waste	JSPCB/HO/RNC/HWM-9875664/2021/262,Dated 09.04.2021	31.12.2026
13	CTO of OBC under Air & Water Act	JSPCB/HO/RNC/CTO-12774305/2022/636,Dated 20-05-2022	30.08.2027
14	Authorization of Bio-Medical Waste	JSPCB/HO/RNC/BMW-15141326/2023/10 11/05/2023	25.03.2027

2.4 SITE INSPECTIONS

The areas that were inspected during the comprehensive site visit to Dalmia site on 20' March 2025 are mentioned below. The inspection aimed to evaluate environmental management practices, identify potential risks, and ensure compliance with regulatory requirements.

- Raw material handling & storage
- Cement grinding mill (VRM)
- Fly ash / Slag handling & storage
- Coal
- Cement storage silos
- Packing plant & dispatch area (Truck/Bag/Bulk Loading)
- Central Control Room (CCR)

- Water management systems (process water, dust suppression, domestic water)
- Sewage Treatment Plant (STP)
- Garland drains & storm water management system
- Solid waste management (dust, process rejects, sludge)
- Hazardous waste management (used oil, grease, contaminated materials)
- Greenbelt development & plantation
- Ambient air quality & noise monitoring stations
- Occupational Health Centre (OHC)
- Employee protection & safety systems (PPE, safety signage, emergency response)
- Energy management systems (VFDs, energy meters)
- Renewable energy integration (Solar rooftop, LED lighting)
- Corporate Social Responsibility (CSR) activities
- Environmental laboratory / monitoring center

2.5 CONSULTATIONS WITH PROJECT OFFICIALS

The audit team conducted comprehensive consultations with project officials, including:

- **Plant Manager:** Discussing overall plant operations and process efficiency
- **Environmental Officer:** Reviewing statutory compliance, monitoring data, and environmental management systems
- **Safety Officer:** Understanding safety practices, PPE implementation, and emergency preparedness
- **CSR Coordinator:** Evaluating corporate social responsibility activities
- **Operational Staff:** Gathering insights on daily operations and practical implementation of environmental measures

The purpose of these consultations was to evaluate the implementation of environmental management initiatives, identify operational challenges, and understand future planning related to:

- **Air Pollution Control Systems:** Performance of bag filters and bag house, and stack emission compliance
- **Greenbelt Development:** Progress, maintenance, and future plantation targets

- **Energy Efficiency:** Plans for energy conservation
- **Raw Materials :** Current usage and future enhancement strategies
- **Water Management Systems:** Reuse, recycling, and reduction initiatives in process and domestic water consumption
- **Environmental Laboratory Strengthening:** Enhancing in-house environmental monitoring capabilities
- **Zero Liquid Discharge:** Plant strictly follows Zero Liquid Discharge (ZLD)

2.6 MONITORING & VERIFICATION

Cross-verification of compliance status was done using:

- **NABL-Accredited Laboratory Data:** Ensuring accuracy and reliability of monitoring data
- **Internal Records:** Reviewing air, water, and noise quality monitoring records
- **CSR Activity Reports and Fund Utilization Statements:** Evaluating CSR initiatives and fund utilization

2.7 REVIEW OF STATUTORY COMPLIANCE

The audit team evaluated compliance with relevant statutes and regulations, including:

- **Environmental Acts:**

  - Air (Prevention & Control of Pollution) Act, 1981

  - Water (Prevention & Control of Pollution) Act, 1974

  - Environment (Protection) Act, 1986

  - Forest (Conservation) Act, 1980

- **Environmental Standards:**

  - Air Quality Standards (GSR-742(E), NAAQS)

  - Noise Quality Standards (GSR-742(E))

  - Water Quality Standards (GSR-801(E), IS10500:2012, IS2296:1982)

The team cross-checked statutory consents and approvals with field-level implementation and operational records to ensure compliance.

2.8 WORKING GROUP MEETING & REPORTING

After the completion of interview, document verification and site visit, the observation and suggestions by the audit team were compiled into a consent checklist and audit notes were prepared. This report has been prepared highlighting areas where action or improvement is required keeping in view the scope of the study.

CHAPTER 3 – COMPLIANCE STATUS

The Environmental Audit was carried out in accordance with the conditions stipulated in the Environmental Clearance (EC), Consent to Establish (CTE), Consent to Operate (CTO), Forest Clearance (FC), Environmental Management Plan (EMP), and other applicable statutory approvals. The audit team developed and implemented systematic procedures to obtain sufficient, relevant, and reliable evidence for assessing the degree of compliance. The appropriateness of each activity was evaluated based on the quality of evidence—its relevance, validity, and reliability—which served as the basis for professional judgement in determining the nature, timing, and extent of the audit procedures.

The audit for Dalmia Cement Bharat Limited, Bokaro, was conducted through a comprehensive review of documents, site inspection, stakeholder interaction, and verification of records to establish evidence of compliance.

3.1 DEFINITIONS OF TERMINOLOGY USED FOR ASSESSMENT OF COMPLIANCE STATUS

For assessment of compliance status against each stipulated environmental clearance and statutory condition, the terminology described in **Table 3.1** has been adopted.

Table 3.1: Expression of compliance with conditions of approval

Status	Description
Complied	Where the environmental condition is implemented in accordance with the stipulated conditions.
Being Complied	The condition is dynamic, where continuous compliance is ensured with passage of time.
Will be Complied / Agreed	Requirement of compliance is at a later date and will be complied at appropriate time.
Partially Complied	Compliance of condition is not fully met and is inadequate.
Not Complied	Non-conformance / lack of implementation of needed action.
Not Applicable / Review Required	Condition is not applicable for the project. Requires review and initiative by project proponent (PP) to bring it to the notice of MoEF&CC for needful action.

3.2 COMPLIANCE STATUS OF DALMIA CEMENT BHARAT LIMITED

Based on the audit, the compliance status of major EC conditions is presented in **Table 3.2.**

Table 3.2 – Point wise compliance status of Environmental Clearance conditions and Audit Observations /Recommendations by EMC

EC Conditions - EC Letter No.-J.C-SEIAA / 2018-19 / 2120-2028/ 474, Ranchi Dated: 22.09.2018			
Point No.	**Specific Conditions of EC**	**Compliance Status**	**Observation**
I. Specific Condition			
(i)	This Environmental Clearance is valid subject to the following conditions below — That the project has a. Obtained all legal rights to operate at concerned place. b. Complied with all various concerned laws of the land and Complied with the decisions of SEIAA on the case of Environmental Clearance of this	**Complied**	**Complied with:** a. Obtained all necessary consent clearance from concern authority to operate the cement grinding unit. b. Complied all legal law of land with respect to our unit. c. Complied with
II. Statutory Compliance			
1	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.	**Not Applicable**	The unit is located in notified industrial area at HADA Bokaro, Jharkhand with due allotment through Govt. of Jharkhand.
2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	**Not Applicable**	There is no wild life sanctuary within 10 km radius of our unit.

	applicable.		
3	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report, in case of the presence of wildlife species in the study area.	**Not Applicable**	The unit is located in notified industrial area at HADA, Bokaro. There is no record of wildlife species within 10 km radius of our unit. Therefore, there is no need for site specific conservation plan/ wild life management plan.
4	The project proponent shall obtain Consent to Establish / Operate under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and the Water (Prevention & Control of Pollution) Act, 1977 from the concerned State Pollution Control Board/ Committee.	**Complied**	Our Unit has obtained CTE from HPCB Ranchi vide letter no. [illegible] CTE obtained and renewed vide letter no. [illegible] CTO [illegible] dated 11.09.2023 for the plant registered from S.M.E.A. to [illegible] from HPCB Ranchi and CTO valid up to 31.08.2027 attached in CTE **Annexure-1 & CTO Annexure-2**
5	The project proponent shall obtain the necessary permission from the Central/ State Water Authority as may be applicable from the competent authority concerned in case of draw of surface water required for the project.	**Complied**	The permission for water connection has been obtained from HADA Bokaro vide agreement dated 17.05.2013. The same agreement copy is attached herewith as per **Annexure-3**
6	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	**Complied**	DCM, Bokaro has obtained Authorization of Hazardous waste from HPCB, Ranchi vide letter no. [illegible] dated 09.10.2023, which is valid up to 31.12.2026. copy of the same attached as per **Annexure-4**
7	No mining activity shall be undertaken in the forest land or deemed forest without obtaining prior forestry clearance.	**Not Applicable**	Not Applicable to our unit.

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 the project.	Agreeable	Agreeable
9	Environmental Clearance is subject to obtained prior clearance from forestry and wildlife aspects including clearance from shifting/regularization of NBWL as may be applicable in this process (in case any forest/wildlife is found in the project area or if the area involves forest land or wildlife habitat in any form or diplomatic zone/eco zone and located within 10 km of protected area.	Not Applicable	The unit is located in notified industrial area at RIADA, Rohtas, Jharkhand with due allocation through Govt of Jharkhand.
10	The project proponent may apply simultaneously the forest and WWL clearance in order to complete the formalities without undue delay, which will process on their respective merits, as rules will not in no sense to close rules of clearance are obtained.	Not Applicable	The unit is located in notified industrial area at RIADA, Rohtas, Jharkhand with due allocation through Govt of Jharkhand.
III. Air quality monitoring and preservation			
1	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emissions with respect to standards prescribed in Environmental (Protection) Rules 1986 vide G.S.R. no 812 (E) dated 25 August 2014 (Coastal and other power generation dated 9th May 2016 (Cement) and connected to SPCB and CPCB online server and calibrate these systems from time from time in accordance to equipment supplier specifications through labs recognized under Environment	Completed	Unit has already installed on line continuous emission monitoring system in cement process stack and connected to SPCB & 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. Ambient emission is being regularly monitored in the plant premises and data is being regularly uploaded to JSPCB & CPCB. On line CEMS and Manual stack emission monitoring data attached as per **Annexure-5**

	(Protection) Act, 1986 or NAAQ standard laboratories. Monitor fugitive emissions in the plant premises.		
2	The project proponent shall institute fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Completed	We are regularly monitoring fugitive dust emission in our plant by in house and JSPCB & NABL approved laboratory. Copy of fugitive emission monitoring reports is attached as per **Annexure-6**
3	The project proponent shall install online ambient air quality monitoring for measurement, protection relevant to the parameters relevant to PM 10 and PM 2.5 in relevance to PM emissions, and SO2 and NOx in relevance to SO2 and NOx operational within and outside the plant, one at least at first location close within and three outside the plant one at an angle of 120° below circular upwind and prevailing downwind zone in case both wind above Normal. Lease plant Conference	Completed	We have installed 2 Nos Online Continuous AAQM monitoring station in up wind and downwind directions with parameters of PM-10, PM-2.5, SO2 & NOx, at the boundary location of the unit. CAAQM monitoring instrument is transmitting data to JSPCB, CPCB online through wireless network. The same data is also displayed at the Industry gate pole. Unit have also installed manual AAQM monitoring station at 120 degree distance of a plant boundary location. AAQM reports are being regularly submitted to JSPCB Ranchi and Regional office at Dhanbad on quarterly basis. Photo of CAAQM is attached as **Annexure-7**
4	The project proponent shall submit detailed summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and ambient monitoring of air quality/fugitive emission to Regional office of MoEF&CC, Zonal office of CPCB and Regional of SPCB along with six monthly monitoring report.	Completed	The summary consolidated monthly report is attached herewith as **Annexure-8**.
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.	Completed	We have installed 2 nos Bag house at VRM mills for the control of air pollution. The bag house stack emission monitored below 50 mg/Nm3. Apart from this 10 nos of emission bag filter installed in all critical transfer points to control the fugitive dust emission. List of APC system installed as given attached as

			per **Annexure-8.** All belt conveyors are fully covered for the control of fugitive dust emission. Raw materials and products are stored in covered sheds and silos. Regular cleaning of roads by 2 nos. road sweeping machine. Good housekeeping is being maintained at all over the plant.
6	The project proponent shall provide leakage detection and monitoring bag cleaning facilities for bag maintenance of bags	**Complied**	Regular maintenance, cleaning 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. CREP compliance report attached as per **Annexure-9**
8	Sufficient number of mobile or stationary vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly	**Complied**	Regular road sweeping and floor cleaning is being done by 2 nos of vacuum sweeping machine. In the vicinity of fugitive dust emission, Good housekeeping is being maintained in all around plant premises. Also fugitive dust emission control system with cleaning of roads/floors and by hose of road vacuum machine attached as per **Annexure-10**
9	Ensure covered transportation and unloading of raw material to prevent spillage and dust generation. Use closed trucks for carrying fly ash	**Complied**	All raw materials are being transported in covered/ tarp covered. Raw material & products are being transported in covered trucks/tarpaulin trucks. Fugitive dust in the vicinity of fugitive spillage as well as control of fugitive dust emission
10	Provide adequate dust extraction/dust suppression in the raw material handling plant	**Complied**	We have constructed plant boundary wall around the plant along with tree plantation belt, which act as wind shelter to wind blown dust to contaminate. We have boundary wall around limestone plant and hence which act as wind shelter. We have also constructed wall around packing unit and raw material yard 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 coming in plant in 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 belt/railways as a mode of transport	**Complied**	All raw materials and products are being transported in covered trucks/ tarpaulin/ covered conveyor belt/railways to reduce the fugitive dust emission. Regular water sprinkling and road sweeping is being done on the roads through water spray system to control of fugitive dust emission.
13	Ventilation system shall be designed to adapt to changes in motor homes and parking plant size.	**Complied**	Air ventilation system automatical drop for adjustable on changes in motor homes and parking plant size.
IV. Water quality monitoring and preservation			
1.	The project proponent shall install effluent treatment system with capacity to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No 422 as amended from time to time and connected to CPCB and CWC water servers and address this system from time to time according to consent/ consent specification through site navigated under Environment (Protection) Act 1986 or NABL accredited laboratories, cross check have small plants, Mineral, Large plants, Continuously	**Complied**	Our site is standalone cement grinding unit, and has no process water for process. The water is only used for equipment cooling in closed loop. Cooling water is only chilled. Therefore, there is no effluent generated from 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 number of piezometers/sampling wells in the plant and adjacent areas through site navigated under Environment (Protection) Act 1986 and NABL accredited laboratories.	**Not Applicable**	No ground water withdrawal from our plant. The permission for water extraction has been obtained from SGWA. There will not be any effluent generation from the plant. Domestic waste water treated in STP, treated water is being used within plant for greenbelt development and dust suppression. However, we are regularly monitoring ground water quality and depth level in surrounding village wells. Ground water quality & water depth level reports of surrounding village is attached as per **Annexure-11**

3.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of treated effluent being used including 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.	**Complied**	There is no effluent generation from our unit as it does not require water for manufacture, the unit has STP 500 KLD for the treatment of domestic waste water. STP treated water quality analysis report attached as per **Annexure 12**. STP treated water is being used to provide development and dust suppression. Treated water monitoring reports are being regularly submitted to the CPCB regional office, Zonal office of CPCB and regional office of SPCB as a part of EC compliance report. Treated water quality analysis report attached as per **Annexure-12**.
4.	Adhere to "Zero Liquid Discharge"	**Complied**	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**	500 KLD STP is in operation for the treatment of domestic waste water. Treated sewage quality meet the prescribed standard norms. Treated water quality analysis report attached as per **Annexure-12**.
6.	Garbage bins and collection pits shall be provided for each work site to assist in overall in the event of heavy rain and to check the water pollution due to urban run off.	**Complied**	Garbage bins are providing at the site material yard to accumulate the all waste at a collection pit. As a minimum, we collect water from all to water tanker and use it for water sprinkling on the general roads in the plant.
7.	The project proponent shall provide rainwater harvesting to maximum possible extent.	**Complied**	Rain water harvesting system implemented as we are to recharge the ground water and also as per approved from Ground Water Board, Ranchi. Vide letter no. 320 Ranchi Dated 16.06.2015 attached as per **Annexure-13**. We have also innovation of walls and pavers near surrounding village area to recover the rain water.
8.	Water coolers shall be provided at the office as well as at premises in the cement plant.	**Complied**	Water coolers installed at office of the unit. Some flow some photographs attached as per **Annexure-14**.
9.	The project proponent shall make efforts to maximize water conservation in the cement plant complex by installation of such water purifying	**Complied**	Continuous use of water is practiced and all necessary efforts are from made to reduce water consumption in our plant.

	systems and ensure proper use of water.		
V. Noise monitoring and prevention			
1.	Noise level survey shall be carried as per the prescribed guidelines and report to this regard shall be submitted to Regional Office of the Ministry as a part of six monthly compliance report.	**Complied**	Noise level are being regularly monitored in different locations of our 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 attached as per **Annexure-15**.
2.	The ambient noise levels should conform to the standards prescribed under EPA Rules, viz. 75 dB(A) during day time and 70 dB(A) during night time.	**Being complied**	**Being complied**
VI. Energy Conservation measures			
1.	Provide solar power generation on roof tops of buildings for street lights, yards for all outdoors, etc., street lights, parking areas, project sites and maximum the same capacity.	**Complied**	90 Nos. installed solar plant light in plant colony area. Photographs of Solar light installed as per **Annexure-16**.
2.	Provide the proper equipment for LED bulbs in their offices and residential areas.	**Complied**	LED bulbs are being used in all offices and residential areas for the lighting purpose.
3.	Maximum utilization of fly ash, slag and overburden as required from as per MM Standards. Waste management.	**Complied**	Slag and fly ash are being used as raw material for cement manufacturing as per MM norms.
VII. Waste management			
1.	The waste oil, grease and other hazardous waste shall be disposed off as per the Hazardous & Other waste (Management & Trans. boundary Movement) Rules, 2016.	**Complied**	Hazardous waste Authorization certificate from JSPCB vide letter no. JSPCB/HO/2018/12/F/34-09/2018-2021/CC Dated 20.04.2021, 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**	Kitchen waste composted and used in greenbelt development
VIII. Green Belt:			
1.	Green belt shall be developed in an area equal to 33% of the plant area with a mixture of native species in accordance with CPCB guidelines. The greenbelt shall cover also cover the entire periphery of the plant.	**Complied**	We have developed greenbelt in 33% of the total land of our Unit. Tree plantation report attached as per **Annexure-17**
2.	The project proponent shall propose GHG emission inventory for the plant and shall submit the proposal for reduction of the same including carbon sequestration including plantation	**Complied**	Dalmia Cement (Bharat) Limited Belsar is a building material producing 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 GGU for moisture drying in raw material. The GHG emission inventory and action plan for the reduction of GHG emission report attached as per **Annexure-18**
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**	On site emergency preparedness plan, Hazard identification and risk assessment (HIRA) already prepared and were approved by Chief Factory Inspector of Jharkhand.
2.	The PP shall provide Personal Protective Equipment (PPE) as per the norms of factory Act.	**Complied**	All Personal protective equipment's (PPE) safety shoes, Nose mask, safety helmet, earplug, provided to all employees and external workers for their safety. Safety training is being regularly done among the employees for the protection 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	**Complied**	All necessary infrastructure facility provided to construction labour during construction phase of the project and also towards of temporary houses after completion of project

	for cooking, toilet facilities, 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.		
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 the Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable regarding Corporate Environmental Responsibility.	**Being Complied**	As per a detailed study CER intervention village are taken as follows: 1. Walls & Pond renovation done surrounding village were 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 Anganwadi surrounding village area. CER report for the period attached as per **Annexure-19**
2.	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for conducting operations in such a manner that all operations are carried out in a manner that all the environmental laws are complied with and are environmentally friendly. The company shall have defined system of reporting infringements or violations noticed of the environmental laws to Board and shareholders and/or stakeholders. The copy of	**Complied**	EMS, Indoor Air Quality Management Policy duly approved from Board of Directors, copy of Environment policy attached below as per **Annexure-20**

	the board resolution in this report shall be submitted to the SEIAA/EC as a part of six-monthly report.		
3	A separate Environmental Cell/Dept. at the project and company head quarter level, with qualified personnel shall be set up under the control of Senior Executive, who will directly be held for organization.	**Complied**	Environmental Management Cell has been established at site plant as well as Corporate headquarter for the management of environmental activities with qualified persons. Environmental management cell is headed by Executive Director (Plant Head) as per norms.
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. The time progress of implementation of action plan shall be reported to the Ministry's Regional Office along with the Six Monthly Compliance Report.	**Complied**	Action plan for EMP implementation is in place. Separate budget allocated for Environmental Protection. It is noticed that budget shall not be diverted for any other purpose. Expenditure on environmental protection is being regularly submitted to Ministry and its Regional Office as a part of EC compliance report. Expenditure on Environmental Protection is detailed as per **Annexure 23**.
5	Self-monitoring must shall be conducted annually. Every three years third party environmental audit shall be carried out.	**Complied**	Self-monitoring work is being regularly done for the continual improvement of environment quality in our plant. Self-monitoring audit report attached as per **Annexure 22**. Third party Environmental audit report submitted as separate compliance report.
6	All the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for the Mineral Industries plants shall be implemented. Miscellaneous	**Not Applicable**	Not relevant.
XI. Miscellaneous			

1	The project proponent shall widely publish the environmental concerns provided for this project along with the recommended 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.	**Complied**	We have advertised Environmental Clearance in local newspapers (Hindustan Times, Dainik, Udaan News, AJK), which are widely circulated in the region and copy of the same attached herewith as per **Annexure 24**.
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 concerned offices of the Government who in turn has to display the same for 30 days from the date of receipt.	**Complied**	We have submitted Environmental Clearance copy to local Panchayat and other Govt. bodies, district head, panch meeting copy of the same attached herewith as per **Annexure 24**.
3	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitoring data on their website and update the same on half yearly basis.	**Complied**	**Complied.**
4	The project proponent shall monitor the criteria pollutants (viz. namely PM$_{10}$, SO_2, NO_x) Ambient levels as well as stack emissions or related parameters, collected for the project and display the same at a prominent location for students to the public and put on the website of the company.	**Complied**	Online environment monitoring data is being regularly displayed at factory main gate for the notice of public.
5	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change or its concerned regional	**Complied**	**Complied.**

	Control Board(JPCB)		
9	Concealing factual data or submission of false/falsified data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and may attract action under the provisions of Environment (Protection) Act 1986.	**Will be Complied / Agreed**	Noted & agreed
10	The MoEF, Jharkhand or any other competent Authority may also modify the above conditions or stipulate any further condition in the interest of Environment Protection.	**Will be Complied / Agreed**	Noted & agreed
11	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	**Will be Complied / Agreed**	Noted & agreed
12	Concealing factual data or submission of false/falsified data may result in revocation of this environmental clearance and may attract action under the provisions of Environment (Protection) Act, 1986.	**Will be Complied / Agreed**	Noted & agreed
13	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions not satisfactory.	**Will be Complied / Agreed**	Noted & agreed

14	The Ministry reserve the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	**Will be Complied / Agreed**	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 required data / information/monitoring reports.	**Will be Complied / Agreed**	Noted & agreed
16	The above conditions will 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 Supreme Court of India, High Courts and any other Court of Law relating to the subject matter.	**Will be Complied / Agreed**	Noted & agreed
17	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act.	**Will be Complied / Agreed**	Noted & agreed
18	This environmental clearance is valid for seven years from the date of issue.	**Will be Complied / Agreed**	Noted & Agreed

CHAPTER 4 – AUDIT FINDINGS

The team collected Environmental Clearance (EC) conditions stipulated by MoEF&CC, GoI, issued vide **EC letter no. EC/ SEIAA / 2018-19 /2138/ 2019/ 474, Ranchi dated: 23.09.2019** for Dalmia Cement Bharat Limited, Bokaro (Unit 1). The detailed observations are presented in this chapter. It provides the compliance status of EC conditions and specific as well as general recommendations for improvement.

4.1 COMPLIANCE STATUS OF AUDIT

The stipulated environmental compliance conditions were audited separately for the specific and general conditions. The compliance status is summarized below.

4.1.1 COMPONENT WISE COMPLIANCE STATUS OF SPECIFIC CONDITIONS

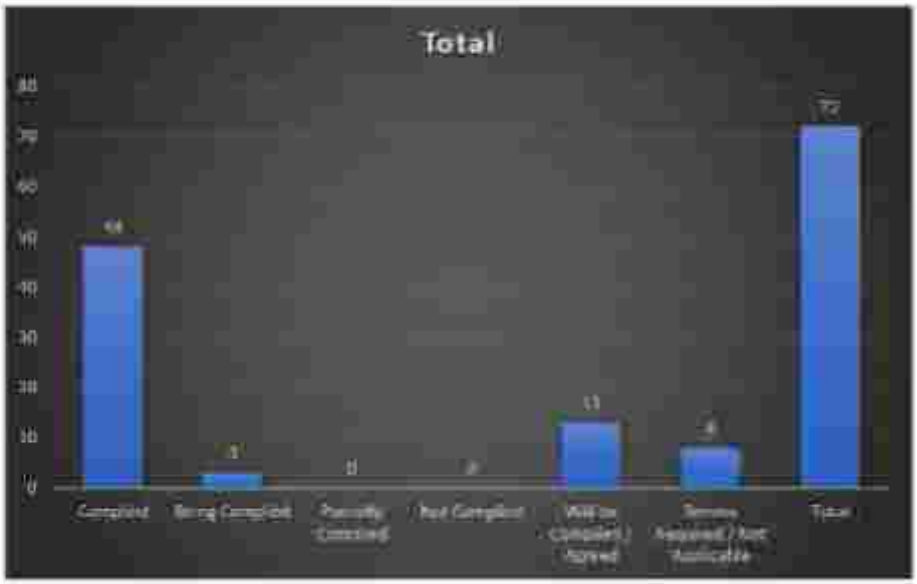
Out of the total 72 (inserted from compiled EC conditions) specific conditions, the compliance status was categorized as *Complied, Being Complied, Will be Complied/Agreed, Partially Complied, Not Complied, and Not Applicable/Review Required*.

Table 4.1: Compliance status of component wise specific conditions

Components	Complied	Being Complied	Partially Complied	Not Complied	Will be Complied / Agreed	Review Required / Not Applicable	Total
Specific Condition	1	0	0	0	0	0	1
Statutory Condition	3	0	0	0	1	6	10
Air Quality Monitoring & Preservation	13	0	0	0	0	0	13
Water Quality Monitoring & Preservation	8	0	0	0	0	1	9
Noise Monitoring And Prevention	1	1	0	0	0	0	2
Energy Conservation Measures	3	0	0	0	0	0	3
Waste Management	2	0	0	0	0	0	2
Green Belt	2	0	0	0	0	0	2
Public Hearing & Human Health Issues	4	0	0	0	0	0	4
Corporate Environment Responsibility	4	1	0	0	0	1	6

Miscellaneous	7	1	0	0	12	0	20
Total	48	3	0	0	13	8	72

Figure 4.1: Detailed compliance status of component wise specific conditions



4.2 SPECIFIC OBSERVATIONS AND RECOMMENDATIONS

1. RAW MATERIAL HANDLING & STORAGE

Observation: Clinker, gypsum, fly ash, and slag are stored in covered sheds; material transfer points are equipped with bag filters.

Recommendation: Strengthen housekeeping around unloading areas and ensure timely replacement of filter bags.

2. CEMENT GRINDING UNIT (VRM)

Observation: The VRM is fitted with high-efficiency bag filters; stack emissions monitored and found within limits.

Recommendation: Increase frequency of localized cleaning to avoid dust generation.

3. FLY ASH / SLAG HANDLING & STORAGE

Observation: Material stored in silos; pneumatic conveying minimizes dust.

Recommendation: ensure immediate cleanup

4. COAL /

Observation: Coal yard was covered properly.

Recommendation: coverage and ensure regular water sprinkling in dry months.

5. CEMENT STORAGE SILOS

Observation: Silos are equipped with pressure relief valves and bag filters working efficiently. No visible dust during silo aeration.

Recommendation: Continue preventive maintenance of bag filters to maintain efficiency.

6. PACKING PLANT & DISPATCH AREA

Observation: Packing machines operate with dust extraction; minor fugitive emissions noticed near truck loading chutes.

Recommendation: Continue preventive maintenance of bag filters and cleaning of area by vacuum sweeping machine to control of fugitive dust

7. CENTRAL CONTROL ROOM (CCR)

Observation: Online monitoring systems functional, emissions and process parameters displayed in real time.

Recommendation: Enable automated data backup and maintain monthly compliance trend reports.

8. WATER MANAGEMENT SYSTEMS

Observation: Process water is mostly reused; no discharge observed. Water meters installed.

Recommendation: Maintain water meter logs to ensure water consumption

9. SEWAGE TREATMENT PLANT (STP)

Observation: STP capacity adequate; treated water reused in horticulture and dust suppression.

Recommendation: Improve sludge drying practices and maintain regular sludge disposal records.

10. GARLAND DRAINS & STORM WATER MANAGEMENT

Observation: Drains are mostly clean; minor silt accumulation seen near the raw material yard.

Recommendation: Increase frequency of desilting before monsoon

11. SOLID WASTE MANAGEMENT

Observation: Dust collected from bag filters is fully reused. Housekeeping waste stored separately.

Recommendation: Introduce color-coded bins uniformly across plant areas.

12. HAZARDOUS WASTE MANAGEMENT

Observation: Used oil stored in designated containers inside an impervious, covered area; labels partially faded.

Recommendation: Replace labels and maintain spill-response kits at storage locations.

13. GREENBELT DEVELOPMENT

Observation: Greenbelt density satisfactory along the boundary, colony, plant area

Recommendation: Add dust-tolerant species.

14. AMBIENT AIR QUALITY & NOISE MONITORING STATIONS

Observation: Monitoring conducted as per schedule; all parameters within prescribed limits.

Recommendation: Provide acoustic enclosures/insulation for noisy equipment and implement if any place. Periodic awareness for workers.

15. OCCUPATIONAL HEALTH CENTRE (OHC)

Observation: OHC well-equipped; health records maintained. Periodic medical checkups conducted but ergonomic assessment missing.

Recommendation: Include ergonomic risk assessments and training sessions for high-risk workers.

16. EMPLOYEE PROTECTION & SAFETY MEASURES

Observation: PPE usage is generally good. No non-compliance observed in plant area.
Recommendation: Strengthen supervision and conduct refresher training on mandatory PPE use.
17. ENERGY MANAGEMENT SYSTEMS
Observation: VFDs installed at major motors; energy meters functional. Energy audit conducted.
Recommendation: Prioritize implementation of identified low-cost energy-saving measures.

18. RENEWABLE ENERGY INTEGRATION

Observation: Solar rooftop system operational; contributes part of auxiliary power.

Recommendation: Install more solar light in plant area and awareness.

19. CORPORATE SOCIAL RESPONSIBILITY (CSR)

Observation: CSR activities aligned to local needs; documentation available.

Recommendation: Develop measurable impact indicators and maintain year-wise CSR outcome reports.

4.3 GENERAL OBSERVATIONS AND RECOMMENDATIONS

1. GENERAL SITE MANAGEMENT

Observation:. Fugitive dust control measures such as water sprinkling, belt conveyors with enclosures, and bag filters are operational. However, high-dust zones like raw material unloading, VRM feed points, packing plant, and material transfer areas exhibit occasional dust accumulation due to high material movement. Housekeeping is satisfactory Recommendations:

- Enhance mechanical sweeping frequency on main internal roads and high-traffic areas.
- Strengthen dust extraction systems and rubber skirtings at high-emission points such as packing plant and fly ash unloading.
- Improve housekeeping schedules around VRM platforms and silo aeration areas.

2. ENVIRONMENTAL DOCUMENTATION & COMPLIANCE

Observation:

The unit maintains statutory documents including monitoring reports, calibration certificates, manifests, stack emissions data, and CEMS/OCEMS records. Although documentation is complete, some logbooks and monitoring sheets are still maintained manually, leading to inconsistency in data referencing. Calibration of ambient monitoring equipment done as per schedule

Recommendations:

- Introduce digital compliance dashboards for monitoring, reporting, and record-keeping.
- maintain synchronized digital logs.
- Implement six monthly internal audits for environmental documentation accuracy.

3. GREENBELT & ECOLOGICAL MANAGEMENT

Observation:

Greenbelt is developed along the plant boundary and internal roads, providing adequate dust filtration. However, density variations and lower survival rates are observed in certain peripheral patches and near the packing/dispatch area.

Recommendations:

- Increase plantation density using native, broad-leaf and shade-tolerant species suitable for dusty environments.
- Conduct annual survival-rate audits and replace gaps systematically.
- Extend greenbelt coverage around raw material storage areas to minimize fugitive dispersion.

4. WATER & STORMWATER MANAGEMENT

Observation:

The grinding unit operates on a low-water-demand process. Water reuse is practiced for dust suppression and domestic purposes. Existing stormwater drains are functional but show silt accumulation near material handling areas.

Recommendations:

- Desilt stormwater drains and sumps prior to monsoon, with periodic checks in high-silt zones.
- Develop additional rainwater recharge structures to improve groundwater percolation.
- Install drain screens or sediment traps in drain minimize silt carryover.

5. SAFETY & HEALTH MANAGEMENT

Observation:

The Occupational Health Centre (OHC) is functional and periodic health check-ups are carried out. PPE usage among plant employees is satisfactory.

Recommendations:

- Enforce stricter PPE compliance among contract and transient workforce through supervision and periodic tool-box training.
- Install or improve acoustic enclosures and noise barriers in VRM and high-noise mechanical zones.

CHAPTER – 5

POST AUDIT CLARIFICATIONS AND FINAL CONCLUSIONS

After incorporating the clarifications and supporting documents provided by the Project Proponent (DCBL) during and after the audit process, the Environmental Audit Report has been finalized and is hereby submitted for onward submission to the competent authority for consideration and clearance of Environmental Clearance (EC) conditions.

The post-audit review involved detailed evaluation of the compliance records, environmental monitoring data, on-site inspections, and clarifications received from project officials. It was observed that the DCBL has implemented a systematic and responsible approach toward environmental management and regulatory compliance at the Dalmia Cement Bharat Limited, Bokaro (Unit 1). The majority of the EC conditions have been satisfactorily complied with, and actions for the remaining long-term commitments are in progress as per stipulated timelines.

5.1 SUMMARY OF AUDIT FINDINGS AND CLARIFICATIONS

The audit established that:

- **Most environmental clearance (EC) and statutory conditions have been complied with**, as reflected by the high number of fully complied components (48 out of 72), particularly those related to air quality preservation, water management, energy conservation, waste management, greenbelt development, and public health obligations.
- **Several compliance activities are being progressively implemented**, including noise monitoring enhancements and certain Corporate Environment Responsibility (CER) commitments, which fall under the "Being Complied" category.
- **A number of commitments are categorized as "Will be Complied/Agreed"**, primarily associated with long-term or phased actions that remain under implementation and are expected to be completed within stipulated or agreed timelines.
- **No cases of partial or non-compliance were identified**, and no deviations were observed that could pose significant environmental or regulatory risks.
- **Some conditions (8 components) require review or are not applicable** due to operational or regulatory reasons, and these have been appropriately documented in the audit.

5.2 ENVIRONMENTAL PERFORMANCE OVERVIEW

The cement plant maintains a zero-liquid discharge (ZLD) status. Sewage Treatment Plant (STP), and subsequently reused for cement mill, dust suppression, cooling operations, and greenbelt development. Regular desilting of storm water drains and maintenance of peripheral pucland drains have effectively minimized off-site runoff and siltation.

Ambient air quality monitoring results indicate that PM_{10}, $PM_{2.5}$, SO_2, and NO_x values remain within the CPCB-prescribed limits across all monitoring stations. Effective dust suppression systems—including bag filters, ESPs, water sprinklers, and fugitive dust barriers—are operational and being systematically enhanced.

Noise levels during both day and night remain within acceptable limits, supported by the use of acoustic enclosures on compressors, fans, and blowers, along with regular maintenance of heavy equipment.

Clinker and raw material storage yards are largely stabilized, with adequate water spraying arrangements, and covered conveyors to minimize fugitive dust. Greenbelt development around plant boundaries, internal roads, and process units has shown substantial progress, with more than 23,000 saplings planted, including native drought-resistant species and dense plantations in high-activity zones.

5.3 CSR, CER, AND COMMUNITY ENGAGEMENT

The cement plant has implemented multiple Corporate Social Responsibility (CSR) and Corporate Environment Responsibility (CER) initiatives, including:

- Skill development and livelihood training programs for local youth,
- Installation of solar-powered streetlights in peripheral villages,
- Periodic medical camps delivering healthcare support to over 6,000 beneficiaries,
- Infrastructure development for government schools and drinking-water facilities.

The plant has operationalized a community grievance redressal system, including a designated CSR officer. Future CSR planning focuses on long-term, theme-based interventions such as education, water access, women empowerment, and renewable energy support for villages.

5.4 CORRECTIVE AND PREVENTIVE ACTION (CAPA) RECOMMENDATIONS

The following corrective and preventive actions are recommended to further enhance environmental performance:

• Accelerate the upgradation of air pollution control systems, especially for Cement mill–and packing plant, to ensure consistent compliance during peak-load operations.

• Enhance greenbelt and plantation density along the plant boundary, material handling zones, and transportation corridors using native tree species.

• Strengthen water conservation initiatives by increasing rainwater harvesting capacity and improving storm water management across the plant premises.

• Conduct periodic third-party audits of ambient air, stack emissions, and groundwater to ensure data reliability and strengthen compliance assurance.

• Continue regular health surveillance programs, workplace safety training, and PPE compliance monitoring to maintain high occupational health and safety standards.

5.5 FINAL CONCLUSION

Based on the overall assessment, site verification, and clarifications provided by plant authorities:

• The cement plant demonstrates substantial compliance with Environmental Clearance conditions and statutory environmental obligations.

• Pollution control systems, environmental safeguards, and monitoring mechanisms are adequately installed and effectively functioning.

• Ongoing efforts in greenbelt development, CSR implementation, energy conservation, and emission reduction reflect a proactive commitment to sustainable industrial operations.

• No major non-compliances or environmental violations were identified that warrant regulatory action.

With continued diligence, timely implementation of pending improvement measures, and strict adherence to the Environmental Management Plan (EMP), the cement plant is well-positioned to maintain compliance with MoEF&CC norms and national environmental standards.

Final Recommendation:

This report, after due incorporation of all clarifications and field verifications, is hereby **submitted for consideration and clearance of Environmental Clearance conditions** for the Dalmia Cement Bharat Limited, located at Plot No. IV/A-7(P) Bokaro Industrial Area, Bolaith, Bokaro Steel City (827014), Jharkhand.

State Level Environment Impact Assessment Authority, Jharkhand
Nawary Complex, Near Dhurwa Bus Stand, Dhurwa, Ranchi, Jharkhand-834 004
E-mail: [illegible]
website: www.jsieiaa.org

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

To: **Mr. Mukesh Kumar Garg,**
M/s Dalmia Cement (Bharat) Limited,
Plot No. – IV/A-7(P), Bokaro Industrial Area (BIADA)
Balidih, Bokaro Steel City,
Jharkhand – 827014.

Sub.: Environmental Clearance for the project **"Upgradation of technology at existing standalone Cement Grinding Unit of M/s Dalmia Cement (Bharat) Ltd. at Bokaro Industrial Area, Balidih, Bokaro, Jharkhand from 3.0 MTPA to 3.7 MTPA" (Proposal No. : SIA/JH/IND/105512/2017).**

Ref: Your application no. Nil dated 03.07.2019.

Sir,

It is in reference to the project **"Upgradation of technology at existing standalone Cement Grinding Unit of M/s Dalmia Cement (Bharat) Ltd. at Bokaro Industrial Area, Balidih, Bokaro, Jharkhand"**, Jharkhand submitted by you for seeking prior Environmental Clearances (EC).

The EC was issued by SEIAA on the basis of recommendation of SEAC in the favour of M/s Dalmia Cement (Bharat) Ltd vide Letter no-EC/SEIAA/2016-17/1997/2017/295 Ranchi dated-18.012.2018.

The standalone grinding unit remain engaged in converting solid waste from steel plant and power plant i.e. slag & fly ash to usable product cement. The Existing capacity is 3.0 MTPA PSC/PPC/PCC. About 60 to 65% of the raw material is solid waste of other industries located in nearby such as BF slag from Bokaro Steel Limited, fly ash from nearby power plant etc. The existing grinding unit (VRM) having older electrical motor (5500kW) and has lived it useful life and needs replacement. DCBL management has decided to replace the old motor with new energy efficient electrical motor (6500kW) available in the market. The change in electrical energy efficient motor will allow us to optimize the production of our standalone grinding units upto 3.7 MTPA from existing 3.0 MTPA without changing any structure or facilities as per the earlier EC.

The existing plant site is located at Plot No. IV/A-7 (P), Bokaro Industrial Area, P.O. Balidih, District Bokaro in Jharkhand. Its geographical co-ordinates are Latitude 23°42'1.24"N and Longitude 86° 3'46.69"E, with mean sea level (MSL) of 231.6 m (760 ft). The existing plant, occupying total area of 28.0 ha (69.19 acres). There is no change land area from earlier EC issued by SEIAA dated 18.12.2018. Total project cost for enhancement from 3.0 MTPA to 3.7 MTPA cement grinding unit is Rs. 10 Crores.

M/s Dalmia Cement (Bharat limited (DCBL), formerly known as Bokaro Jaypee Cement ltd., is operating a 3.0 MTPA standalone cement grinding unit. This grinding unit is converting waste

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material from other industries such as BF slag (from adjoining steel plant) and fly ash from power plants into useful products cement. The unit is in operation and an existing at the location of Balidih Industrial area of Bokaro (Jharkhand).

The grinding unit mainly comprise of two no of VRM Mills produce 3.0 MTPA cement annually and having matching packaging unit. The existing VRM units driven by old outdated energy consuming electrical motors (5500kW) and lived its useful life and need replacement. Therefore, DCBL management decided to seek permission from SEIAA/NEAC under Environmental Clearance(EC) under para 7(ii) of Notification S.O.535 (E) dated 22nd November 2016 as this replacement of old electrical motors with new age innovative energy efficient electrical motors(6500kW) will simultaneously help us to produce more cement and will optimize upto 3.70 MTPA through this upgradation in technology. DCBL management is also committed to reduce the existing level of air emission (key Pollutant PM) by about 30% from existing level (28mg/Nm3) to about 21-22mg/Nm3 by using new innovative solutions in bag filter technology attached with VRM Mills. Management is also committed to zero liquid discharge principle along with reduction in water consumption by about 5% of existing consumption (325 KLD) used both in domestic and industrial cooling. The present status of solid waste management practices is 100% recycling as cement dust is the product of grinding unit and hence cannot afford to wastage. Therefore this change certainly will bring net positive impact on over all surrounding and shall humbly request for according permission for replacing motors in existing VRM Mills.

The plant site is located in the industrial area of the Bokaro city under the district of Bokaro. The most important river in the area is River Damodar which is at a distance of around 5.0 in northern side with respect to the project site. Garga Dam is situated at a nearest distance of 7.0 Km towards the south from the project site. Bokaro Steel city is located about 9.0 Km distance in the south-east direction w.r.t. the project site.

Executive Summary of the Proposal

Sl. No.	Unit configuration as per EC Accorded	Proposed changes Requested	Final Status
1.	Existing available land	No change	No change
2.	Existing Plant Location	No Change	No Change
3.	Existing 2 no VRM	No change in structure	No change
	VRM: Equipped with Old electrical motors of 5500kW with existing gear box	**The old motors will be replaced by energy efficient electrical motors of 6500kW with slight setting in flexel pinion setting**	**The new motors will be new age innovative technology-based energy efficient electrical motors of 6500kW with gearbox internal setting**
4.	Existing Cement Silo for storage of cement	No change	No change
5.	Existing raw material handling facilities	No change	No change
6.	Raw material as per existing requirement	Throughput quantity shall change	Throughput quantity shall change
7.	Storage facilities for raw material and product	No change envisaged	No change Envisaged

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8.	Air Pollution Control for dust emission (28 mg/Nm3)	Air Pollution Control for dust emission (40% reduction due to refurbishing of bag filters)	There will be 30% over all reduction in air emission from current level of 28 mg/Nm3 due to increase in NO of bags and new generation bag materials
	Water Consumption at @315 KLD at present level	Water consumption shall be reduced to 5% from existing level by stoppage of leakage etc	5% reduction in water consumption expected
	Water Pollution Control in existing plant as well follow zero Liquid discharge	Water is used in close circle for indirect cooling and there is no contamination expected. Zero liquid discharge shall continue	Return water get recycled through cooling tower. Zero liquid discharge
	Solid waste management in existing plant through 100% recycle of dust captured through bag filters	The existing practice shall continue	The existing practice shall continue

PROJECT SCENARIO

Unit	Capacity (in MTPA)	Product
Existing Project :		
Cement Grinding Unit (Vertical Roller Mill)	3.0	PSC / PPC / PCC
Production Optimization due to change in energy efficient electrical motors		
Capacity optimization/increase in the existing Cement grinding unit	0.7	PSC / PPC / PCC
Total Capacity	3.7	PSC / PPC / PCC

- There shall be no change in product mix or any other physical infrastructure as was allowed by EC issued earlier Where,
- PSC - Portland Slag Cement
- PPC - Portland Pozzolana Cement
- PCC - Portland Composite Cement

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RAW MATERIAL REQUIRMENT (For 37,00,000 TPA Portland Slag Cement (PSC))

Sl. No	Raw Material	% of raw material	Raw material requirement for 3.0 MTPA	Raw material requirement TPA for 3.70 MTPA
i	Clinker	36.5	1095000.00	1350500.00
ii	Slag	60.0	1800000.00	2220000.00
iii	Gypsum	1.5	45000.00	55500.00
iv	Coal	2.2	66000.00	81400.00

RAW MATERIAL REQUIRMENT (For 37,00,000 TPA Portland Pozzolana Cement (PPC))

Sl. No	Raw Material	% of raw material	Raw material requirement TPA for 3.0 MTPA	Raw material requirement TPA for 3.70 MTPA
i	Clinker	62.5	1875000.00	2312500.00
ii	Fly Ash	35.0	1050000.00	1295000.00
iii	Gypsum	2.5	75000.00	92500.00
iv	Coal	2.0	60000.00	74000.00

RAW MATERIAL REQUIRMENT (For 37,00,000 TPA Portland Composite Cement (PCC))

Sl. No	Raw Material	% of raw material	Raw material requirement TPA for 3.0 MTPA	Raw material requirement TPA for 3.70 MTPA
i	Clinker	35.5	975000.00	1202500.0
ii	Fly Ash	25.0	750000.00	925000.0
iii	Slag	40.0	1200000.00	1480000.0
iii	Gypsum	2.5	75000.00	92500.0

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iv	Coal	2.2	66000.00	$3.00

Water Pollution Control

The plant management practices zero liquid discharge and also practice water economy in operations. The sewage sludge, which is an excellent fertilizer, is being utilized as fertilizer.

The plant management has further committed to reduce water consumption by 5% from existing level of 315 KLD.

Solid Waste Management

- The solid waste, which is generated in the form of dust from all the air pollution control equipment of cement plant will be 100% recycled in the process.
- Used oil & waste oil generating due to maintenance will be sold to authorized dealers of CPCB.

Noise Pollution Control

Noisy equipment has been placed on vibration isolators or housed in a separate enclosure or surrounded by baffles covered with noise absorbing material. As the operator is stationed in the control room, there is minimum chance of exposure to high noise levels. However, personnel working in high noise zones are provided with personal noise protection equipment (e.g. earmuffs, earplugs) and their duty hours are regulated to control noise exposure levels. We have been provided acoustic enclosure to D.G. Set.

Green Belt Development Plan

A well planned designed green belt has been developed which covers an area of more than 33% of the project site. Best management practices are being followed for maintaining this green belt. Out of the total plant area (27.8 hectares (69.19 acres), around 9.24 hectares (22.83 acres) shall be covered under green belt to maintain 33% greenbelt in the project area.

Environmental Monitoring

Routine monitoring of stack emission, ambient air quality, work zone air quality, noise level, wastewater and surface water stream are being carried out. The monitored data are being recorded and are reviewed periodically to ensure compliance of Statutory Regulations. The same practice shall continue.

Water Requirement

Daily Water Requirement :

315 cu.m/day (Total) – no change expected. Further Plant management is committed to reduce it by 5% from current level by leakage detection and recovery of water shall be pursued.

Source:

Garga Dam (Permission from the Concerned Authority is available. Agreement made with BIADA for drawl of maximum 550 Cu.m/day water.)

Power Requirement

21 MVA (Existing) no change in power requirement due to energy efficient electrical motors consume less energy for higher input material = 21 MVA (Total).

Source: Damodar Valley Corporation (DVC)

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Manpower Requirement

Existing manpower, to the tune of 824 persons including executives & non-executives are utilized during operational phase of project.

The proposal was appraised by State Level Expert Appraisal Committee (SEAC) and recommended for grant of Environmental Clearance in its meeting held on 10th, 11th & 12th July, 2019.

State Level Environment Impact Assessment Authority (SEIAA), Jharkhand in its meeting held on 19th September, 2019 discussed the project proposal along with recommendations made by SEAC and decided to grant EC to the project.

Following the decision of SEIAA, as mentioned above, Environmental Clearance is hereby issued to the **"Upgradation of technology at existing standalone Cement Grinding Unit of M/s Dalmia Cement (Bharat) Ltd. at Bokaro Industrial Area, Balidih, Bokaro, Jharkhand"** along with the following conditions as recommended by SEAC.

I. Specific Conditions :

1. This Environmental Clearance is valid subject to the following conditions below –
   That this project has-
   a. Obtained all legal rights to operate at concerned place.
   b. Complied with all existing concerned laws of the land and
   c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.

II. Statutory Compliance :

1. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
2. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
3. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (In case of the presence of schedule-I species in the study area)
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.
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.
6. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
7. **No mining/activity shall be undertaken in the forest land or deemed forest without obtaining requisite prior forestry clearance.**

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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.**

9. **Environmental clearance is subject to obtaining prior clearance from forestry and Wildlife angle including clearance from standing committee of NBWL, as may be applicable to this project (in case any forest region / 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 or located with in 10 km. of protected area).**

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 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 31 August, 2014 (Current) and subsequent amendment dated 9th May, 2016 (Current) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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.

3. The project proponent shall install system carried to Ambient Air Quality monitoring for continuous / effective parameters relevant to the main pollutants emitted (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 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).

4. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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.

6. The project proponent shall provide leakage detection and mechanical bag cleaning facilities for better maintenance of bags.

7. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.

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8. Sufficient number of mobile or stationary vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

9. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. Use closed bulkers for carrying fly ash.

10. Provide wind shelter fence and chemical spraying on the raw material stock piles; and

11. Have separate truck parking area and monitor vehicular emissions at regular intervals.

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.

13. Ventilation system shall be designed for adequate air changes as per ACGIH Documents for all tunnels, motor houses, cement bagging plants.

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. 812 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these 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).
2. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient number of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
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.
4. Adhere to 'Zero Liquid Discharge'.
5. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
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.
7. The project proponents shall practice rainwater harvesting to maximum possible extent.
8. Water meters shall be provided at the inlet to all unit processes in the cement plant.
9. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing circular use and by recycling treated water.

V. Noise monitoring and prevention :

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1. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Offices of the Ministry as a part of six-monthly compliance report.
2. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

VI. Energy Conservation measures:

1. Provide solar power generation on rooftops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
2. Provide the project proponent for LED lights in their offices and residential areas.
3. Minimize utilization of fly ash, slag and overburden to remain blend as per BIS Standards.

VII. Waste Management:

1. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & other waste (Management & Trans boundary Movement) Rules, 2016.
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.*

VIII. Green Belt:

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 now also cover the entire periphery of the plant.
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.

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.
2. The PP shall provide Personal Protection Equipment (PPE) as per the norms of factory Act.
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.
4. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

X. Corporate Environment Responsibility:

1. The project proponent shall comply with the provisions contained in the Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
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 / deviations / violation of the environmental / forest / wildlife norms / conditions. The company shall have

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defined system of reporting infringement / deviation / violation of the environmental norms / statutory 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.

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.
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 plan shall be reported to the Ministry Regional Office along with the Six Monthly Compliance Report.
5. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
6. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.

XI. 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.
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 turn has to display the same for 30 days from the date of receipt.
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.
4. The project proponent shall monitor the criteria pollutants level namely, PM_{10}, SO_2, NO_x (ambient levels) as well as stack emissions or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
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.
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.

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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.

   i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

   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.

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 (J.S.P.C.B.), Ranchi, and Central Pollution Control Board (CPCB).**

9. **Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.**

10. **The SEIAA, Jharkhand or any other competent Authority may alter/modify the above conditions or stipulate any further condition in the interest of Environment Protection.**

11. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

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.

13. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

14. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

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 required data / information / monitoring reports.

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 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, 2010.

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18. This environmental clearance is valid for seven years from the date of issue.

Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.

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झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद्

JHARKHAND STATE POLLUTION CONTROL BOARD

T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C. DHURWA, RANCHI, 834004
Phone: [illegible] Fax: [illegible] Web site: www.jspcb.org

Ref. No. B-1998 Ranchi, Dated: 22/11/2021

To

The Dy. Executive Director
M/s. DALMIA CEMENT BHARAT LIMITED
Nimari Village, Bokaro Industrial Area,
P.O. Balidih, Tehsil-Chas,
District Bokaro, Jharkhand.

Sub.: Expansion of Production Capacity of 4.5 MTPA from existing 3.7 MTPA due to change in Product Mix and Modernisation of Technology in existing Standalone Grinding Unit located at Balidih Industrial Area (BIADA), P.O. Balidih, Tehsil-Chas Bokaro Steel City (Jharkhand)

Ref.: Your application along with requisite documents with 'No Increase in Pollution Load Certificate' dated 30/08/2021

Sir,

Your attention is invited to the reference cited above, wherein you have applied for issue of 'No Increase in Pollution Load Certificate for expansion of Production Capacity to 4.5 MTPA from existing 3.7 MTPA due to change in Product Mix and Modernisation of Technology in existing Standalone Grinding Unit to manufacture cement (PSC & CC) located at Balidih Industrial Area (BIADA), P.O. Balidih, Tehsil-Chas Bokaro Steel City (Jharkhand).

Existing Product Mix (3.7 MTPA) with Raw material Requirement submitted is :-

Product Mix	Production (MT)	Clinker (MT)	Slag (MT)	Fly ash (MT)	Gypsum (MT)	Coal for Hot Air (MT)
PSC	31,37,744	10,44,795	20,08,085	-	62,753	69,028
CC	6,10,222	2,11,876	2,28,784	1,37,336	12,204	11,096
Total	**37,47,966**	**12,56,671**	**22,36,870**	**1,37,336**	**74,957**	**80,125**

Since the Product mix is changing which dominated by higher fly ash proposition upto 35% in raw material mix, which require less grinding energy, the requirement and raw material mix shall also change which is indicated below as submitted :-

Proposed Operation - 4.5 MTPA (Upgradation & Product mix Change) with Raw Material Requirement :-

Product	Production (MT)	Clinker (MT)	Slag (MT)	Fly ash (MT)	Gypsum (MT)	Coal for Hot Air (MT)
PSC	6,21,522	2,11,310	3,97,790	-	12,430	12,430
CC	39,06,172	14,52,346	14,63,549	8,77,001	78,018	62,227
Total	**45,27,694**	**16,63,656**	**18,61,306**	**8,77,001**	**90,448**	**74,657**

It is also submitted that :-

1. There will not be any additional increase in pollution load from the existing scenario and consented norms of JSPCB due to production enhancement upto 4.5 MTPA with 85% PCC and 15% PSC product mix as stated above
2. There will be no increase in water requirement as stated in your assessment
3. No additional waste water generation
4. There will not be any additional increase in any Hazardous waste generation from existing scenario due to enhanced product mix
5. Thus, 'Zero Effluent Discharge' shall be practiced at the Complex. There is no change in existing quantity of Trade effluent generation and its utilisation after proposed Modernisation.
6. The unit shall install bag filter as Air Pollution Control Measures during the modernization to control the air emission in VRM-I & VRM-II with new Specifications.

After critical assessment of the project proposal submitted by the proponent and NABET approved consultant, and a site visit by Regional Officer, Dhanbad to take stock of existing environmental control measures, the Board has come to the conclusion that there will not be any increase in pollution load due to the above said proposed change in product mix and Expansion through modernization as per Environmental Clearance already issued. The unit has submitted application for no increase in pollution load certificate alongwith required documents after considering the fact and verification report by Regional Officer, Dhanbad, Board has agreed to issue no increase in pollution load certificate subject to the following conditions :-

1. The unit shall comply with the conditions imposed in the Environmental Clearance issued by SEIAA, Jharkhand vide letter no EC/SEIAA/2018-19/2138/2019/474 dated23/09/2019
2. The unit shall comply with all existing norms of discharge and emission as well as changes if any made by Authorities like MoEF&CC, SEIAA, CPCB and JSPCB from time to time.

3. The unit shall comply with all the conditions imposed by the Board in the consent order when granted
4. The unit shall periodically analyse the discharges and emissions levels and report to JSPCB, so as to monitor the unit and confirm the real time pollution load after operation to expanded capacity
5. The unit shall not go for any expansion or installation of new machineries without prior consent of the Board
6. Ambient Air Quality and stack emission to be monitored by external agency approved by NABL & JSPCB as per CPCB Norms and the reports to be submitted to JSPCB on regular basis.
7. The unit shall furnish Environmental Management Plan and 3rd party Audit after modernization of standalone grinding unit
8. The unit shall install the emission control device in the DG sets for reduction of emission of Particulate matter
9. The unit shall ensure that there shall not be any increase in pollution load due to proposed product mix/modernization/ increase in product quantity up to 4.5 MTPA
10. The unit shall provide online monitors for effluent, ambient air quality and stack emission parameters and shall make proper connectivity to CPCB & JSPCB for continuous monitoring of water and Air Quality
11. The unit shall comply with the consent order conditions, various directions issued by JSPCB/CPCB/NGT etc., from time to time.
12. An action plan for reduction in CO2 emission shall be furnished.
13. The unit shall enhance the Green Belt development in the premises in consultation with the DFO for native species.
14. The unit shall enhanced the rain water harvesting capacity
15. The unit shall submit the adequacy and efficiency report for Air Pollution Control Equipment after implementation of product mix and modernization.
16. The occupier shall obtain CTE before expansion of the casting plant.

Based on the above decision, the unit shall apply for consent through online consent Management and Monitoring System (OCMMS) for its proposed expansion through No increase in pollution Load of unit for the production of Cement 4.5 MTPA by the unit.

Yours faithfully,

(Yatindra Kumar Das)
Member Secretary

ANNEXURE-1

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No.: JSPCB/HO/RNC/CTE-11785214/2022/96 Dated : 2022-03-06

Consent to Establish (CTE) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Reference: Application (s) No.- 11785214 / dated : 25/12/2021 of Dalmia Cement (Bharat) Limited, Venkatesan Thyagarajan for consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

2. **Documents Relied Upon:**

(a) The content of Inspection Report (IR) checklist 28.12.2021 issued vide Ref. No. 1436 dated 28.12.2021 of R O-Cum-Laboratory, J.S.P.C.Board, Dhanbad.

(b) The content of copy of Environmental Clearance granted vide letter No. EC/SEIAA/2018-19/2138/2019/474 dated 23.09.2019 for "Upgradation of technology at existing standalone cement Grinding unit of M/s Dalmia Cement (Bharat) Ltd., at Bokaro Industrial Area, Balidih, Bokaro, Jharkhand from 3.0 MTPA to 3.7 MTPA" with compliance report.

(c) The content of Copy of CTE issued vide Ref No. : JSPCB/HO/RNC/CTE-6897145/2020/11 Dated : 07.01.2021 for production of Portland Slag Cement and Composite Cement 3.0 MTPA to 3.7 MTPA.

(d) The content of copy of CTO issued vide Ref No. JSPCB/HO/RNC/CTO-7320225/2020/560 dated 04.03.2020 for the period of 31.03.2022 for production of Portland Slag Cement and Composite Cement –3.0 MTPA to 3.7 MTPA and its compliance report.

(e) The content of Copy of the No Increase In Pollution Load Certificate issued by the Board vide letter ref. no. B-1998 dated 22.11.2021.

(f) The content of Executive Summary related to No Increase in Pollution load with increase in production capacity to 4.5 MTP. Although change in Product Mix and Modernisation in Technology in Existing Standalone Grinding Unit of M/s Dalmia Cement (Bharat) Limited, at Bokaro Industrial Area(BIADA), Bokaro

(g) The content of unit has installed CAAQMS in the single stack and has assured to comply some of the conditions as mentioned in EC.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to establish the project at Mouza- Kusari, P.S.-Bokaro Steel City, District-BOKARO as follows:

Project	Site Area		Investment (Rs)/ Year	Product & Capacity	Period of CTE
	Plot Nos	Area			

In Expansion	Mauza -Kanet, Plot No. IV/A-7(P), - Industrial area, BIADA, Bokaro	289062 Sq. Mtrs or 20.24 Hectare as per CTO	55.66 Crore	Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per EC Exp.)	date of issue to six months

(A) Specific Conditions:

1. That, the occupier shall make Work area and transport roads and approach road off the main road concrete/ black top before commissioning of the project.

2. That, the occupier shall install fixed type water sprinklers to cover all dusty places in the premises to impart water spraying intermittently

3. That, the occupier shall make all roads pucca and shall maintain a good house keeping by regular cleaning and wetting of the roads and dust prone areas.

4. That, the occupier shall store all raw materials and products under shed and shall as far as practicable, do their processing and transfer under foolproof cover(s).

5. That, the occupier shall install online certified PM10 analyser with onsite display and connectivity to JSPCB server.

6. That, the occupier shall ensure that there shall be no leakage from the doors of the ovens and doors must remain sealed in order to minimize the fugitive emissions.

7. That, the occupier shall collect and treat the effluent in foolproof latest system and shall recycle treated effluent to the system for reuse and shall ensure no discharge of effluent out side the premises.

8. That, the occupier shall install air pollution control devices such as Dust Catcher, Cyclone Separator, Bag filters, Venturi Scrubber, ESP etc. in suitable combination to control the emission.

9. That, the occupier shall use fly ash mud or fly ash bricks in construction of the project.

10. That, the occupier shall implement all pollution control measures as recommended in EIA/EMP.

11. That, the occupier shall comply the recommendations of CREP.

12. That, the occupier shall comply all the conditions of Environmental Clearance issued by MOEF, Govt of India, New Delhi.

13. That, the occupier shall use all solid wastes as resource as a raw material or a product.

14. That, as a stake holder in Dhanbad Action Plan the occupier shall ensure the compliance of action to be taken to reduce the pollutants as suggested in Dhanbad Action Plan by them.

(B) General Conditions :

(1) That, the occupier shall construct pucca (i) minimum ten feet high boundary wall and (ii) approach road and internal roads and shall keep the premises neat and clean and tidy.

(2) That, the occupier shall install comprehensive enclosure (s) to cover the places of unloading of raw materials, the equipments of their processing & transferring, the places of loading of products, by products and wastes for prevention of fugitive emission and shall install such automatic inlet system(s) that so house dust/ gases collect(s) and undergo (es) cleaning and clean air goes out.

(3) That, the occupier shall install such automatic outlet system(s) that process flue gas(es) / process gas(es) and undergoes) cleaning and clean air goes) out through the chimney(s) having height(s) as per Central Pollution Control Board norm.

(4) That, the occupier shall have D G Set(s) of the standard as laid in the Environment (protection) Rules, 1986 and shall install it (them) within acoustic enclosure (s) and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.

(5) That, the occupier shall impart treatment as per Central Pollution Control Board test to 'wastes and' and shall keep process effluent in close-circuit and effluent from other sources in conformity with the standard (s).

(6) That, the occupier shall install Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge.

(7) That, the occupier shall create new water body (ies) / remove deposit(s) of existing water body(ies) and nearby stream(s) and pond(s) and shall maintain the wholesomeness of water.

(8) That, the occupier shall grow greenery in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(9) That, this CTE is valid subjected to the validity of mining Lease / Mining Plan / Ecofriendly / Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(10) That, this CTE is consent from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time being in force, rests with the industry/ unit/ occupier.

(11) That, this CTE shall not in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(12) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Water (Prevention & Control of Pollution) Cess Act, 1977, the Air (Prevention & Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1986 and Rules there under.

4. That, this CTE shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.

5. That, this CTE is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTE will be revoked if any of the information/ documents/ certificates/ undertaking given by the occupier is found false/fictitious/forged in future.

6. This order shall be valid subject to compliance of all other legal requirements applicable to the unit.

7. The State Board reserves the right to revoke, withdraw or make any reasonable variation / change / alteration in condition of this consent.

This is issued with the approval of the competent authority

Yatindra Kumar Das

Digitally signed by Yatindra Kumar Das
Date: 2022.03.06 15:24:26 +05'30'

(Yatindra Kumar Das)
Member Secretary

Memo No. : BSPCB/HO/RNC/CTE-11785214/2022/96

Dated : 2022-03-06

Copy to : Sri Venkatesan Thyagarajan, Director of M/s Dalmia Cement (Bharat) Limited, At- Plot No. IV/A-A-7(P), Bokaro Industrial Area Development Authority, Bokaro Steel City, Dist- Bokaro / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Bokaro/ Director of Mines, Government of Jharkhand, Ranchi/ Chief Inspector of Factories, Ranchi/ D.F.O., Bokaro/D.M.G., Bokaro / R.O., Dhanbad for information & ensuring compliance of the above.

Yatindra Kumar Das

Digitally signed by Yatindra Kumar Das
Date: 2022.03.06 11:23:57 +05'30'

(Yatindra Kumar Das)
Member Secretary

ANNEXURE-2

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone 0651-2400850 (Fax) 2400851/2400852/2401817/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-14970501/2023/503 Dated : 2023-03-15

Consent to operate (CTO) under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Application (s) dated 2022-12-15 of Dalmia Cement (Bharat) Limited, Occupier Name :Venkatesan Thangarajan for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981.

2. **Documents Relied Upon:**

(a) The content of Consent to Establish (CTE), Ref No.-JSPCB/HO/RNC/CTE-11785214/2022/96 Dated 06.09.2022 for Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) – From 3.7 MTPA to 4.5 MTPA (As per EC Exp.) with compliance report.

(b) The content of copy of Environmental Clearance granted vide letter No. EC/SEIAA/2018-19/2138/2018/474 dated 23.09.2019 for "Upgradation of technology at existing standalone cement (grinding unit of M/s Dalmia Cement) (Bharat) Ltd., at Bokaro Industrial Area, Balidih, Bokaro, Jharkhand from 3.0 MTPA to 3.7 MTPA" with compliance report.

(c) The content of Copy of the No Increase In Pollution Load Certificate issued by the Board vide letter ref. no. B-1998 dated 22.11.2021.

(d) The content of Executive Summary related to No Increase in Pollution load with increase in production capacity to 4.5 MTPA through change in Product Mix and Modernization in Technology in Existing Standalone Grinding Unit of M/s Dalmia Cement (Bharat) Limited, at Bokaro Industrial Area(BIADA), Bokaro.

(e) The content of Self-declaration for procurement of Raw Material from valid source.

(f) The content of Consent to Operate (CTO), vide ref. no. JSPCB/HO/RNC/CTO-13809692/2022/897, dated 12.06.2022 for the production of Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) – From 3.7 MTPA to 4.5 MTPA (As per EC Exp.) for the period upto 31.03.2023.

(g) The content of authorization under HoWM Rules' 2016 vide ref. no. JSPCB/HO/RNC/HWM-9675664/2021/26, dated 09.04.2021.

(h) The content of Inspection Report (I.R), Ref No.-1513 dated 31.12.2022 of R.O., JSPCB, Dhanbad.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mouza -Kasuti , P.S -Bokaro Steel City , District -BOKARO , as follows.

Project	Site-Area	Investment (Rs)	Product & Capacity	Period of CTO

	Plot Nos.	Area			Date of issue To
In Expansion	At- Industrial area, BIADA, Bokaro, Plot No. IV/A-7(P)	280002 Sq. Mtrs or 28.24 Hactare	55.66 Crore	Portland Slag Cement, Portland Composite Cement & Portland Pozzolana Cement (PSC, PCC & PPC) - From 3.7 MTPA to 4.5 MTPA (As per EC Exp. and previous CTO)	31/03/2027

(A) Specific Conditions:

1. That, the occupier shall install, operate and maintain dust containment cum suppression system.

2. That, the occupier shall carry out grinding and packing under covered area

3. That, the occupier shall maintain the new emission guideline as prescribed by CPCB/MoEF for cement industry.

4. That, the occupier shall cover the truck dumpers used for transportation of Limestone, Gypsum, Coal, Cement and other materials and shall use least habitation route for their movement

5. That, the occupier shall install & maintain fixed type water sprinkler all along the road and the points of loading & unloading points.

6. That, the occupier shall construct pucca approach road and internal roads and shall do sprinkling of water along these area.

7. That, the occupier shall harvest rain water of the premises and recharge it to the ground by the method of Central Ground Water Board that fits most to such project.

8. That, the occupier shall keep surface run off within the premises and should construct garland drain and settling pit for this purpose.

9. That, the occupier shall transport the product by leak proof and covered vehicles with tarpaulin sheet.

10. That, the occupier shall establish and operate well equipped environmental laboratory with facilities to monitor at least all regulatory parameters and duly accredited by NABL.

11. That, the occupier shall operate and maintain air pollution control devices to such as bag filters to control fuel dust emission.

12. That, the occupier shall submit the disposal and utilization of fly ash generated in the plant.

13. That, the occupier shall comply conditions of the CREP and shall report to the Board regularly.

14. That, occupier shall maintain the operation of Pollution control system installed at-Ball Mills and Silos. Also the power supply to production units & Silos shall be interlinked with pollution control arrangement.

15. That, the occupier shall operate and maintain the pollution control equipments such as bag filters and others.

16. That, the occupier shall operate and maintain the CAAQMS and PM 10 analyzer and ensure transmission of data to JSPCB and CPCB server uninterruptedly.

17. That, the occupier shall comply all the conditions of EC and CTO and submit six monthly compliance report to Board and other relevant documents alongwith the analysis reports successively.

18. that, the occupier shall dispose the solid waste as per prescribed norms.

19. That, the occupier shall dispose the hazardous waste as per HoWM Rules' 2016 and shall obtain authorization under HoWM Rules' 2016.

20. That, the occupier shall submit online applications for renewal of consent under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent with documents showing compliance of all of the above conditions.

21. That, this CTO supersedes the CTO granted earlier vide ref. no. JSPCB/HO/RNC/CTO-13089032/2022/837, dated 12.06.2022.

(B) General Conditions :

(1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

S.N.	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO2), µg/m3	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO2), µg/m3	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM10, µg/m3	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM2.5, µg/m3	Annual 24 hours	40 60	40 60
5.	Ozone(O3), µg/m3	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m3	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m3	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH3) µg/m3	Annual 24 hours	100 400	100 400
9.	Benzene (C6H6) µg/m3	Annual	05	05
10.	Benzo(a) Pyrene (BaP) Particulate Phase only ng/m3	Annual	01	01
11.	Arsenic (As) ng/m3	Annual	06	06
12.	Nickel (Ni) ng/m3	Annual	20	20

Note : Serial no. 1 to 4 – Mandatory
Serial no. 5 to 12 As applicable for specific type of industry.

(2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S.N	Parameter	Standard
1	Particulate Matter	150 mg/Nm³

(3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S.N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

(4) That, the occupier shall dispose of solid wastes as follows:

S.N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or Kilns.
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of soil or Mineral

(5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norms.

(6) That, the occupier shall install and maintain Central Ground Water Board, State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.

(7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(8) That, the occupier shall submit environmental statement with supporting stochiometric calculations analysis reports, every year latest by 30th September of the next financial year.

(9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

(10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.

(12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.

4. **That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.**

5. **That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.**

6. **The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.**

7. **The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.**

This is issued with the approval of the Competent authority

Yatindra Kumar Das Digitally signed by Yatindra Kumar Das Date: 2023.03.15 21:26:08 +05'30'

(Yatindra Kumar Das)
Member Secretary

Memo No. : JSPCB/HO/ENC/CTO-1197/05/01/2023/503

Dated : 2023-03-15

Copy to: M/s Dalmia Cement (Bharat) Limited, At- Plot No. IV/A-A-7(P), Bokaro Industrial Area Development Authority, Bokaro Steel City, Dist- Bokaro / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Bokaro/ Director of Mines, Government of Jharkhand, Ranchi/ Chief Inspector of Factories, Ranchi/ D.F.O., Bokaro/D.M.O., Bokaro / R.O., Dhanbad for information & monitoring compliance of the above.

Yatindra Kumar Das Digitally signed by Yatindra Kumar Das Date: 2023.03.15 21:27:17 +05'30'

(Yatindra Kumar Das)
Member Secretary

Annexure-3

Water agreement copy from BIADA, Jharkhand

भारतीय गैर न्यायिक

पचास रुपये FIFTY RUPEES

रु.50 Rs.50

INDIA

INDIA NON JUDICIAL

झारखण्ड JHARKHAND A 459112

AGREEMENT BOND FOR INDUSTRIAL

METERED WATER SUPPLY SERVICE CONNECTION

An agreement made this 17thday of March 2011 between the Bokaro Industrial Area Development Authority (Hereinafter called the owner) on the first part and M/s **Bokaro Jaypee Cement Limited**, "JA House", 63 Basant Lok, Vasant Vihar, New Delhi-110057 hereinafter called "THE CONSUMER" on the second part.

The particulars of the industrial plot to which supply is to be given in the factory premises.

Description of premises

(a) Industrial Plot No.: IV/A – 70P1

(b) Chainsah of the industrial plot: As per Annexure 01

(c) Industrial Plot No.: IV/A – 70P1

(d) Revenue plot & No.: As per Annexure 01

Whereas the consumer desired to obtain supply of water for industrial purposes for his Premises as described from the distribution mains of the Authority and has made a written application to the Authority for this purpose and the Authority has decided to grant it, it is hereby covenanted and agreed as under:-

M/s BOKARO JAYPEE CEMENT LTD.

(Authorised Signatory)

Chief Administrative Officer

B.I.A.D.A

1) The Authority shall provide a connection and turn on the water to this premises, on the completion of the commendation plans laid by the 2nd part by the Authority at the cost of the consumer or on receipt of D.O. certificate of satisfactory completion of the commendation pipes by the consumer. The sanctioned plan with details noted such as capacity no. of tap and size of water meter, female or storage tank etc. by the Authority.

2) The consumer shall pay water rate/charges due to the Authority as per rates fixed by the Authority from time to time. The rates effective from 01.11.09 are as under:-

i) Rs. 5/- Per 1000 liters of water supplied.

3) a) The meter of required size shall be purchased by the consumer at his own cost which shall be approved by the Authority before installation. Whenever meter will be found stuck up, defective it will be replaced at the cost of the consumer. Every new meter shall be approved by the Authority. In case the meter is not installed, billing will be on the basis of water requirement plus 20%.

b) The register of meter reading shall be prima facie evidence of the quantity of water consumed and bills for water rates shall be based on the meter reading taken monthly, a copy of which will be supplied to the consumer by demand.

c) Provided that if any meter is out of order and if in the opinion of the D.O. it is not registering correctly the Authority may estimate the quantity to be billed for. For the purpose of defect in meter as certified by the DO/JOO/JEB in the manner terms and conditions laid down in the element of tendered deed. The defective water meter will have to be replaced at the cost of consumer supplied by the consumer. The water meter of required size and make to be approved by the Authority shall be purchased by the consumer.

4. Bill of water rates shall be presented by the Authority monthly and shall be paid by consumer within seven days of presentation. For this purpose the date of presentation shall mean the date of issue of the bill on the address of the unit.

5. Security Deposit: Water requirement per day 0.90 x 5.00 (rate) = 4.50 (rate)

i) Rs. 5,4,000.00 (Rupees Six Lakh Twelve Thousand) only will be deposited by the party in Authority fund.

6. The cost of stamping this agreement shall be borne by the unit consumer.

7. This agreement may be terminated with the consideration of the one allotment.

M/s SOHAM PIPES COMPANY LTD.

Authorised Signatory

Witnesses:

1.
2.

8. The Authority will have right to shut off the supply temporarily for purposes of necessary repairs/maintenance of water supply pipelines etc. giving a prior notice to the concerned unit.

9. That the meter chamber shall be the property of the Authority even, if it is constructed by the consumer at his own cost but it will be got repaired by consumer or if Authority get it repaired, the cost will be received from consumer. The safety of water meter will be with consumer.

10. That the consumer shall take proper care for the safety of the meter which will be installed in the meter chamber allotted within the premises of the unit and that in case of its theft he will be responsible and be liable for replacement of the meter within a week time.

11. In case of any dispute regarding this water connection, the decision of Bokaro Industrial Area Dev. Authority will be final and binding upon the parts.

12. If the consumer fails to pay the water charges due under this agreement within seven days of the date on which the payment falls due, the consumer shall be liable to pay interest @ 10% simple per annum on earlier bill amount.

13. Every sum that may become due from the consumer to the Authority under or in pursuance of the provisions of this agreement shall be payable to the Authority and shall be recoverable as public demand under the Bihar & Orissa public Recovery Act, 1914.

14. In case the consumer desires to increase/decrease connected demand the Authority may require to be given 3 months notice in writing stating the required demand.

15. If the consumer uses the water supplied or deals with it in any manner as to unduly or improperly to interfere with the efficient supply of water to any person by the Authority or sells or diverts water to premises other than his/her own, the Authority may discontinue the supply with prior notice.

16. The consumer shall not cause or permit any such repairs additions or alternations to be done otherwise than by the Authority shall when any such repairs are required to be done, inform such officers of the Authority for this purpose.

17. All payment referred to above shall unless otherwise direct by the Authority to be made by the consumer by cash/draft in the office of M.D. BIADA.

BOKARO [illegible]

Authorised Signatory

Chief [illegible] Officer
BIADA

The Authority shall be at liberty to alter charges, minimum guarantee, any terms and conditions in the agreement bond etc. as set out herein hereafter and the same shall be binding on the consumer.

18. Point of supply: [illegible]

19. Connection fitting: (a) Water meter with enclosure

(b) 20Ø M.S. Pipe with valve

20. Qty of water required per month in 1.65 Crore Liters.

21. [illegible] of above connected load)

(i) Tariff Rs.[illegible] per [illegible] per Month. [illegible] of monthly demand)

(ii) Charge for additional quantity ... NIL ... per 1000 gal (Tax inclusive and subject to revision)

22. Building plans in triplicate showing pipeline and all fixtures including index plan showing use of female water pipeline and cross cock etc. duly signed by the licensed plumber. Architect Engineer.

In witness whereof the said parties hereunto set & subscribed their respective hands and seals the day and year first above written.

Signed by the consumer

In presence of 1) AWADHESH KUMAR PANDEY

2) PRADEEP KUMAR SINGH

Signed for and on behalf of the BIADA

In presence of 1)

2)

Director
Industries
BIADA

ANNEXURE-4

JHARKHAND STATE POLLUTION CONTROL BOARD

T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004
Phone: 2400852, 2400851, Fax 0651- 2400859 www.jspcb.org

FORM 2

[See rule 6(2)]

FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES

1. No. of authorization and date of issue: JSPCB/HO/BNC/HWM-9675664/2021/26 09/04/2021

2. Reference of application(No. and date): 9675664/30/12/2020

3. Dalmia Cement (Bharat) Limited of Venkatesan Thyagarajan is hereby granted an authorization based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Distt. Bokaro

Details of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(tonnes/annum)
1	5.1 Used Oil/Spent oil	Sold to authorised recycler	1.5 KL/Annum
2	5.2 Used Oil Cotton	Sold to authorised recycler	1.0 KL

(1) The authorisation shall be valid for a period of date of issue to 31.12.2026 years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A. General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.

2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.

3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.

4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.

6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty."

7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.

8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and use of the imported hazardous and other wastes shall be maintained.

10. The hazardous and other waste which are generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.

11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.

12. An application for the renewal of an authorisation shall be made as laid down under these Rules.

13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. Annual return shall be filed by June 30th for the period ending 31st March of the year.

B. Specific conditions:

(1) That, the occupier shall comply the provisions of the Environment Protection Act and Rules.

(2) That, the authorisation shall be produced at the time of inspection.

(3) That, the occupier authorised shall not resell or otherwise transport the H/W without obtaining prior permission of the Board.

(4) That, any un-authorisation change shall constitute a breach the authorisation.

(5) That, it is the duty of authorised person to take prior permission of the Board to close down the facility.

(6) That, the renewal of authorisation shall be made as laid down in the rules.

(7) That, any other condition for compliance as per the guidelines issued by the MoEF for CPCB.

(8) That, the occupier shall submit annual return for the financial year before 30th June, every year.

(9) That, the occupier shall comply all the conditions.

(10) That, the occupier shall submit quarterly and annual information on hazardous wastes consumed its source, products generated or resources conserved (specifying the details like type and quantity of resources conserved) to the concerned SPCB.

(11) That, the occupier shall complied all directions given by standard operating and procedure.

DILIP KUMAR

Dilip Kumar
Environmental Engineer

Memo No. JSPCB/HO/RNC/HWM-9675664/2021/26
Date: 09/04/2021

Copy To:

Sri Sunil Kumar Gupta, Executive Director (Manufacturing Head East) of M/s Dalmia Cement (Bharat) Limited, At- Plot No. IV/A-A-7(P), Bokaro Industrial Area Development Authority, Bokaro Steel City, Dist- Bokaro / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Bokaro/ Chief Inspector of Factories, Ranchi/ R.O., Dhanbad for information & ensuring compliance of the above.

DILIP KUMAR

Dilip Kumar
Environmental Engineer

JHARKHAND STATE POLLUTION CONTROL BOARD

T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI-834004

Phone.:2400852, 2400851, Fax:0651- 2400850 www. jspcb.org

FORM III

(See Rule 10)

AUTHORISATION

(AUTHORISATION FOR OPERATING A FACILITY FOR COLLECTION, RECEPTION, TREATMENT, STORAGE, TRANSPORT AND DISPOSAL OF BIOMEDICAL WASTES)

1. File no. of authorisation and date of issue: JSPCB/HO/RNC/BMW-15141326/2023/10 31/05/2023

2. M/s Occupational Health Center (Dispensary)-Dalmia Cement (Bharat) Limited, Bokaro, Priya Ranjan an occupier or operator of the facility located at Dalmia Cement (Bharat) Limited, is hereby granted an authorisation for:

Generation, segregation	✓	**Collection**	✓
Storage	✓	**Transportation**	
Reception		**Use**	
Recycling		**Offering for sale**	✓
Packaging		**Transfer**	✓
Treatment or Processing or Conversion		**Disposal or destruction**	✓
Any other form of handling			

3. M/s Occupational Health Center (Dispensary)-Dalmia Cement (Bharat) Limited, Bokaro is hereby authorized for handling of biomedical waste as per the capacity given below:

(i) Number of beds of HCF: 02

(ii) Number of health care facilities covered by CBMWTF: NA

(iii) Installed treatment and disposal capacity: NA

(iv) Area or distance covered by CBMWTF : NA

(v) Quantity of Biomedical waste handled, treated or disposed: NA

4. This authorisation shall be in force for a period of Date of issue to 30.06.2027 Years from the date of issue.

5. This authorisation is subject to the conditions stated below and to such other conditions as may be specified in the rules for the time being in force under the Environment (Protection) Act, 1986.

Rajiva Kumar Sinha

Digitally signed by Rajiva Kumar Sinha Date: 2023.05.31 [illegible]

Date: 31/05/2023
Place: Jharkhand State Pollution Control Board

Rajiva Kumar Sinha
Section Head, Dhanbad

Terms and Conditions of Authorisation

1. The authorisation shall comply with the provisions of the Environment (Protection) Act, 1986 and the rules made there under.

2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the prescribed authority.

3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the biomedical wastes without obtaining prior permission of the prescribed authority.

4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. It is the duty of the authorised person to take prior permission of the prescribed authority to close down the facility and such other terms and conditions may be stipulated by the prescribed authority.

Specific Conditions:

1. That the occupier shall not mix bio-medical waste with general waste and shall under no circumstances, hand over untreated wastes to the municipality for disposal to land fill site.

2. That, the occupier shall segregate bio-medical wastes and collect in colored containers/bags at the point of generation as per the Rules and shall transport them in covered containers labeled with the symbols of biohazard & cytotoxicity.

3. That, the occupier shall treat the segregated bio-medical wastes in the manner prescribed under the Rules and shall ensure separate treatment of segregated wastes at the individual or common facility, duly authorized by State Pollution Control Board, Jharkhand.

4. That, the authorized person shall treat the biomedical waste containing more than or equal to 50 PPM of mercury and shall dispose of it (them) as per the provisions of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2016.

5. The occupier of health care unit shall submit the statistics related to spillage and collection of mercury during the period from January to December of previous year, along with the annual report latest by 30th June of every year.

6. The authorized person of the unit shall maintain records related to the generation, collection, storage, transportation, treatment, disposal and/or any form of handling of Bio-medical Waste and all records shall be subject to inspection and verification by the State Pollution Control Board, Jharkhand at any time.

7. That, the occupier shall upload online application for renewal of authorization 90 days prior to the date of expiry of this authorization under Rule 10 of the Bio-Medical Waste Rules, 2016 with CTO copy issued under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 along with compliance of all the above conditions.

8. That, the occupier shall Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site the manner as prescribed by the World Health organization (WHO) of National AIDS Control Organization (NACO) guidelines and then send to the common biomedical waste treatment facility for final disposal.

9. That, the occupier shall ensure segregation of liquid chemical waste at source and ensure pre-treatment or neutralization prior to mixing with other effluent generated from health care facilities.

10. That, the occupier shall ensure every occupier or operator of Common bio-medical waste treatment facility shall submit an annual report to the prescribed authority in Form-IV, on or before the 30th June of every year.

11. That, the occupier shall submit the compliance of this authorization alongwith the compliance of this CTO on yearly basis.

12. That, this authorization is being issued to synchronization of CTO granted.

Memo No.: JSPCB/HO/RNC/BMW-15141356/2023/10 Dated:31/05/2023

Copy To:

Deputy Commissioner, Bokaro/ Director in Chief, Health Services, Department of Helath, Ranchi/ Civil Surgeon, Bokaro/ Regional Officer, Regional Office, Dhanbad for information and necessary action.

Rajiva Kumar Sinha

Rajiva Kumar Sinha
Section Head, Dhanbad

ANNEXURE-5

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 2 6			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air	
Report Issue Date: 27-12-2024	**Test Report No.:** RN-241205004A01		
Sample ID: 241224AP01001	**Sample Description:** Ambient Air		
Challan No./P.O. No.: 4548043344/237	**Challan No./P.No. Date:** 05-11-2024		
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:** Sanjay Verma		
Sample Drawn by: IEM Team	**Sampling Date:** 23-12-2024 to 24-12-2024		
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Main Gate			
Field Meteorological information	**A. Temp. (°C):** 18	**R.H. (%):** 66	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—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	$\mu g/m^3$	100	64.3
2	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	27.1
3	Sulphur Dioxide (SO_2)	IS 5182 Part-02	$\mu g/m^3$	80	15.1
4	Nitrogen Dioxide (NO_2)	IS 5182 Part-06	$\mu g/m^3$	80	29.2
5	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	38.5
6	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	19.9
7	Arsenic (as As)	USEPA I.O. 3.2	ng/m^3	—	BDL (MDL-2)
8	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.03
9	Nickel (as 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(R)
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: Siddharth kumar & Team

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

Corporate office : A-9, Modi Heights, Opp. RP India Public Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site : IEMC - A-32, Sabal Vihar, Near Sabal Mandir, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph : 8427804232, 8427804271, Email : info@iemcorp.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 27-12-2024	**Test Report No.:** IEM-241105054A01	
Sample ID: 241224AP01001	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4549041344/233	**Challan No./ P.No. Date:** 05-11-2024	
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:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline(NAAQM/S/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Main Gate		
Field Meteorological Information	**A. Temp. (°C):** 18 **R.H.** (%): 66 **W.C.:** Partly Sunny **W.D.:** SW to NE	
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—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-01-2023	mg/m^3	—	BDL(MDL-1.8)
3.	Benzene (C_6H_6)	IS 5182 Part 11	$\mu g/m^3$	—	BDL (MDL- 0.06)

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, RDL: Refine Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009
Remark	Sample Complied with prescribed specifications.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 3 5 2 4 0 0 0 0 0 2 1 2 7			
Discipline: Chemical	Group: Atmospheric Pollution	Sub Group: Ambient Air	
Report Issue Date: 27-12-2024		Test Report No.: RN-241105004402	
Sample ID: 241224P01002		Sample Description: Ambient Air	
Challan No./P.O. No.: 4504904/044/227		Challan No./ P No. Date: 05-11-2024	
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IVA-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: 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Fabrication Yard			
Field Meteorological Information	A. Temp. (°C): 18	R.H. (%): 66	W.C.: Partly Sunny	W.D.: SW to NE
Sample Receiving date: 24-12-2024	Testing Started: 24-12-2024	Testing Ended: 27-12-2024	

---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	$\mu g/m^3$	100	63.0
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	38.3
3.	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	17.0
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	31.4
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	34.1
6.	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	18.4
7.	Arsenic (as As)	USEPA IO-3.2	ng/m^3	—	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.03
9.	Nickel (as 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: Akankha Sopidih

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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	(Tauseer Ahmad)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory. An report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : [illegible]
Laboratory site : [illegible]
Ph. [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 27.12.2024	**Test Report No.:** RN 241105/004/R02	
Sample ID: 241224AP01002	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4546043344/037	**Challan No./ P.No. Date:** 05-11-2024	

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:** 23-12-2024 to 24-12-2024		
Protocol: CPCB Guideline(NAAQM5/36/2012-13) & IS Method 5182 Series				
Sampling Location: Near Fabrication Yard				
Field Meteorological Information	**A. Temp. (°C):** 18	**R.H. (%):** 66	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024		**Testing Ended:** 27-12-2024	

—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/m³	—	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEMSOP-Air-01-2022	mg/m³	—	BDL(MDL-1.8)
3.	Benzene (C_6H_6)	IS 5182 Part 11	ug/m³	—	BDL (MDL-0.06)

—End of Report—

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

Tested By: Akanksha Saurabh

Sample Drawn By: Siddharth Kumar & Team

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

Corporate office : [illegible]
Laboratory Unit : [illegible]
Ph : [illegible] Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 2 8			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air	
Report Issue Date: 27-12-2024		**Test Report No.:** RN 241105004603	
Sample ID: 24122AAP01003		**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4546043346/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guidelines/NAAQMS/36/2012-13 & IS Method 5182 Series			
Sampling Location: Near Colony			
Field Meteorological Information	**A. Temp. (°C):** 18	**R.H.** (%) 66	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—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	$\mu g/m^3$	100	53.1
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	25.2
3.	Sulphur Dioxide (SO_2)	IS 5182 Part-02	$\mu g/m^3$	80	10.8
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part-06	$\mu g/m^3$	80	25.3
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	41.4
6.	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	14.0
7.	Arsenic (as As)	USEPA I.D. 3.2	ng/m^3	—	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.04
9.	Nickel (as 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±2 % in all sensing area as per IS 196:1966(R).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specifications.

Tested By: Anamika Sourabh

Sample Drawn By: Siddharth Kumar & Team

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

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 27-12-2024	**Test Report No.:** IEM-241105001A03	
Sample ID: 241224AP01003	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4540043344/237	**Challan No./P.No. Date:** 05-11-2024	

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:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Colony			
Field Meteorological Information	**A. Temp. (°C):** 18	**R.H. (%):** 66	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—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/m³	—	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEM/SOP/AI 01 2023	mg/m³	—	BDL(MDL-1.8)
3.	Benzene (C_6H_6)	IS 5182 Part 11	µg/m³	—	BDL (MDL- 0.06)

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196 (Part-1).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible]

Institute for Environmental Management

Test Report

UIR No.:	T C 1 1 5 5 5 2 4 0 0 0 0 0 2 1 2 9		
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air	
Report Issue Date: 27-12-2024		**Test Report No.:** RN/ 241105004A02a	
Sample ID: 241224AP01004		**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4540043344227		**Challan No. / P.No. Date:** 05-12-2024	
Issued to: Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works) Plot No (V/A-7(P), Bokaro Industrial Area Gulidih Bokaro Steel City, Bokaro-827014 Jharkhand India			
Type of industry: Cement		**Customer Representative:** Sanjeev Verma	
Sample Drawn by: IEM Team		**Sampling Date:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Wagon Tippler			
Field Meteorological Information	**A. Temp. (°C):** 18	**R.H. (%):** 56	**W.C.:** Partly Sunny **W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—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	$\mu g/m^3$	100	63.5
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24 2019	$\mu g/m^3$	60	29.9
3.	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	33.7
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	27.6
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	32.6
6.	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	27.5
7.	Arsenic (as As)	USEPA ID 5.2	ng/m^3	—	BDL (MDL-1)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.02
9.	Nickel (as Ni)	IS 5182 Part 29	ng/m^3	—	BDL (MDL-8)

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27±2°C and Relative Humidity 45±5 % in all testing area as per IS 3196 (Part-V).
Abbreviation	BDL: Minimum Detection Limit, RDL: Reject Detection Limit
Limit is Specified	As per the Environmental Protection Rule - 1986
Remark	Sample Complay with prescribed specification

Tested By: Rajeshkar Saurabh

Sample Drawn By: Siddharth kumar & Team

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Corporate office : [illegible]
Laboratory Site : [illegible]
[illegible]
[illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 27-12-2024	**Test Report No.:** RN-241105004A04	
Sample ID: 241224AP01004	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4545041544/237	**Challan No./ P.No. Date:** 05-11-2024	

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:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Wagon Tippler			
Field Meteorological Information	**A. Temp. (°C):** 18	**R.H.** (%): 66	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—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-01-2023	mg/m^3	—	BDL(MDL-1.8)
3.	Benzene (C_6H_6)	IS 5182 Part 11	$\mu g/m^3$	—	BDL (MDL- 0.06)

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±7 % in all testing area as per IS 196:1966(C).
Abbreviation	NDL: Minimum Detection Limit, RDL: Reliable Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS) 2009
Remark	Sample Comply with prescribed specifications.

Tested By: Anuksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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Corporate Office : A.R. Alvi Heights, Opp. All India Radio station, Bistupur, Bokaro, Jharkhand - 834001
Laboratory Site : H.No. - A-23, Sector Vikas, Near School Bisanpur, Pocket Housing Colony, Bokaro 829032, Jharkhand, India
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 3 4			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Stack Emission	
Report Issue Date: 27-12-2024		**Test Report No.:** RN-241105000451	
Sample ID: 241221AP04001		**Sample Description:** Stack Emission	
Challan No./P.O. No.: 4548043344/227		**Challan No./ P.No. Date:** 05-11-2024	
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IVA-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:** 23-12-2024	
Protocol: CPCB Guideline (LATS/86/2013-14) & IS Method 11255 Series			
Field Meteorological Information	**A. Temp. (°C):** 30	**R.H. (%):** 64	**W.C.:** Semi-Cloudy **W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

General Physical Information

Stack Identification	Cement Mill Bag House Stack	**Sampling Port**	Available
Plat Form	Permanent	**Stack Height from Ground Level (m)**	50
Stack Description	Common for cement mill -1 & 2	**Port Hole Height from Ground Level (m)**	30
Shape of Stack	Circular	**Inner Dimension of Stack (m)**	3.2
Construction Material	MS	**Pollution Control Device (if any)**	Bag House

Flue Gas Temperature (K): 370	**Flue Gas Velocity (m/s):** 17.1	**Flue Gas Volumetric Flow Rate (Nm^3/hr):** 516863.3

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	13.9	30.0

Dust	Kg/hr	7.1

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27±2°C and Relative Humidity 60±5 % at all testing area (Ref: IS 7769 (2012))
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule – 1986
Remark	Sample Compliz with prescribed specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes:	Reviewed by:	Authorised Signatory:
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Corporate Office : A-8, Mark Heights, Opp. GD India, Kadru Mohan, Ranchi Road, Ranchi, Jharkhand - 834001
Laboratory Site : [illegible], Ranchi-834002, Jharkhand, India
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 3 5	
Discipline: Chemical	Group: Atmospheric Pollution / Sub Group: Stack Emission
Report Issue Date: 27-12-2024	Test Report No.: RN-241100030432
Sample ID: 241221AP04002	Sample Description: Stack Emission
Challan No./P.O. No.: 4500043344/257	Challan No./ P.No. Date: 05-11-2024

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: 21-12-2024
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series	

Field Meteorological Information	A. Temp. (°C): 20	R.H. (%): 64	W.C.: Semi Cloudy	W.D: SE to NW
Sample Receiving date: 24-12-2024	Testing Started: 24-12-2024	Testing Ended: 27-12-2024		

General Physical Information

Stack Identification	Packing Plant Stack - 4	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	45
Stack Description	Single	Port Hole Height from Ground Level (m)	41
Shape of Stack	Circular	Inner Dimension of Stack (m)	0.55
Construction Material	MS	Pollution Control Device (If any)	Bag Filter

Flue Gas Temperature (K): 326	Flue Gas Velocity (m/s): 22.5	Flue Gas Volumetric Flow Rate (Nm^3/hr): 17066.4

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	29.1	30.0

Dust	Kg/hr	0.3

—End of Report—

Env. Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 60±5 % or as testing area as per IS specifications.
Abbreviation	NDL: 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: Dukhharan Kumar & Team

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Reviewed by: Authorized Signatory

(Tasneem Ansari) Technical Manager

(Dr. R. C. Jain) Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 7 4 0 0 0 0 0 2 1 3 6			
Discipline: Chemical	Group: Atmospheric Pollution	Sub Group: Stack Emission	
Report Issue Date: 27-12-2024		Test Report No.: IEM-24110500453	
Sample ID:24122IAP04003		Sample Description: Stack Emission	
Challan No./P.O. No.: 4548043344/237		Challan No./ P.No. Date: 05-11-2024	
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:23-12-2024	
Protocol: CPCB Guideline (LA75/80/2013-14) & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 20	R.H. (%): 64	W.C.: Semi-Cloudy	W.D.:SE to NW
Sample Receiving date:24-12-2024	Testing Started:24-12-2024	Testing Ended:27-12-2024	

General Physical Information

Stack Identification	Packing Plant Stack - 3	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	45
Stack Description	Single	Port Hole Height from Ground Level (m)	41
Shape of Stack	Circular	Inner Dimension of Stack (m)	0.55
Construction Material	MS	Pollution Control Device (if any)	Bag Filter

Flue Gas Temperature (K): 323	Flue Gas Velocity (m/s): 18.9	Flue Gas Volumetric Flow Rate (Nm^3/hr): 14475.0

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	23.7	30.0

Dust	Kg/hr	0.3

—End of Report—

Env. Condition of Lab	Laboratory is maintaining Temperature 25± 2°C and Relative Humidity 45±5 % in all testing area as per IS 1261:2017.
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environmental (Protection) Rules – 1986.
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Goutabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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In the case 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, Vault Heights, City of India Kedla Mohan, Kuta Road, Ranchi, Jharkhand - 834001
Laboratory Site : IEM, A-13, Sakar Villas, Near Nalanda, Bhusaur, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph. : 9507826252, 8447804251, Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 1 7			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Stack Emission	
Report Issue Date: 27-12-2024		Test Report No.: RN-24110000454	
Sample ID:241221AP04004		Sample Description: Stack Emission	
Challan No./P.O. No.: 4548043344/237		Challan No./ P.No. Date: 05-11-2024	
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:23-12-2024	
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 20	R.H. (%): 64	W.C.: Semi-Cloudy	W.D.:SE to NW
Sample Receiving date:24-12-2024	Testing Started:24-12-2024	Testing Ended:27-12-2024	

General Physical Information

Stack Identification	Packing Plant Stack - 2	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	45
Stack Description	Single	Port Hole Height from Ground Level (m)	41
Shape of Stack	Circular	Inner Dimension of Stack (m)	0.55
Construction Material	MS	Pollution Control Device (if any)	Bag Filter

Flue Gas Temperature (K): 328	Flue Gas Velocity (m/s): 21.5	Flue Gas Volumetric Flow Rate (Nm^3/hr): 16201.5

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	24.7	30.0

Dust	Kg/hr	0.4

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining temperature 25±2°C and Relative Humidity 60±5 in all testing area as per IS (No 1741)
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: Siddharth kumar & Team

Specific Contractual Rules:	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Corporate office : A.K. Shell Complex, near All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory site : Plot - A-1/1, Sahaj Vihar, Shop Sahyog Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph. - 8437004271, 8437004272, Email - [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 3 0 0 0 2 1 1 8			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Stack Emission	
Report Issue Date: 27-12-2024		Test Report No.: RN-24110500405	
Sample ID: 241221AP04005		Sample Description: Stack Emission	
Challan No./P.O. No.: 4548043544/237		Challan No./ P.No. Date: 05-11-2024	
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: 23-12-2024	
Protocol: CPCB Guideline (LAT/80/2013-14) & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 20	R.H. (%): 64	W.C.: Semi Cloudy	W.D. SE to NW
Sample Receiving date: 24-12-2024	Testing Started: 24-12-2024	Testing Ended: 27-12-2024	

General Physical Information

Stack Identification	Packing Plant Stack - 1	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	45
Stack Description	Single	Port Hole Height from Ground Level (m)	41
Shape of Stack	Circular	Inner Dimension of Stack (m)	0.55
Construction Material	MS	Pollution Control Device (If any)	Bag Filter

Flue Gas Temperature (K): 326	Flue Gas Velocity (m/s): 19.1	Flue Gas Volumetric Flow Rate (Nm^3/hr): 14310.0

Test Result

Sl. NO	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	15.1	30.0

Dust	Kg/hr	0.3

—End of Report—

Env. Condition of Lab.	Laboratory & Monitoring Temperature (°C) (°C and Relative humidity (%) (If any)
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: Siddharth Kumar & Team

Specific Contractual Note	Reviewed by	Authorized Signatory
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Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** RN 241105004F101
Sample ID: 241224AP03003		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/237		**Challan No. / P.No. Date:** 05-11-2024

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:** 23-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series				
Sampling Location: Truck Parking Area				
Field Meteorological Information	**A. Temp.** [illegible]	**R.H.** [illegible]	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024		**Testing Ended:** 27-12-2024	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Perticulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1235.3

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 40±5 % in all testing area as per IS 196:1984(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414 (E) Dated 30th May 2008
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.		

Corporate Office : [illegible]
Laboratory Site : [illegible]
Kandhi-[illegible], Jharkhand, India
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** RN-241105004FE02
Sample ID: 241224AP03002		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/227		**Challan No./ P.No. Date:** 05-11-2024

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:** 23-12-2024

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

Sampling Location: Near Clinker Silo(Raw material yard)

Field Meteorological Information	**A. Temp.** [illegible]	**R.H.** [illegible]54	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE

Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	981.2

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in air testing area as per IS 199:1964(E).
Abbreviation	MDL: Minimum Detection Limit, RDL: Range Reporting Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 30th May 2009.
Remark	Sample comply with the prescribed specification

Tested By: Akansha Sourabh

Sample Drawn By: Siddharth kumar & Team

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On the basis of Quality Checkers and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	(Tauqeer Ahmad) Technical Manager	(Dr. S. C. Jain) Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** RN-241205024FL02
Sample ID: 241224AP00003		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No IVA-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:** 23-12-2024
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series	
Sampling Location: Near Mill Area	

Field Meteorological Information	**A. Temp.** (°C):26	**R.H.** (%):64	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE

Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1122.7

—End of Report—

Env. Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196-1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 30th May 2008
Remark	Sample comply with the prescribed specification.

Tested By: Akankshe Sinjalah

Sample Drawn By: Siddharth Kumar & Team

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Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi [illegible], Jharkhand, India
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air

Report Issue Date: 27-12-2024	**Test Report No.:** IEM-241025004FE04
Sample ID: 241224AP00004	**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4546043344/237	**Challan No./ P.No. Date:** 05-11-2024

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:** 24-12-2024

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

Sampling Location: Near Packing Plant

Field Meteorological Information	**A. Temp.** [illegible]	**R.H.** [illegible]	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE

Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

---Test Results---

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	μgm^{-3}	2000	958.8

---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 GSR 414 (E), Dated 30th May 2008
Remark	Sample comply with the prescribed specifications

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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

Reviewed By	Approved Signatory
(Tajveer Ahmad)	(Dr. S. C. Jain)
Technical Manager *	Director

Corporate office : [illegible]
Laboratory Site : Office : [illegible]
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 3 9 7 3 4 1 0 0 0 0 5 0 3	
Discipline: Chemical	Group: Atmospheric Pollution / Sub-Group: Ambient Air
Report Issue Date: 10-03-2025	Test Report No.: [illegible]
Sample ID: [illegible]	Sample Description: Ambient Air
Challan No./P.O. No.: 4[illegible]	Challan No./P.O. Date: 05-12-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No IUA-7(P), Bokaro Industrial Area Gondlin
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement	Customer Representative: Sanjeev Verma
Sample Drawn by: IEM Team	Sampling Date: 05-03-2025 to 07-03-2025

Protocol: CPCB Guidelines/NAAQMS/36/2012-13 & As Method 5182 Series

Sampling Location: Near Main Gate

Field Meteorological Information: A. Temp. (°C): 22 | R.H. (%): 47 | W.C.: Sunny | W.D.: NW to SE

Sample Receiving Date: 07-03-2025 | Testing Started: 07-03-2025 | Testing Ended: 10-03-2025

—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	$\mu g/m^3$	100	44.4
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	25.2
3.	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	17.4
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	22.4
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	35.8
6.	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	22.1
7.	Arsenic (as As)	USEPA IO. 3.2	ng/m^3	—	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.01
9.	Nickel (as 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 45±5 % at all testing time as per IS 5182 (Range)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit as Specified	As per the Environment (Protection) Rule - 1986
Remark	Sample Consign with prescribed condition

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Rules	Reviewed By	Authorized Signatory
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On the basis of Quality Checker and Technical case certified by the Authorized signatory. The report is issued by the Director of the Organization.	(Tanveer Ahmad) Technical Manager	(Dr. S. C. Jain) Director

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible] Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Ambient Air
Report Issue Date: 10-03-2025	**Test Report No.:** IEM-24310503HA01	
Sample ID: 24030TAP05001	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4548043344/237	**Challan No./ P.No. Date:** 05-11-2024	

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:** 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Main Gate			
Field Meteorological Information	**A. Temp. (°C):** 22	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—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/m³	—	BDL (MDL-0.18)
2.	Carbon Monoxide (CO)	IEMSOP/Air-01-2022	mg/m³	—	BDL(MDL-1.8)
3.	Benzene (C_6H_6)	IS 5182 Part 11	µg/m³	—	BDL (MDL 0.06)

—End of Report—

Env. Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 3 Re 1984(E).
Abbreviation	MDL: Minimum Detection Limit; BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS) 2009
Remark	Sample Comply with prescribed specifications

Tested By: Akankha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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	(Tauqeer Ahmad)	(Dr. B. C. Jain)
	Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi [illegible] Jharkhand India
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 1 3 0 0 0 0 0 0 5 0 3			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air	
Report Issue Date: 10-03-2025	Test Report No.: TR-141105004402		
Sample ID: 260307AP03002	Sample Description: Ambient Air		
Challan No./P.O. No.: 4548043344/23T	Challan No./ P.No. Date: 05-11-2024		
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: 05-03-2025 to 07-03-2025		
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Fabrication Yard			
Field Meteorological Information: A. Temp. (°C): 22	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025	Testing Ended: 10-03-2025	

—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	$\mu g/m^3$	100	65.5
2	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	33.0
3	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	19.3
4	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	35.1
5	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	31.4
6	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	20.9
7	Arsenic (as As)	USEPA (O: 3.2	ng/m^3	—	BDL (MDL-2)
8	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.05
9	Nickel (as 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 45±5 % in all testing area as per IS 190 (1984)(C).
Abbreviation	MDL: Minimum Detectable Limit, RDL: Relive 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: Siddhath kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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	(Tauqeer Ahmad)	(Dr. S. C. Jain)
On the basis of Quality Checks and Technical data verified by the Authorized signatory, this report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph.: [illegible], Email: [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 10-03-2025	**Test Report No.:** IEM-241105004A02	
Sample ID: 250307AP03002	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4546043344/237	**Challan No./ P.No. Date:** 05-11-2024	
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:** 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Fabrication Yard		
Field Meteorological Information	**A. Temp. (°C):** 22 **R.H. (%):** 47 **W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—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_6H_6)	IS 5182 Part 11	$\mu g/m^3$	—	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
Norms** to Specified	National Ambient Air Quality Standards (NAAQS) 2009
Remark	Sample Comply with prescribed specifications.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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	(Tauqeer Ahmad)	(Dr. B. C. Jain)
On the base of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 3 9 3 2 5 0 0 0 0 8 0 5 0 4			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air	
Report Issue Date: 10-03-2025		**Test Report No.:** RN 241105004A03	
Sample ID: 250307AP03003		**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024	
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IV/A-7(P), Bokaro Industrial Area Sahidih Bokaro Steel City, Bokaro-827014 Jharkhand india			
Type of Industry: Cement		**Customer Representative:** Sanjeev Verma	
Sample Drawn by: IEM Team		**Sampling Date:** 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Colony			
Field Meteorological Information	**A. Temp. (°C):** 22	**R.H.:** nil 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—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	$\mu g/m^3$	100	89.3
2	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24 2019	$\mu g/m^3$	60	27.3
3	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	13.1
4	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	30.0
5	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	38.7
6	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	16.5
7	Arsenic (as As)	USEPA I.O. 3.2	ng/m^3	—	BDL (MDL-2)
8	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.06
9	Nickel (as Ni)	IS 5182 Part 26	ng/m^3	—	BDL (MDL-4)

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 3-C and Relative Humidity 65±5 % in all testing area as per IS 3196-1966(E)
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 Gourakh

Sample Drawn By: Siddharth Kumar & Team

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On the basis of Quality Checked and Technical data verified by the Authorized signatory the report is issued by the Director of the Organization	(Tauqeer Ahmad) Technical Manager	(Dr. S. C. Jain) Director

Corporate office : A-8, Modi Heights, Opp. Air India Parking Station, Ranchi Road, Ranchi, Jharkhand - 834002
Laboratory Unit : H.No. - D-13, Sakchi Vihar, Near Sakchi Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.: 9407804253, 9431804253, Email - ...

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 10-03-2025	**Test Report No.:** IEM-24110/00446/03	
Sample ID: 250307AP03003	**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4548043344/237	**Challan No. / P.No. Date:** 05-11-2024	

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:** 06-03-2025 to 07-03-2025

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

Sampling Location: Near Colony

Field Meteorological Information	**A. Temp. (°C):** 22	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025		**Testing Ended:** 10-03-2025	

—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)	IEMSOP4e-01-2022	mg/m^3	—	BDL(MDL-3.8)
3.	Benzene (C_6H_6)	IS 5182 Part 11	$\mu g/m^3$	—	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(E).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Normat^ is Specified	National Ambient Air Quality Standards (NAAQS) 2009
Remark	Sample Comply with prescribed specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

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	T. Ahmad	
	(Tauqeer Ahmad)	(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	Technical Manager	Director

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 2 5 0 0 0 0 0 0 5 0 5			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air	
Report Issue Date: 10-03-2025		**Test Report No.:** IEM-241105004A04	
Sample ID: 250307AP20004		**Sample Description:** Ambient Air	
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Wagon Tippler			
Field Meteorological Information	**A. Temp. (°C):** 22	**R.H.** (%): 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 23:2006	$\mu g/m^3$	100	67.6
2	Particulate Matter (PM_{10})	IS 5182 Part 24:2019	$\mu g/m^3$	60	26.2
3	Sulphur Dioxide (SO_2)	IS 5182 Part-02	$\mu g/m^3$	80	16.0
4	Nitrogen Dioxide (NO_2)	IS 5182 Part-06	$\mu g/m^3$	80	34.3
5	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	29.9
6	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	180	30.0
7	Arsenic (as As)	USEPA I.O. 3.2	ng/m^3	—	BDL (MDL-2)
8	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.04
9	Nickel (as 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 60±5 % in all testing areas as per IS 196:1966(RC).
Abbreviation	MDL: Minimum Detectable Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environment (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification.

Tested By: Akankshi Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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Corporate office : A-6, Modi Heights, Opp. All India Radio station, Ratu Road, Ranchi, Jharkhand- 834001
Laboratory Site : Khata - A 13, Tekari Khas, Near Tatina Bhawan, Hatma Housing Colony, Ranchi-834002, Jharkhand, India
Ph.: 8407804251, 8407804251, Email: iem2011@rediffmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 10-03-2025	**Test Report No.:** IEM 241105004N04	
Sample ID: 260307AP03004	**Sample Description: Ambient Air**	
Challan No./P.O. No.: 4548043344/237	**Challan No./ P.No. Date:** 05-11-2024	

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:** Satyam Verma
Sample Drawn by: IEM Team	**Sampling Date:** 05-03-2025 to 07-03-2025

Protocol: CPCB Guideline(NAAQM/5/36/2022-13) & IS Method 5182 Series

Sampling Location: Near Wagon Tippler

Field Meteorological Information	**A. Temp. (°C):** 22	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAGS - 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)	EMSOP/Air-01 2022	mg/m^3	—	BDL(MDL-1.35)
3.	Benzene (C_6H_6)	IS 5182 Part 11	$\mu g/m^3$	—	BDL (MDL- 0.06)

—End of Report—

Env Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS) 2009.
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

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

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ranchi, [illegible], Jharkhand, India
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 3 4 2 2 3 0 0 0 0 0 0 5 1 8			
Discipline: Chemical	Group: Atmosphere Pollution	Sub-Group: Stack Emission	
Report Issue Date: 10-03-2025		Test Report No.: NV-241185-08451	
Sample ID: 250307AP062(1)		Sample Description: Stack Emission	
Challan No./P.O. No.: 4648043744/237		Challan No./ P.No. Date: 05-11-2024	
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 Sharma	
Sample Drawn by: IEM Team		Sampling Date: 06-03-2025	
Protocol: CPCB Guideline (LA751BQ/2013-14) & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 24	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025	Testing Ended: 10-03-2025	

General Physical Information

Stack Identification	Cement Mill Bag House Stack	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	50
Stack Description	Common for cement mill 1 & 2	Port Hole Height from Ground Level (m)	30
Shape of Stack	Circular	Inner Dimension of Stack (m)	3.7
Construction Material	MS	Pollution Control Device (if any)	Bag House
Flue Gas Temperature (K): 373	Flue Gas Velocity (m/s): 13.0	Flue Gas Volumetric Flow Rate (Nm^3/hr): 141195.1	

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulate Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	14.9	30.0
Dust		Ng/hr		7.3	

—End of Report—

Site Condition of Test	Laboratory & Monitoring Temperature (+/-2°C) and Relative Humidity (±5%) as per testing was as per IS (as stated)
Abbreviation	MDL: Minimum Detection Limit, NDL: Below Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule – 1986
Remark	Sample Complied with prescribed specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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

Reviewed by: Authorized Signatory

Tauqeer Ahmad — Dr. S. C. Jain

Technical Manager — Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi 834002, Jharkhand, India
Ph - [illegible] Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.:	T E 1 5 2 5 2 2 5 3 0 0 0 0 3 5 2 3		
Discipline: Chemical	Stream: Atmospheric Pollution	Sub Group: Stack Emission	
Report Issue Date: 20-03-2025		Test Report No.: IEM 24110500452	
Sample ID: 25030IAP06002		Sample Description: Stack Emission	
Challan No./P.O. No.: 4546043344/227		Challan No./ P.No. Date: 05-11-2024	
Issued to: Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works) Plot No IVA-7(P), Bokaro Industrial Area Bulidih Bokaro Steel City, Bokaro-827014 Jharkhand India			
Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team		Sampling Date:06-03-2025	
Protocol: CPCB Guideline [LA75/80/2013-14] & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 28	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date:07-03-2025	Testing Started:07-03-2025	Testing Ended:10-03-2025	

General Physical Information

Stack Identification	Packing Plant Stack - 4	Sampling Port	Available
Plot Form	Permanent	Stack Height from Ground Level (m)	45
Stack Description	Single	Port Hole Height from Ground Level (m)	41
Shape of Stack	Circular	Inner Dimension of Stack (m)	0.55
Construction Material	MS	Pollution Control Device (If any)	Bag Filter

Flue Gas Temperature (K): 311	Flue Gas Velocity (m/s):21.3	Flue Gas Volumetric Flow Rate (Nm^3/hr):17415.2

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	21.7	30.0

Dust	Kg/hr	0.4

—End of Report—

Key Condition of Lab	[illegible]
Abbreviation	BDL: Below Detection Limit, ND: None Detection Limit
Limit as Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification

Tested By:Anantshre Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Note	Reviewed by	Authorized Signatory
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	(Tauseef Ahmad) Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible] Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 2 5 0 0 0 0 0 0 5 2 6			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Stack Emission	
Report Issue Date: 10-03-2025		Test Report No.: RN-241100/0453	
Sample ID: 250307AP06003		Sample Description: Stack Emission	
Challan No./P.O. No.: 4548043344/237		Challan No./ P.No. Date: 05-11-2024	
Issued for: 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:06-03-2025	
Protocol: CPCB Guideline (LA75/80/2013-14) & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 24	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date:07-03-2025	Testing Started:07-03-2025	Testing Ended:10-03-2025	

General Physical Information

Stack Identification	Packing Plant Stack - 3	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	45
Stack Description	Single	Port Hole Height from Ground Level (m)	41
Shape of Stack	Circular	Inner Dimension of Stack (m)	0.55
Construction Material	MS	Pollution Control Device (If any)	Bag Filter

Flue Gas Temperature (K): 326	Flue Gas Velocity (m/s): 19.7	Flue Gas Volumetric Flow Rate (Nm^3/hr): 14938.9

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	26.8	30.0

Dust	Kg/hr	0.4

—End of Report—

Env.Condition of Lab.	Laboratory is maintaining Temperature in (20-27) and Relative Humidity (45-75 %) at Testing area as per IS (NA 2666)
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: Siddhanth kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : A-8, Modi Heights, Opp.- All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site : H.No. - A-13, Sukant Villas, Near Tatisilwai Bypass, Kishlay Housing Colony, Ranchi-834002, Jharkhand, India
Ph : 8417804252, 8437804251, Email : ranchi2012@iemindia.com

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 5 2 2 5 0 0 0 0 0 0 5 2 1			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Stack Emission	
Report Issue Date: 10-03-2025		**Test Report No.:** IEM 24110000454	
Sample ID: 250307AP06004		**Sample Description:** Stack Emission	
Challan No./P.O. No.: 4546043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 06-03-2025	
Protocol: CPCB Guideline (LATS/80/2023-14) & IS Method 11255 Series			
Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

General Physical Information

Stack Identification	Packing Plant Stack - 2	**Sampling Port**	Available
Plat Form	Permanent	**Stack Height from Ground Level (m)**	45
Stack Description	Single	**Port Hole Height from Ground Level (m)**	45
Shape of Stack	Circular	**Inner Dimension of Stack (m)**	0.55
Construction Material	MS	**Pollution Control Device (if any)**	Bag Filter

Flue Gas Temperature (K): 333	**Flue Gas Velocity (m/s):** 22.3	**Flue Gas Volumetric Flow Rate (Nm^3/hr):** 16546.2

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm^3	23.1	30.0

Dust	kg/hr	0.4

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining temperature 27± 2°C and Relative Humidity 60± 5 in all testing area as per IS 149 (2002).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Complie with prescribed specification

Tested By: Alankarika Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : A-8, Modi Heights, Opp. JBS Indly Kalna Station, Pahu Road, Ranchi, Jharkhand - 834001
Laboratory Site : Al No. – A-13, Sakar Villas, Near Sahar Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.- 8407804253, 8507904211, Email: lab.ems2012@gmail.com

Institute for Environmental Management

Test Report

ULR No.: T E 1 5 2 9 2 2 5 0 0 0 0 0 0 5 2 2			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Stack Emission	
Report Issue Date: 10-03-2025		**Test Report No.:** RN-241100500455	
Sample ID: 250307AP06005		**Sample Description: Stack Emission**	
Challan No./P.O. No.: 4548043344/237		**Challan No./P.No. Date:** 05-11-2024	
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:** 06-03-2025	
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series			
Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

General Physical Information

Stack Identification	Packing Plant Stack - 1	**Sampling Port**	Available
Plat Form	Permanent	**Stack Height from Ground Level (m)**	45
Stack Description	Single	**Port Hole Height from Ground Level (m)**	41
Shape of Stack	Circular	**Inner Dimension of Stack (m)**	0.55
Construction Material	MS	**Pollution Control Device (if any)**	Bag Filter

Flue Gas Temperature (K): 329	**Flue Gas Velocity (m/s):** 19.9	**Flue Gas Volumetric Flow Rate (Nm³/hr):** 14968.2

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm³	22.4	30.0

Dust	kg/hr	0.3

—End of Report—

Env Condition of Lab.	Temperature 25 ± 2 and Relative humidity 55 ± 5 at testing place as per IS 11255
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environmental (Protection) Rules – 1986
Remark	Sample Comply with prescribed specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddhath kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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Corporate office : A-8, Modi Heights, Opp. All India Radio Station, Ranchi, Jharkhand - 834001
Laboratory Site : H.No. – A-15, Sonari Villas, Near Indira Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.- 8407804253, 8437804253, Email- ieml2012@rediffmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** R/v 241105004F101
Sample ID: 250307AP00001		**Sample Description: Fugitive Emission**
Challan No./P.O. No.: 4546043344/237		**Challan No. / P.No. Date:** 05-11-2024
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:** 06-03-2025
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Truck Parking Area		
Field Meteorological Information	**A. Temp. (°C):** 24 **R.H. (%):** 47 **W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	712.2

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing zone as per IS 196/1964(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 30th May 2008
Remark	Sample sample with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed By	Authorized Signatory
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	(Tauqeer Ahmad)	(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.	Technical Manager	Director

Corporate office : A.K. Ahuja Heights, Opp. All India Radio Station, Kutta Road, Ranchi, Jharkhand - 834001
Laboratory Site : 19 Km. - 6 - 8 K, Adityapur Phase, Near Kidco Bhawan, Gamharia Bhawang - Adityapur, Ranchi-834002, Jharkhand, India
Ph - 0651-2462255, 9431764751/51, Email - info@iemindia.org, www.iemindia.org

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** IEM-2503050481-02
Sample ID: 250307KP05002		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/277		**Challan No. / P.No. Date:** 05-11-2024

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:** 06-03-2025	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Clinker Silo(Raw material yard)			
Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025		**Testing Ended:** 10-03-2025

---Test Results---

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1088.6

---End of Report---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 60±5 % in all testing area as per IS 1791:1986(E)
Abbreviation	MDL: Minimum Detection Limit, RDL: Refer Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 30th May 2009
Remark	Sample is comply with the prescribed specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

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Reviewed by	Authorized Signatory
(Tauqeer Ahmad)	(Dr. R. C. Jain)
Technical Manager	Director

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ranchi-834001, Jharkhand, India
[illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air

Report Issue Date: 10-03-2025	**Test Report No.:** Rh-241105009FE03
Sample ID: 2503074P05003	**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4546043344/237	**Challan No. / P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No IV/A-7(F), 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:** 06-03-2025

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

Sampling Location: Near Mill Area

Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1207.1

—End of Report—

Env.Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±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 20th May 2009.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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	(Tauqeer Ahmad)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorised signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi [illegible], Jharkhand, India
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** IN 241105004F04
Sample ID: 250307AP05004		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/237		**Challan No./P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No IVA-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:** 06-03-2025	
Protocol: CPCB Guideline(NAAQM/2/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Packing Plant			
Field Meteorological Information:	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1053.0

—End of Report—

Env.Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196:1981(C).
Abbreviation	MDL: Minimum Detection Limit; BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 18th May 2006.
Remark	Sample comply with the prescribed specification.

Tested By: Alankisha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes	Reviewed by	Authorised Signatory
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	(Tajdeer Ahmad)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorised signatory, the report is issued by the Director of the Organisation.	Technical Manager	Director

Corporate office : A-8, Modi Heights, Opp. All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834007
Laboratory site : HOC - 6, I.E. Sakri Chas, Near Nirmal Bhawan, Hehal, Dhurwa, Ranchi-834007, Jharkhand, India
Ph. : 9431809220, 8987604251, Email : iem2011@rediffmail.com

ANNEXURE-4

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** IEM-24110/004-101
Sample ID:241224A0000[illegible]		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/227		**Challan No./P.No. Date:** 05-12-2024

Issued to:
Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works)
Plot No PIA-7(P), Bokaro Industrial Area Balidih
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement	**Customer Representative:** Satyam Verma
Sample Drawn by: IEM Team	**Sampling Date:**23-12-2024

Protocol: CPCB Guidline(NAA(IM)/36/2012-13) & IS Method 5182 Series

Sampling Location: Truck Parking Area

Field Meteorological Information:	**A. Temp.** [illegible]	**R.H.** [illegible]	**W.C.:** Sunny, Cloudy	**W.D.:** NW to NE

Sample Receiving date:24-12-2024	**Testing Started:**24-12-2024	**Testing Ended:**27-12-2024

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1295.3

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 3°C and Relative Humidity 45±5 % [illegible] testing [illegible] as per IS [illegible]
Annexation	Min. Minimum Detection Limit, Min. Below Detection Limit
Limit is Specified	As Per CPCB 414 (D), Dated 20th May 2008.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes :	Reviewed by	Authorised Signatory
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Corporate Office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** RN-241102004F102
Sample ID: 241224AP025002		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4546043344/237		**Challan No./ P.No. Date:** 05-11-2024

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:** 23-12-2024

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

Sampling Location: Near Clinker Silo/Raw material yard)

Field Meteorological Information	**A. Temp.** (°C):28	**R.H.** (%):64	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE

Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	981.2

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 3861:1966(E).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414(E) Dated 8th May 2008.
Remark	Sample comply with the prescribed specifications.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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On the basis of Quality Checked and Technical cross-verified by the Authorised signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorised Signatory
(Tauqeer Ahmad)	(Dr. N. C. Jain)
Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible] Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** R/V 241205004/r103
Sample ID: 241224AP03003		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4546043544/237		**Challan No./ P.No. Date:** 05-11-2024

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:** 23-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Mill Area			
Field Meteorological Information	**A. Temp.** (°C):20	**R.H.** (%):64	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part – 04	$\mu g/m^3$	2000	1122.7

—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, RDL: Reporting Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 5th May 2009
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** RN-241205004F604
Sample ID: 241224AP03004		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548943344/237		**Challan No./ P.No. Date:** 09-11-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No IVA-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:** 23-12-2024	
Protocol: CPCB Guideline/NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Packing Plant			
Field Meteorological Information	**A. Temp.** 25-30	**R.H.** 60-64	**W.C.:** Sunny Cloudy **W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	988.6

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±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 09th May 2008.
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddhath Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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	(Tauqeer Ahmad)	(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	Technical Manager	Director

Corporate Office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024	**Test Report No.:** RN-241205004FDS	
Sample ID: 241204AP03008	**Sample Description:** Fugitive Emission	
Challan No./P.O. No.: 4548043344/237	**Challan No./ P.No. Date:** 05-11-2024	

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:** 23-12-2024		
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series				
Sampling Location: Packing Floor Area				
Field Meteorological Information	**A. Temp.** [illegible]	**R.H.** [illegible]	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024		**Testing Ended:** 27-12-2024	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m^3	10	8.9

—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(Ed Inv. Rules)
Remark	Sample Comply With the Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024	**Test Report No.:** IIM-241205004FE05	
Sample ID: 241224AP03005	**Sample Description:** Fugitive Emission	
Challan No./P.O. No.: 4946043344/237	**Challan No./ P.No. Date:** 05-11-2024	

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:** 23-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Mill Area			
Field Meteorological Information	**A. Temp.** (°C):28	**R.H.** (%):54	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m^3	10	8.4

—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 Factories Act, 1948(Work Room)
Remark	Sample Complie With the Prescribed Specification

Tested By: Akanksha Sonkar

Sample Drawn By: Siddharth Kumar & Team

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Corporate Office : [illegible]
Laboratory Add : H.No. : [illegible]
[illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024	**Test Report No.:** IEM 241105024FUJ	
Sample ID: 241234AP03007	**Sample Description:** Fugitive Emission	
Challan No./P.O. No.: 4548043344/237	**Challan No./ P.No. Date:** 05-11-2024	
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IVA-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:** 23-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Wagon Loading Area		
Field Meteorological Information	**A. Temp.** (°C): 30	**R.H.** (%):64	**W.C.:** Semi- Cloudy	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Particulate Matter (SPM)	IS 5182 Part - 24	mg/m^3	NI	4.4

—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	NDL: Minimum Detection Limit; RDL: Reporting Detection Limit
Limit is Specified	As Per Factories Act, 1948(Work Zone)
Remark	Sample Complies With the Prescribed Specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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	T. Ahmad (Tauqeer Ahmad) Technical Manager
	(Dr. S. C. Jain) Director
On the basis of Quality Checked and Technically verified by the Authorized signatory, the report is issued by the Director of the Organization.	

Corporate office : [illegible]
Laboratory site : [illegible]
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 27-12-2024		**Test Report No.:** IEM-241105004FF338
Sample ID: 241224AP01008		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/237		**Challan No. / P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No NIA-7(P), Bokaro Industrial Area Saildih
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement		**Customer Representative:** Sanjeev Verma	
Sample Drawn by: IEM Team		**Sampling Date:** 24-12-2024	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Truck Loading Area			
Field Meteorological Information	**A. Temp.:** (°C)38	**R.H.:** (%)64	**W.C.:** Semi-Cloudy	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024		**Testing Ended:** 27-12-2024

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part – 04	mg/m^3	10	6.8

—End of Report—

Env. Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 55±5 % in all testing area as per IS 1981:1986(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As Per Factories Act, 1948(Ministry)
Remark	Sample Comply With the Prescribed Specification

Tested By: Akanksha Gautam

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by:	Authorized Signatory
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On the basis of Quality Checked and Technically verified by the Authorized signatory, this report is issued by the Director of the Organization.		

Corporate Office : [illegible]
Laboratory Loc. : [illegible]
Ph. : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Work Environment & indoor Air
Report Issue Date: 10-03-2025		Test Report No.: IEM-241105004F101
Sample ID: 250307AP00001		Sample Description: Fugitive Emission
Challan No./P.O. No.: 4548043344/237		Challan No. / P.No. Date: 05-11-2024
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:06-03-2025
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Truck Parking Area		
Field Meteorological Information	A. Temp. (°C): 24	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date:07-03-2025	Testing Started:07-03-2025	Testing Ended:10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1.	Suspended Perticulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	712.2

—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(E).
Abbreviation	MDL: Minimum Detection Limit. BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 5th May 2009
Remark	Sample is comply with the prescribed specification

Tested By: Akanksha Soubbh

Sample Drawn By: Siddharth kumar & Team

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

Reviewed by	Authorized Signatory
(Tauheer Ahmad)	(Dr. S.C. Jain)
Technical Manager	Director

Corporate office : A.K. Mall Heights, Opp.-12 Indra Kalir Palace, East Govt. Ranchi, Jharkhand - 834001
Laboratory Site : 31 No. - A-33, Sector VI(A), Near Sulabh Showcase, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.: 8447047333, 8447047111, Email : info@iemindia.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** RN-241105004-102
Sample ID: 250307AP06002		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024

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:** 06-03-2025	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Clinker Silo(Raw material yard)			
Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Perticulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1065.8

—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 G.S.R. 414 (E) Dated 20th May 2008
Remark	Sample sample with the prescribed specifications.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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	(Tauqeer Ahmad)	(Dr. S. C. Jain)
On the base of Quality Checked and Technical data verified be the authorised signatory the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : A-8, Mini Duplex, Opp. All India Radio Station, Ratu Road, Ranchi Jharkhand - 834001
Laboratory Site : Plot No. - A-13, Kalpa Vihar, Near Bihar Bhawan, Bipin Bihari Colony, Ranchi-834002, Jharkhand, India
Ph : 8447064334, 8409409339, Email : iem2013@rediffmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air

Report Issue Date: 10-03-2025	**Test Report No.:** IEM-241106/004FE03
Sample ID: 250307AP09003	**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4548043344/237	**Challan No./ P.No. Date:** 05-11-2024

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:** 06-03-2025

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

Sampling Location: Near Mill Area

Field Meteorological Information	**A. Temp. (°C):** 34	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	2000	1207.1

—End of Report—

Env Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 60±5 % in all testing area as per IS 196 1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As Per G.S.R. 414 (E) Dated 30th May 2008
Remark	Sample comply with the prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

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Corporate Office / A-8, Vasant Enclave, City- All India Kisan Nagar, Ratu Road, Ranchi, Jharkhand - 834002
Laboratory Site - Office - 1, 2, 3, Sabal Chatti, Near Sahar Dispensary, Harmu Housing Colony, Ranchi, 834002, Jharkhand, India
Tel - 9427924033, 9431762031, Email - [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Work Environment & Indoor Air
Report Issue Date: 30-03-2025		**Test Report No.:** IEM-24115/0004/104
Sample ID: 050007AP0004		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4500435447237		**Challan No./ P.No. Date:** 05-11-2024

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:** Sanjay Verma
Sample Drawn by: IEM Team	**Sampling Date:** 06-03-2025

Protocol: CPCB Guidelines(NAAQM/5/36/2012-13) & IS Method 5182 Series

Sampling Location: Near Packing Plant

Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	$\mu g/m^3$	3000	1053.0

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196 (1966)(E)
Abbreviation	MDL: Minimum Detectable Limit; NDL: Noise Detection Limit
Limit is Specified	As Per G.S.R. 414 (E), Dated 30th May 2000
Remark	Sample complies with the prescribed specifications

Tested By: Akanksha Dowarah

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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Corporate office : 1-B, Modi Heights, Opp. All India Radio Station, Ashok Nagar, Ranchi, Jharkhand - 834002
Laboratory Unit : 10 Km - 11 Km, Sajna Chad, Near Sajna Village, Harmu Sewage Canal, Ranchi-834002, Jharkhand, India
M - 9431809202, 9431809203, Email : info@iemindia@gmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** IEM-241105/0041115
Sample ID: 241107IAN05806		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4546043044/207		**Challan No./ P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No (V/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:** 06-03-2025	
Protocol: CPCB Guideline/NAAQM/35/2012-13 & IS Method 5182 Series			
Sampling Location: Packing Floor Area			
Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.S.:** Nil to 3k
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 24	mg/m^3	10	7.3

—End of Report—

Env.Condition at Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 50±5 % in all testing area as per IS 546 (Part-1)
Abbreviation	NQL: Minimum Detection Limit, BDL: Below Detection Limit
Limit as Specified	As Per Pollution Act 1948(Air Act)
Remark	Sample Comply With the Prescribed Specification

Tested By: Akanksha Saurabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi, [illegible], Jharkhand, India
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** RN-241108004FE06
Sample ID: 250307AP05006		**Sample Description: Fugitive Emission**
Challan No./P.O. No.: 4648043344/237		**Challan No./ P.No. Date:** 05-11-2024
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No (V/A-7(P), Bokaro Industrial Area Baldih Bokaro Steel City, Bokaro-827014 Jharkhand India		
Type of Industry: Cement		**Customer Representative:** Sanjeev Verma
Sample Drawn by: IEM Team		**Sampling Date:** 06-03-2025
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Mill Area		
Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47 **W.C.:** Sunny **W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m^3	10	6.8

—End of Report—

Env Condition of Lab.	Laboratory is maintaining Temperature 27± 3°C and Relative Humidity 45±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 (Rules Rule)
Remark	Sample Comply With the Prescribed Specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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On the base of Quality Checklist and Technical data verified by the Authorized signatory, this report is issued by the Director of the Organization.	(Taqseen Ahmad) Technical Manager	(Dr. S. C. Jain) Director

Corporate office : A-9, Mish Heights, Opp. All India Radio Station, Kanke Road, Ranchi, Jharkhand - 834001
Laboratory Site : R.No. - 4, C.L. Sahu Village, Near Sikkal Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph. : 9431762411, 8431606131, Email : info@iemindia.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** [illegible]
Sample ID: 2[illegible]0007AP05007		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4500043344/237		**Challan No./ P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works)
Plot No IWA-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:** 06-02-2025

Protocol: CPCB Guideline(M4A0/4S/96/2013-14) & IS Method 5182 Series

Sampling Location: Wagon Loading Area

Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m³	10	6.9

—End of Report—

Env.Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 55±5 % in all testing area as per IS 546: 1960(C)
Abbreviation	MDL: Minimum Detection Limit; SDL: Status Detection Limit
Limit is Specified	As Per Rajasthan Act, 1948(R Use Rules)
Remark	Sample Complie With the Prescribed Specification

Tested By Akanksha Gowalih

Sample Drawn By Siddharth Kumar & Team

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

Corporate office : [illegible]
Laboratory Off : [illegible]
Ranchi-834002, Jharkhand, India
Ph : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub Group:** Work Environment & Indoor Air
Report Issue Date: 10-03-2025		**Test Report No.:** IEM-241106004FE08
Sample ID: 250307AP06008		**Sample Description:** Fugitive Emission
Challan No./P.O. No.: 4546043344/237		**Challan No./ P.No. Date:** 05-11-2024

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:** 06-03-2025

Protocol: CPCB Guideline(NAAQM/5/36/2012-13) & IS Method 5182 Series

Sampling Location: Truck Loading Area

Field Meteorological Information	**A. Temp. (°C):** 24	**R.H. (%):** 67	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Limit	Results
1	Suspended Particulate Matter (SPM)	IS 5182 Part - 04	mg/m^3	10	7.2

—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 (Air Act)
Remark:	Sample Comply With the Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth kumar & Team

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Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi [illegible] Jharkhand, India
Ph : [illegible], [illegible], Email : [illegible]

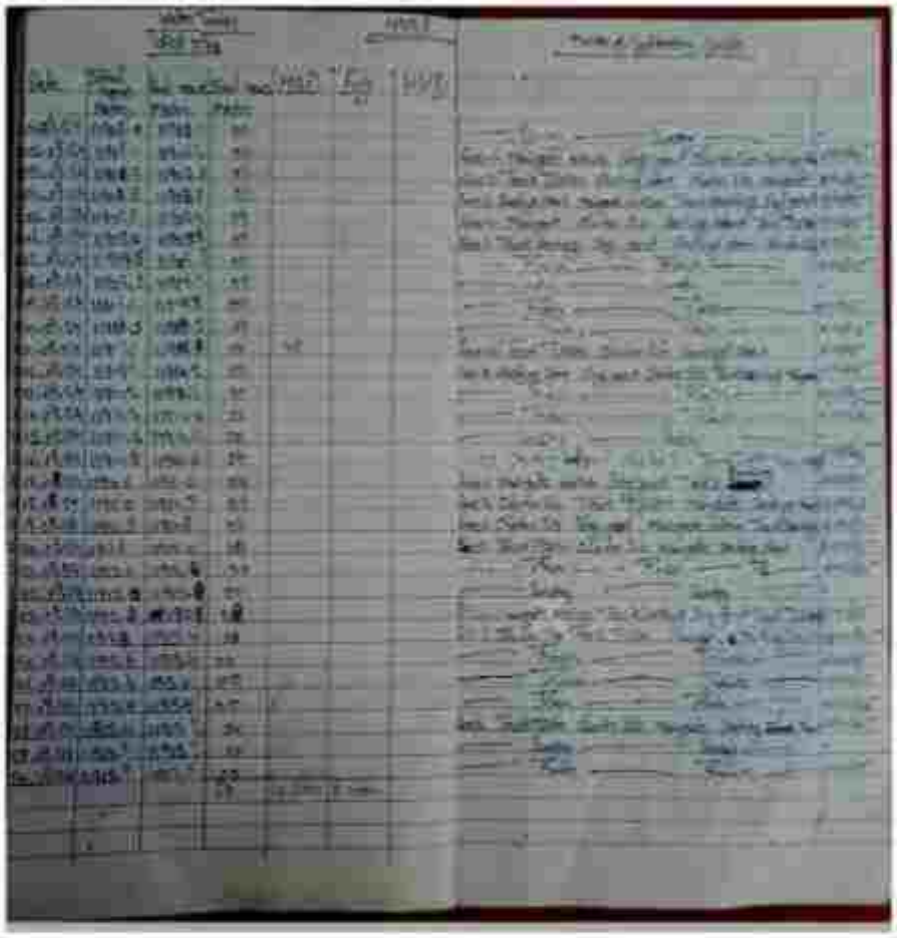
Fixed type water sprinkler provided in plant for the control of fugitive dust emission

Water sprinker near clinker yard

Water sprinkler provided near coal yard

Regular water sprinkling done on plant entrance road and dusty place area by 2 nos water spray tankers

Log book of water spray tanker



ANNEXURE-7

DALMIA CEMENT BHARAT LIMITED, BOKARO

Manual Stack emission monitoring report from October 2024 to March 2025

Month	Min.	Max.	Avg.
October-2024,	5.6	11.9	8.7
November-2024,	5.3	10.1	7.9
December-2024,	7.6	13.8	10.7
January-2025,	8.2	19.4	13.2
February-2025,	9.6	16.1	12.3
March-2025,	6.0	12.2	9.4
Min.	**5.3**	**10.1**	**7.9**
Max.	**9.6**	**19.4**	**13.2**
Avg.	**7.1**	**14.1**	**10.4**

On Line CEMS report from October 2024 to March 2025

Month	Min.	Max.	Avg.
October-2024,	5.6	15.9	14.1
November-2024,	6.9	12.6	11.9
December-2024,	7.6	16.5	15.3
January-2025,	6.1	17.4	14.7
February-2025,	13.8	24.7	19.8
March-2025,	11.4	23.8	20.6
Min.	**5.6**	**12.9**	**11.9**
Max.	**13.8**	**24.7**	**20.6**
Avg.	**8.8**	**18.9**	**16.1**

JSPCB Norms	**30 mg/Nm3**

Institute for Environmental Management

Test Report

Unit No.: T C 1 1 2			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Stack Emission	
Report Issue Date: 13-01-2025		Test Report No.: IW-241101304[illegible]	
Sample ID: 2501014P[illegible]		Sample Description: Stack Emission	
Challan No./P.O. No.: 4500403344/537		Challan No./ F.No. Date: 05-01-2024	

Issued to:
Ultratech Cement (Bharat) Limited, (Jharkhand Cement Works)
Plot No 10A-1(P), Bokaro Industrial Area Bokaro
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team		Sampling Date: 09-01-2025	
Protocol: CPCB Guideline 1-47/86/2013-14/ & IS Method 11255 Series			
Field Meteorological Information	A. Temp. (°C): 36	R.H. (%): 67	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date: 13-01-2025	Testing Started: 17-01-2025	Testing Ended: 13-01-2025	

General Plant Information

Stack Identification	Cement Mill Bag House Stack	Sampling Port	Available
Plat Form	Permanent	Stack Height from Ground Level (m)	30
Stack Description	Common for cement mill 1 & 2	Port Hole Height from Ground Level (m)	30
Shape of Stack	Circular	Inner Dimension of Stack (m)	3.7
Construction Material	MS	Pollution Control Device (If any)	Bag House

Flue Gas Temperature (K): 373	Flue Gas Velocity (m/s): 10.0	Flue Gas Volumetric Flow Rate (Nm^3/hr): 141101.3

Test Result

Sl. NO.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part 1)	mg/Nm^3	24.9	30.0
Dust		kg/hr		7.1	

Note of Results:

Non-Conformance of Lab.	[illegible]
Abbreviation	NDL: Minimum Detection Limit; ND: Below Detection Limit
Limit as Rule/Act	As per the Environmental (Protection) Rules – 1986
Remark	Sample Complies with prescribed specification

Tested By: Akanksha Gaurish

Sample Drawn By: Siddharth kumar & Team

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Reviewed By: Technical Manager

Authorised Signatory: Director

Page 1 of 1

Corporate office - [illegible]
Laboratory Site - [illegible]
Ranchi [illegible], Jharkhand, India
Ph - [illegible], Email - [illegible]

CEMS CALIBRATION

Endress+Hauser

People for Process Automation

Endress+Hauser (India) Pvt. Ltd.

Customer Name:

Work Order Details:

Fixed Unit Name:

Calibration Report No:

Calibration Date:

Next Calibration Due on:

Sl. No.	Analyzer Installed	Method of Sampling	Analyzer's Measured Values (Actual Engaged during Calibration Sampling)	Process conditions during Calibration Sampling	Calibrator Sampling Result Actual mg/Nm³	Analyzer Measurement Corrected Result at Calibrator Sampling Result
1.	[illegible]	Standard Calibration	[illegible]	Stable	[illegible]	[illegible]

Signature:

Remarks:

Institute for Environmental Management

Test Report
Stack Emission
(ISO KINETIC SAMPLING)
Grinding Mill Unit-1

Client Name &Address:	**Sample Details:**
M/s. Dalmia Cement (Bharat) Limited **Plot No. IV/A – 70/F, Bokaro Industrial Area,** **PO – Balidih/Dist.- Bokaro-Jharkhand-827014**	Type of Industry: Cement Manufacturer Sample Description: Stack Emission Sampling Date: 12/03/2025 Sampling Location: Grinding Mill Unit Ladder/Platform: Yes Weather Condition: Sunny
Test Report No: IEM-DCBL-STACK-1-IKS-2607/2024 Report issue Date:13/03/2025 Protocol: IS Method & CPCB Guideline	Customer Rept.: Mr. Sanjeev Verma Sample Drawn by: Rajiv Kumar Singh & Team

General Physical Information

1.	Type of Plant	Cement Grinding Unit
2.	Plant Running Condition	Yes
3.	Emission Due to	Grinding of Raw Material
4.	Stack Height from Ground Level (m)	42
5.	Port Hole Height from Ground Level (m)	30
6.	Shape of Stack	Circular
7.	Inner Dimension of Stack (m)	2.75
8.	Stack Connected to	Bag Filter
9.	Type of Fuel Used	[illegible]
10.	Consumption of Fuel	Nil
11.	Pollution Control Device / Arrg.	Bag House
12.	ID Fan Capacity	8 Lakh Cubic per Hour

Flue Gas Emission Analysis

Sl. No.	Parameters	Protocol	Result 1st Sampling 12/03/2025 03:53 PM-04:53PM	Result 2nd Sampling 12/03/2025 05:00 PM-06:00PM	Result 3rd Sampling 12/03/2025 06:30PM-07:30PM
1.	Flue Gas Temperature(°C)	IS 11255 (Part-3)	96	96	95
2.	Moisture in Flue Gas (%)	CPCB Guideline	4.1	4.0	4.1
3.	Absolute Stack Gas Pressure (mm Hg)	CPCB Guideline	745.7	745.6	745.6
4.	Flue Gas Velocity (m/s)	IS 11255 (Part-3)	8.3	8.1	8.3
5.	Stack Gas Volumetric Flow Rate (Nm³/hr.)	IS 11255 (Part-3)	281526.9	284000.8	283174.8
6.	**Particulate Matter (mg/Nm³)**	IS 11255 (Part-1)	**16.3**	**20.8**	**15.8**
7.	Particulate Matter (kg/hr.)	IS 11255 (Part-1)	15.4	18.7	15.4

Emission Rate

	Dust (Kg/hr.)	CPCB Guideline	5.44	5.90	5.81

—End of Report—

Results Contained Herein:
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In the case of Quality Checks and Technical data collected by the Authorized Agency, the report is issued by the Director of the Organization.

Reviewed by:	Authorized Signatory
(Technical Manager)	(Dr. K. C. Jain)
Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible]

DALMIA CEMENT BHARAT LIMITED, BOKARO

Manual Stack emission monitoring report from April 2024 to September 2024

Month	Min.	Max.	Avg.
April-2024	10.6	20.6	15.3
May-2024	9.7	16.9	12.7
June-2024	6.8	13.5	10.6
July-2024	7.9	21.4	13.2
August-2024	9.5	19.2	11.5
September-2024	8.9	18.5	15.2
Min.	**6.8**	**13.5**	**10.6**
Max.	**10.6**	**21.4**	**15.3**
Avg.	**8.9**	**18.1**	**13.1**

On Line CEMS report from April 2024 to September 2024

Month	Min.	Max.	Avg.
April-2024	6.4	22.1	15.7
May-2024	9.3	24.3	17.4
June-2024	7.8	15.3	12.1
July-2024	6.8	21.6	16.2
August-2024	8.0	17.5	14.3
September-2024	6.2	20.8	16.2
Min.	**6.2**	**15.3**	**12.1**
Max.	**9.3**	**24.3**	**17.4**
Avg.	**7.5**	**20.2**	**15.2**

JSPCB Norms	**30 mg/Nm3**

Institute for Environmental Management

Test Report

LRN No.:	1 1 1 2 5 1 0 2 4 0 0 0 0 0 1 0 4 5
Discipline: Chemical	**Group:** Atmospheric Pollution / **Sub-Group:** Stack Emission
Report Issue Date: 27-09-2024	**Test Report No.:** IEM/2024/00101
Sample ID: 2409240904001	**Sample Description:** Stack Emission
Challan No./P.O. No.: 4540306/1/001	**Challan No./P.No. Date:** 16-09-2024

Issued to:

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

Type of Industry: Cement	**Customer Representative:** Sanjeev Verma
Sample Drawn by: IEM Team	**Sampling Date:** 14-09-2024
Protocol: CPCB Guideline 2/HT/1/2021-22 & 1/Method 31200 Series	
Field Meteorological Information: A. Temp. (°C): 26 R.H. (%): 60 W.S.: Fairly Sunny W.D.: W to NW	
Sample Receiving date: 24-09-2024	**Testing Started:** 24-09-2024 **Testing Ended:** 27-09-2024

General Plant Information

Stack Identification	Cement Mill Bag House Stack	**Sampling Port**	Available
Plat Form	Permanent	**Stack Height from Ground Level (m)**	35
Stack Description	Chimney	**Port Hole Height from Ground Level (m)**	20
Shape of Stack	Circular	**Inner Dimension of Stack (m)**	3.3
Construction Material	MS Sheet	**Pollution Control Device (if any)**	Bag House

Flue Gas Temperature (K): 370	**Flue Gas Velocity (m/s):** 16.5	**Flue Gas Volumetric Flow Rate (Nm³/hr):** 142124.2

Test Result

Sl. No.	Parameters	Test Methods	Unit	Result	Limits
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm³	19.4	50.0

Date	kg/hr	14.0

Remarks

Env. Condition of Lab	[illegible]
Abbreviation	[illegible]
Limit is Specified	As per the Environmental Protection Act, 1986
Remark	Sample Certified with government specification

Tested By: Akshata Sourabh

Sample Drawn By: Vijay Kumar Singh & Team

Sub-Ref Contractual Issues 1. The results shown relate only to the sample tested. 2. This report shall not be reproduced except in full without written approval of the IEM. 3. The results indicated in this report are valid for the sample submitted for examination. 4. Any complaint about the report should be communicated in writing within 15 days of its issue. 5. The liability of IEM is limited to the amount charged for the analysis conducted under the contract. 6. In case of feedback or queries, please write to us at info@iem.co.in Unauthorised use of name, logo and technical results by the customer/agent is forbidden. Violators will be prosecuted.	Reviewed By: Authorised Signatory Designation: Analyst Sign & Date: [illegible] Technical Manager: Sign & Date:

[illegible]

Annexure-7

DALMIA CEMENT BHARAT LIMITED, BOKARO

Ambient air quality monitoring report from October 2024 to March 2025

Ambient air quality monitoring report -Near Time office				
	SO2 µg/m3	NOx µg/m3	PM-10 µg/m3	PM-2.5 µg/m3
October-2024	6.1	13.7	44.0	23.7
November-2024	7.3	11.5	46.8	26.1
December-2024	8.11	15.20	48.6	28.6
January-2025	12.7	13.5	55.5	29.7
February-2025	7.5	17.4	51.3	26.8
March-2025	9.1	15.0	55.2	27.7
Min.	**6.1**	**11.5**	**44.0**	**23.7**
Max.	**12.7**	**17.4**	**55.5**	**29.7**
Avg.	**8.5**	**14.4**	**50.2**	**27.1**

Ambient air quality monitoring report FH-3 Building				
	SO2 µg/m3	NOx µg/m3	PM-10 µg/m3	PM-2.5 µg/m3
October-2024	7.0	11.6	47.1	21.7
November-2024	9.1	15.7	45.5	26.0
December-2024	8.4	13.3	44.8	24.5
January-2025	11.8	12.7	52.1	26.9
February-2025	12.2	16.2	50.9	24.5
March-2025	8.2	11.5	51.2	25.5
Min	**7.0**	**11.5**	**44.8**	**21.7**
Max.	**12.2**	**16.2**	**52.1**	**26.9**
Avg.	**9.5**	**13.6**	**48.6**	**24.7**

JSPCB Norms

SO_2	NO_2	PM_{10}	$PM_{2.5}$
($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
80	80	100	60

DALMIA CEMENT BHARAT LIMITED, BOKARO

Ambient air quality monitoring report from October 2024 to March 2025

Ambient air quality monitoring report: Near Wagon Tippler				
	SO2	NOx	PM-10	PM-2.5
	µg/m3	µg/m3	µg/m3	µg/m3
October-2024	10.8	14.6	50.7	25.7
November-2024	8.6	12.3	48.8	23.8
December-2024	12.7	16.4	53.3	27.4
January-2025	10.6	15.3	57.0	30.1
February-2025	14.8	18.2	53.1	25.9
March-2025	15.2	13.8	52.8	24.3
Min	**8.6**	**12.3**	**48.8**	**23.8**
Max	**15.2**	**18.2**	**57.0**	**30.1**
Average	**12.1**	**15.1**	**52.6**	**26.2**

Ambient air quality monitoring report: Fabrication yard				
	SO2	NOx	PM-10	PM-2.5
	µg/m3	µg/m3	µg/m3	µg/m3
October-2024	8.0	10.1	48.0	22.3
November-2024	13.5	15.1	57.9	27.6
December-2024	10.0	12.2	54.7	26.3
January-2025	8.7	14.7	58.1	28.9
February-2025	11.6	11.6	52.3	23.2
March-2025	12.5	13.2	54.1	26.1
Min	**8.0**	**10.1**	**48.0**	**22.3**
Max	**13.5**	**15.1**	**58.1**	**28.9**
Average	**10.7**	**12.6**	**54.2**	**25.7**

JSPCB Norms

SO_2	NO_X	PM_{10}	$PM_{2.5}$
($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
80	80	100	60

Ambient air quality report from NABL/JSPCB approved lab of month of March 2025

Institute for Environmental Management

Test Report

MR No: T C 1 5 7 0 2 3 3 0 0 0 0 0 0 0 5 0 3	
Discipline: Chemical	Group: Atmospheric Pollution / Sub-Group: Ambient Air
Report Issue Date: 10-03-2025	Test Report No.: IIN-241170000001
Sample ID: [illegible]	Sample Description: Ambient Air
Challan No./P.O. No.: [illegible]	Challan No./P.No. Date: 05-11-2024

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: Sangam verma
Sample Drawn by: EM Team	Sampling Date: 04-03-2025 to 07-03-2025
Protocol: CPCB G:\Sector\NAAQMS\36\2013-14 & 5 Method 5182 Series	
Sampling Location: Near Main Gate	
Field Meteorological information: A. Temp. (°C): 22 / R.H. (%): 67 / W.C.: Sunny / W.D.: NW to SE	
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025 / Testing Ended: 12-03-2025

—Test Results—

Sl. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM_{10})	IS 5182 Part 23:2008	$\mu g/m^3$	100	66.8
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	29.2
3.	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	17.4
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	32.5
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	25.8
6.	Ozone (O_3)	IS 5182 Part 26	$\mu g/m^3$	100	22.1
7.	Arsenic (as As)	USEPA IO 3.3	ng/m^3	—	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.05
9.	Nickel (as Ni)	IS 5182 Part 36	ng/m^3	—	BDL (MDL-4)

—End of Report—

Env Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 60±5 % as all testing [illegible]
Abbreviation	NDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit to Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification

Tested By: Hariklitha Gautam

Sample Drawn By: Siddharth kumar & Team

Specific Contested Rules:
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7. In the case of Quality Control and Technical data written in the submission systems, no report is issued to the Director of the Organization.

Reviewed by:	Authorized Signatory
(Technical Manager)	(Dr. A. C. Jain)
Technical Manager	Director

Page 3 of 3

Corporate office : A-8, Nilesh Hospital, Opp. All India Radio Station, Ranchi Road, Ranchi, Jharkhand -834002
Laboratory Site : H No. - A 33, Sakar Vihar, Near Sulina Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph. [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 10-03-2025	Test Report No.: [illegible]	
Sample ID: [illegible]	Sample Description: Ambient Air	
Challan No./P.O. No.: [illegible]	Challan No./P.No. Date: [illegible]	
Issued to: Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works) Plot No-N/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: [illegible] to [illegible]	
Protocol: CPCB Guideline/NAAQM/SN/2012-13/ & IS standard 5182 Series		
Sampling Location: Near Main Gate		
Field Meteorological Information	A. Temp. (°C): 22	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date: [illegible]	Testing Started: [illegible]	Testing Ended: [illegible]

---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/m³	—	BDL (MDL-0.10)
2.	Carbon Monoxide (CO)	IEM/SOP/AQ-01-2022	mg/m³	—	BDL(MDL-1.0)
3.	Benzene (C_6H_6)	IS 5182 Part 11	µg/m³	—	BDL (MDL-0.05)

---End of Report---

Env Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 3196 (Part-1)
Abbreviation	MDL: Minimum Detection Limit; BDL: Below Detection Limit
Norms* is Specified	National Ambient Air Quality Standards (NAAQS) 2009.
Remark	Sample Complie with prescribed specifications.

Tested By: Akanksha Sourabh

Sample Drawn By: Subhash kumar & Team

Results Conditional Notes	Reviewed By	Authorised Signatory
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On the basis of Quality Checked and Technical data verified by the Authorised signatory, the report is issued by the Director of the Organization.	Chandan Anand Technical Manager	Dr. B. C. Jana Director

Page 2 of 2

Corporate office : [illegible]

Laboratory Site : [illegible]

Ph. : [illegible], Mob[illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 2 5 0 0 0 2 0 0 5 0 A	
Discipline: Chemical	Group: Atmospheric Pollution / Sub-Group: Ambient Air
Report Issue Date: 10-03-2025	Test Report No.: RN-241/250304403
Sample ID: 250301AP03003	Sample Description: Ambient Air
Challan No./P.O. No.: 4540043244/037	Challan No./ P.No. Date: 05-11-2024
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No-N/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: 06-03-2025 to 07-03-2025
Protocol: CPCB Guideline(NAAQM/1/36/2012-LI) & IS Method 5182 Series	
Sampling Location: Near Colony	
Field Meteorological Information: A. Temp. (°C): 22 / R.H. (%): 47 / W.C.: Sunny / W.D.: NW to SE	
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025 / Testing Ended: 10-03-2025

—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	$\mu g/m^3$	100	35.8
2	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	27.3
3	Sulphur Dioxide (SO_2)	IS 5182 Part 02	$\mu g/m^3$	80	13.1
4	Nitrogen Dioxide (NO_2)	IS 5182 Part 06	$\mu g/m^3$	80	30.0
5	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	38.7
6	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	16.5
7	Arsenic (as As)	USEPA IO 3.3	ng/m^3	---	BDL (MDL-2)
8	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.06
9	Nickel (as Ni)	IS 5182 Part 28	ng/m^3	---	BDL (MDL-4)

—End of Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing areas as per IS 3196:2004(21).
Abbreviation	BDL: Minimum Detection Limit, MDL: Method Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification

Tested By: Manisha Gupta

Sample Drawn By: Siddharth Kumar & Team

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6. In case of feedback/ complaints, please send an email to info@iemlab.net

On the basis of Quality Checked and Technically verified by the authorized signatory, this report is issued to the Director of the Organization.

Reviewed By	Authorized Signatory
T. Mishra	S. C. Jain
Technical Manager	Director

Corporate office - A-8, Modi Heights, Opp. Allmitra Public School, Hatia Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. - A-13, Talent Vihar, Near Sahara Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.- 8407804251, 8407804251, Email- iem2012@rediffmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 10-03-2025	Test Report No.: IEM-241305004A25	
Sample ID: 2503IEMP0005	Sample Description: Ambient Air	
Challan No./P.O. No.: 4946043344/027	Challan No./ P.No. Date: 05-12-2024	

Issued to:
Dalmia Cement (Bharat) Limited, Lihar/Hand Cement Works)
Plot No IVA-7(P), Bokaro Industrial Area Bokaro
Bokaro Steel City, Bokaro-827014 ,Jharkhand India

Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team		Sampling Date: 06-03-2025 to 07-03-2025	
Protocol: CPCB Guidelines(NAAQM/2/96/2012-13) & IS-Method 5182 Series			
Sampling Location: Near Colony			
Field Meteorological Information:	A. Temp. (°C): 22	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date:07-03-2025	Testing Started:07-03-2025	Testing Ended:10-03-2025	

—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/m³	—	BDL(MDL-0.38)
2	Carbon Monoxide (CO)	IEMSOP/AA-01 2023	mg/m³	—	BDL(MDL 1.0)
3	Benzene (C_6H_6)	IS 5182 Part 11	µg/m³	—	BDL (MDL-0.26)

—End of Report—

Env.Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5% in all testing area as per IS 196-1966(C).
Abbreviation	BDL: Managed Detection Limit, BDL: Below Detection Limit
Norms* is Specified	National Ambient Air Quality Standards (NAAQS), 2009
Remark	Sample Complie with prescribed specification

Tested By:Hamlata Sourabh

Sample Drawn By:Sudhanshu kumar & Team

Specific Contractual Note:	Reviewed by	Authorized Signatory
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Corporate office - 4 A, Modi Heights, Opp.-All India Radio Station, Ajay Road, Ranchi, Jharkhand - 834001
Laboratory Site - Plot - A-13, Saket Vihar, Near Sahara Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.- [illegible], Email - [illegible]

Institute for Environmental Management

Test Report

UAR No.: T C 1 5 2 5 2 2 5 0 0 0 0 0 0 0 5 0 3		
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 03-05-2025	Test Report No.: IN-241/05/04401	
Sample ID: 250307AP0005	Sample Description: Ambient Air	
Challan No./P.O. No.: 4500431044/237	Challan No./ P.No. Date: 05-11-2024	
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: 05-03-2025 to 07-03-2025	
Protocol: CPCB Guidelines(NAMP)/Method 1182 Series		
Sampling Location: Near Fabrication Yard		
Field Meteorological Information: A. Temp. (°C): 22	R.H. (%): 41	W.E.: Sunny	W.D.: NW to SE
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025	Testing Ended: 10-03-2025

—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	$\mu g/m^3$	100	65.3
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	53.5
3.	Sulphur Dioxide (SO_2)	IS 5182 Part-02	$\mu g/m^3$	80	19.3
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part-06	$\mu g/m^3$	80	36.1
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	31.4
6.	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	20.9
7.	Arsenic (as As)	USEPA I.D. 3.2	ng/m^3	—	BDL (MDL:2)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.05
9.	Nickel (as 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 45±5 % in all testing area as per IS 196:1966(E)
Abbreviation	MDL: Minimum Detectable Limit, BDL: Below Detectable Limit
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Collect with prescribed specification

Tested By: Akanksha Gautam

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes:
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7. In the case of Quality Control test, Test/Cal was verified by the authorized signatory. The report is issued to the Director of the Organization.

Reviewed by: Authorized Signatory

Technical Manager — Dr. S. C. Jain, Director

Corporate office : A-8, Modi Heights, Opp. All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834005
Laboratory Site : H No. – A-10, Salem Vihar, Near Jaitvar Bhawan, Vinoba Housing Colony, Ranchi-834002, Jharkhand, India
Ph. : 8407804270, 8407804271, Email : iem2012@rediffmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 10-03-2025		Test Report No.: [illegible]
Sample ID: [illegible]		Sample Description: Ambient Air
Challan No./P.O. No.: [illegible]		Challan No./ P.No. Date: [illegible]

Issued to:
Dalmia Cement (Bharat) Limited, Jharkhand Cement Works)
Plot No IVA-7(P), Bokaro Industrial Area Balidih
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement	Customer Representative: [illegible]
Sample Drawn by: IEM Team	Sampling Date: [illegible]

Protocol: CPCB Guidelines/NAAQMS/TM/2013-14 & IS Method 5182 Series

Sampling location: Near Tata Station Yard

Field Meteorological Information	A. Temp. (°C): 22	R.H. (%): 67	W.C.: Sunny	W.D.: NW to SE

Sample Receiving date: [illegible]	Testing Started: [illegible]	Testing Ended: [illegible]

---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/m³	—	[illegible]
2	Carbon Monoxide (CO)	[illegible]	mg/m³	—	[illegible]
3	Benzene (C_6H_6)	IS 5182 Part 11	µg/m³	—	[illegible]

---End of Report---

Env Condition at Lab	Laboratory is maintaining temperature 27±2°C and Relative Humidity 45±5 % in all testing area as per IS 7769-1(1992)
Miscellaneous	[illegible]
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009
Remark	Sample Complies with prescribed specifications

Tested By: Mamata Soubdh

Sample Drawn By: Siddharth Kumar & Team

Results Contextual Note:	Reviewed by	Authorized Signatory
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On the basis of quality checked and technical cross verification by the authorized signatory, the report is issued by the Director of the Organization.	(Tarkeshwar Kumar) Technical Manager	Dr. [illegible] Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi-[illegible], Jharkhand, India
Ph.: [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 2 3 2 9 2 2 5 0 0 0 0 0 0 0 5 0 1			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air	
Report Issue Date: 17-03-2025		Test Report No.: IEM/241/25/04A04	
Sample ID: 250307AP03004		Sample Description: Ambient Air	
Challan No./P.O. No.: 4546043/94/227		Challan No./ P.No. Date: 20-11-2024	
Issued to: Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works) Plot No 01(A-7)P), Bokaro Industrial Area Sakchi Bokaro Steel City, Bokaro-827014 Jharkhand India			
Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by: IEM Team		Sampling Date: 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline (NAAQMS/36/2012) (3) & (5) Method 5.0/52 (Write)			
Sampling Location: Near Wagon Tipper			
Field Meteorological Information: A. Temp. (°C): 23	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025	Testing Ended: 07-03-2025	

—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	$\mu g/m^3$	100	67.6
2.	Particulate Matter ($PM_{2.5}$)	IS 5182 Part 24:2019	$\mu g/m^3$	60	38.2
3.	Sulphur Dioxide (SO_2)	IS 5182 Part-02	$\mu g/m^3$	80	39.0
4.	Nitrogen Dioxide (NO_2)	IS 5182 Part-06	$\mu g/m^3$	80	36.3
5.	Ammonia (NH_3)	IS 5182 Part 25	$\mu g/m^3$	400	28.9
6.	Ozone (O_3)	IS 5182 Part 09	$\mu g/m^3$	100	30.9
7.	Arsenic (as As)	USEPA I.D. 3.2	ng/m^3	—	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	$\mu g/m^3$	1.0	0.04
9.	Nickel (as Ni)	IS 5182 Part 28	ng/m^3	—	BDL (MDL-4)

—End of Report—

Env. Condition at Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 5182 (1993)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	As per the Environmental Protection Rule - 1986
Remark	Sample Collected and processed by customer

Tested By: Anjanaha Sourabh

Sample Drawn By: Subhash Kumar & Team

Specific Exclusion Notes:
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5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/complaint, please write an email to [illegible]

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

Reviewed By: Technical Manager Signature

Thousand Ahmad — Technical Manager

S. C. Jaiswal — Director

Corporate Office: A-8, Mitali Heights, Opp. All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834002
Laboratory Site: R.No. – A-13, Sakshi Vihar, Near Sahara Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.: [illegible], Email: [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Air
Report Issue Date: 10-03-2025		**Test Report No.:** EN 24 [illegible]
Sample ID: [illegible]		**Sample Description:** Ambient Air
Challan No./P.O. No.: [illegible]		**Challan No./P.No. Date:** 05-11-2024

Issued to:
Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works)
Plot No-N/A-7(P), Bokaro Industrial Area Bokaro
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement	**Customer Representative:** Sanjeev Verma
Sample Drawn by: IEM Team	**Sampling Date:** 06-03-2025 to 07-03-2025

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

Sampling Location: Near Wagon Tipper

Field Meteorological Information:	A. Temp. (°C): 32	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—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/m³	—	BDL (MDL-0.10)
2	Carbon Monoxide (CO)	IEMSOP/[illegible]	mg/m³	—	BDL(MDL-1.0)
3	Benzene (C_6H_6)	IS 5182 Part 11	µg/m³	—	BDL (MDL- 0.20)

—End of Report—

Env.Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 55±5 % as per [illegible]
Abbreviation	BDL: Minimum Detected Limit, BDL: Below Detection Limit
Norms * is Specified	National Institute for Quality Standards (NAQS) 2009
Remark	Analysis Complyin with prescribed cpcb notification.

Tested By: Shankaran Sourabh

Sample Drawn By: Siddharth Kumar & Team

Results Contextual Notes	Reviewed by	Authorized Signatory
1. The laboratory accepts responsibility for correctness of the report. 2. This report shall not be reproduced except in full, without written approval of the IEM. 3. This report is intended for only purposes and not for legal purpose or to be presented. 4. Any complaint about the report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to a maximum amount of Rs. 6. In case of feedback/ complaints please send an email at [illegible]	(Technical Manager)	(Director)
On the behalf of Quality Channel and Technical was entitled to the authorized signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph : [illegible], Email : [illegible]

ANNEXURE-8

List of air pollution control device installed in plant

Dalmia Cement (Bharat) Limited, Bokaro					
Sl. No.	Location	Equipment No.	Capacity in m^3/hr	No. of Bags	Standard
1	Cement Silo Top	591 BF1	7500	64	30 mg/Nm³, Non CPCB norms for Stack emission
2	Cement Silo Top	591 BF2	7500	64	
3	Cement Silo Top	591 BF3	7500	64	
4	C.S.Bin Dedusting	611BF1	3664	25	
5	C.S.Bin Dedusting	611BF2	3664	25	
6	C.S.Bin Dedusting	611BF3	3664	25	
7	Nuisance Dedusting	611BF4	18000	144	
8	Packing Plant	641BF1	34000	256	
9	Packing Plant	641BF2	16000	121	
10	Packing Plant	642BF1	34000	256	
11	Packing Plant	642BF2	18000	121	
12	Reclaiming Tunnel For Slag & Gypsum Conv	K91 BF1	12500	100	
13	Clinker Silo Bottom	511BF2	9000	72	
14	Clinker Silo Bottom	511 BF1	9000	72	
15	Cement Mill Hopper	K91 BF2	12500	100	
16	Coal Crusher	L31 BF1	5000	80	
17	FBC	L32 BF1	5000	80	
18	Bag House-1	521BF7	16000	121	
19	Bag House-2	522 BF7	3664	25	
20	Bag House - 1	521 BF6	714240	5632	
21	Bag House - 2	522 BF6	714240	5632	
22	C. Mill Hopper Top	511 BF3	9000	72	
23	C. Mill Hopper Bottom	521 BF1	14850	100	
24	C. Mill Hopper Bottom	521 BF2	13640	100	
25	Cement Mill - 1	521 BF4	15540	121	
26	Reject Building	521 BF5	7500	64	
27	Cement Mill - 2	522 BF4	15540	121	
28	Reject Building	522 BF5	7500	64	
29	Transfer Point Dedusting In Hopper Building	522 BF1	14850	100	
30	Transfer Point Dedusting In Hopper Building	522 BF2	13640	100	
31	Transfer Tower-1	491 BF1	9000	72	
32	Clinker Silo Top	491 BF2	9000	72	
33	Packing Plant	643 BF-1	30000	96	
34	Packing Plant	643 BF-2	20000	154	
35	Outside Cement Silo	643 BF-3	7500	97	

Annexure-9

Compliance of CREP Conditions

BOKARO CEMENT MANUFACTURING WORKS

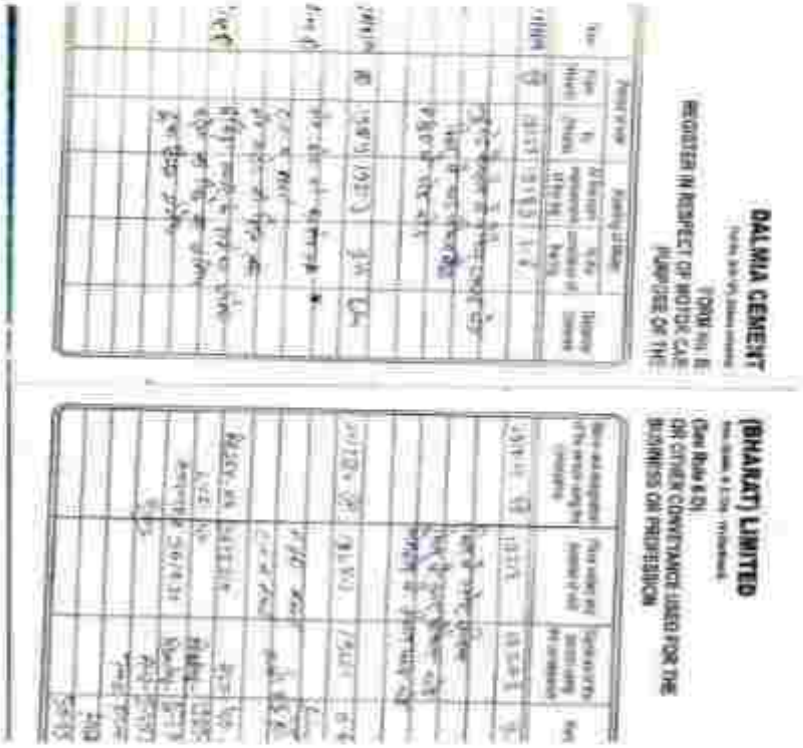
S.No.	CREP Conditions	Compliance
1	Cement plants/Standalone grinding units, which are not complying* with notified standards, shall do the following to meet the standards: • Augmentation of existing air pollution control devices- by July 2003 • Replacement of existing air pollution control devices- by July 2004	M/s. Dalmia cement (Bharat) Limited will comply with all the Stipulated standards given by MoEF&CC/JSPCB. Company has ensured installation of bag filter as air pollution control device (APCD) in plant to comply the notified standards. Regular monitoring of ambient air quality is also being/ will be practised.
2	Cement plants/Standalone grinding units located in critically polluted or urban areas (including 5 km distance outside under urban boundary) will meet 100 mg/Nm3 limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm. As per Gazette Notification MoEFCC G.S.R.497(E) dated 10th May, 2016, emission standards for PM have been prescribed as 30 mg/Nm3.	Neither the plant is located in Critically Polluted area nor in Urban areas. Plant is located in industrial area. All measures will be undertaken to keep emission level of PM below the permission limit. The major source of air pollution (i.e. Cement mill) will be provided with Bag House. Bag Filters and de-dusting/minimise filters will be installed in Packing Plant and all material transfer points.
3	The new cement kilns to be accorded NOC/ Environmental clearance w.e.f. 01.04.2003 will meet the limit of 50 mg/Nm3.	Unit is Stand-alone Grinding Unit only and will comply with new emission norms.
4	CPCB will evolve load based standards by December 2003.	This is a Stand-alone grinding unit; Load based standards issued by the MoEF&CC is for Kiln only for clinkerization. Hence, this condition is not applicable.
5	CPCB and NCBM will evolve SOz and NOx emission standards by June 2004	Unit is Stand-alone Grinding Unit only and there will not be SO2 and NOx emission during manufacturing process; this condition is not applicable.
6	The Cement industry will control fugitive emission from all the raw materials and products storage and transfer points by December 2003. However, the feasibility for	Unit is Stand-alone Grinding Unit only and there will not be SO2 and NOx emission during manufacturing process; this condition is not applicable.

	the control of fugitive emission from limestone and coal storage area will be decided by the National Task Force (NTF). The NTF shall submit its recommendations within three months.	To control the fugitive emissions the following measures are adopted/ proposed: • All measures to control emission from construction activities such • as covering of construction site, water sprinkling & covering of construction material etc are being adopted at site. • All the conveyors will be covered with conveyor covers and hoods to offset any trapping of material in wind stream. • Storage of raw material/cement in storage shed and Silos. • Concreted internal roads and The sprinkling of water will be done all along internal roads in the plant in order to control the dust arising due to the movement of vehicular traffic. • Thick green belt is being developed around the plant to arrests the fugitive emissions. • Plugging of all leakage and enclosing storage and material handling systems.
7	CPCB, NCCM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in cement kiln by July 2003.	Not Applicable
8	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring system (CMS) by December 2003.	Continuous emission monitoring system (CEMS) installed at Cement Mill Stack and real time emission monitoring data are being regularly transmitted to SPCB and CPCB website.
9	Tripping in kiln ESP to be minimized by July 2003 as per the recommendations of NTF.	Not Applicable: Stand-alone Grinding Unit, high efficiency Bag House provided in Cement Mill
10	Industries will submit the target date to enhance the utilization of waste material by April 2003.	After expansion, our GU utilize Fly ash along with Slag which are process waste generated by Thermal Power Plant and Steel industries and help them in getting rid of waste in most sustainable manner by converting into useful product i.e. Cement.

11	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	Not Applicable
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	Not Applicable

Annexure-10

Log book of running hours of road swapping machine



DALMIA CEMENT

FORM No. B
REGISTER IN RESPECT OF MOTOR CAR
PURPOSE OF THE

(BHARAT) LIMITED

(See Rule 6 D)
OR OTHER CONVEYANCE USED FOR THE
BUSINESS OR PROFESSION

Annexure-11

GROUND WATER LEVEL REPORT OF SURROUNDING VILLAGES FROM APRIL 2024 TO SEPTEMBER 2024

Location	Coordinate of Site	Depth from ground (feet)						
		Month	April-2024.	May-2024.	June-2024.	July-2024.	August-2024	September-2024.
Pakhriatand (Near Anganwadi)	23070'5590"N 86006'2678" E	1	23.9	25.7	24.9	23.4	12.3	7.2
Tupkadi (Near Electric Pole)	23071'3352"N 86006'1573" E	1	12.8	23.9	22.8	21.2	11.8	7.5
Godawali (Near Temple)	23068'7751"N 86006'0031" E	1	12.3	14.7	14.3	12.3	2.9	1.6
Bhutkuru (Near primary School)	23070'4642"N 86005'1418" E	1	20.2	22.6	21.8	20.5	13.6	9.0

Institute for Environmental Management

Test Report

Unit No.: I C I L S I D W O R K S	
Discipline: Chemical	Group: Water / Sub-Group: Ground Water
Report Issue Date: 27-09-2024	Test Report No.: IEM [illegible]
Sample ID: [illegible]	Sample Description: Ground Water (Dug well)
Challan No./P.O. No.: [illegible]	Challan No./ P.No. Dated: 20-09-2024
Issued to: Dalmia Cement (Bharat) Limited, Lithakhand Cement Works, Plot No-[illegible], Dalmia 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: 24-09-2024
Protocol: CPCB Guidelines & Method 2320 Series	
Sampling Location: Bhukhara	
Field Meteorological Information: Air Temp.: [illegible] R.H.: [illegible] W.C.: Partly Sunny W.D.: [illegible]	
Sample Receiving date: 24-09-2024 Testing Started: 24-09-2024 Testing Ended: 27-09-2024	

Test Result

Sl. No.	Tested Parameter	Unit	Method No.	Limit: Acceptable	Limit: Permissible	Results
1.	pH value at 25°C	—	IS 3025 (Part-11)	6.5 – 8.5	No Relaxation	7.1
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	<1
3.	Colour	Hazen	IS 3025 (Part-04)	5	15	<5
4.	Odour	—	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	158
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	20.7
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	72
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	144
9.	Chloride (as Cl-)	mg/l	IS 3025 (Part-32)	250	1000	23
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL (MDL: 0.05)
11.	Sulphate (as SO4-2)	mg/l	IS 3025 (Part-24)	200	400	29
12.	Magnesium (as Mg+2)	mg/l	IS 3025 (Part-46)	30	100	11

IEM Report

Sam. Condition at Lab:	Laboratory is maintaining Temperature 20±2°C and Relative Humidity 65±5% in all testing areas as per IS 196:1966(R)
Abbreviation:	BDL: Minimum Detection Limit, NTU: Nephelometric Units
Limit is Specified:	IS 10500: 2012
Remark:	Sample Complies with prescribed specifications.

Tested By: Mukesh Kumar Mahto

Sample Drawn By: Rajib Kumar Singh & Team

Specific Conditions Notes: 1. The laboratory accepts responsibility for accuracy of the report. 2. This report shall not be reproduced in part or full without written approval of the IEM. 3. This report is issued for only guidance and not for legal purposes or for litigation. 4. Any complaint about the report should be communicated in writing within 7 days of its issue. 5. Test results, if found to be in non-conformance, will be noted in nonconformity. 6. In case of discrepancy, please write at [illegible] On the case of Quality Checked and Test was not carried by the Institute/Agency, the report is issued by the Director of the Organization.	Reviewed by: (Technical Manager) / Technical Manager	Authorized Signatory: (Dr. S. C. Jain) / Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Water	Sub-Group: Ground Water
Report Issue Date: 27-09-2024		Test Report No.: IEM-23/08/2024/0K1
Sample ID: 240924IC02021 & 240924A4602001		Sample Description: Ground Water (Dug well)
Challan No./P.O. No.: 4500020071/237		Challan No./P.No. Date: 28-09-2023

Issued to:
Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works)
Plot No IVA-7(P), Bokaro Industrial Area Bokaro
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement	Customer Representative: Sanjoy Verma
Sample Drawn by: IEM Team	Sampling Date: 24-09-2024

Protocol: CPCB Guideline& IS Method 3025 Series

Sampling Location: Bhukuru

Field Meteorological Information: Amb. Temp. (°C): 28 | R.H. (%): 69 | W.C.: Partly Sunny | W.D.: SE to NW

Sample Receiving date: 24-09-2024	Testing Started: 24-09-2024	Testing Ended: 27-09-2024

—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 – 0.02)
2.	Chromium	mg/l	APHA 3111 B 2017	0.05 - No Relaxation	BDL (MDL – 0.02)
3.	Lead (Pb)	mg/l	APHA 3111 B 2017	0.01 - No Relaxation	BDL (MDL – 0.02)
4.	Manganese (Mn)	mg/l	APHA 3111 B 2017	0.1 - 0.3	BDL (MDL – 0.02)
5.	Total Coliform	MPN/100 ml	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
6.	E. Coli	MPN/100 ml	IS 1622: 1981		BDL (MDL-1.8)

—End Report—

Env. Condition of Lab.	Laboratory is maintaining Temperature 25 ± 2°C and Relative Humidity 65 ± 5 % in all testing area as per IS 196:1966(E).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2012
Remark	Sample Comply with prescribed specification.

Tested By: Vishwakarma Manju

Sample Drawn By: Rajiv Kumar Singh & Team

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	T. Bhuvan	
	(T.Kumar Anand)	(Dr. B. C. Jain)
On the basis of Quality Checks and Technical data verified by the Authorized signatory. Remarks is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : A-9, Mesh Heights, Opp. All India Radio Station, Ranchi Road, Ranchi, Jharkhand - 834001
Laboratory Site : H.No. - A-15, Sakar Villas, Near Sakar Mansion, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph. - 8407804255, 8407804251, Email : iem2012@yahoo.com

Institute for Environmental Management

Test Report

UGR No.: T C 2 1 5 1 5 2 4 2 2 0 6 0 1 4 5 2	
Group/Line: Chemical	Group: Water / Sub-Group: Ground Water
Report Issue Date: 27-09-2024	Test Report No.: [illegible]
Sample ID: [illegible]	Sample Description: Ground Water (Dug well)
Challan No./P.O. No.: [illegible]	Challan No./ P.No. Date: [illegible]

Issued to:

Dalmia Cement (Bharat) Limited, Uttarkhand Cement Works
Plot No.WA-2(P), Bokaro Industrial Area Salidih
Bokaro Steel City, Bokaro-827014 Jharkhand India

Type of Industry: Cement	Customer Representative: [illegible]
Sample Drawn by: IEM Team	Sampling Date: 24-09-2024
Protocol: CPCB Guidelines & Method 6125 Series	
Sampling Location: Pahariya Tola	
Field Meteorological Information: A. Temp. (°C): [illegible] R.H. (%): [illegible] W.C.: Partly Sunny W.D.: SE to NW	
Sample Receiving date: 24-09-2024	Testing Started: 24-09-2024 / Testing Ended: 27-09-2024

---Test Result---

Sl. No.	Tested Parameter	Unit	Method No.	Limit: Acceptable	Limit: Permissible	Results
1	pH value at 25°C	—	IS 3025 (Part-11)	6.5 – 8.5	No Relaxation	6.6
2	Turbidity	NTU	IS 3025 (Part-10)	1	5	<1
3	Colour	Hazen	IS 3025 (Part-04)	5	15	<5
4	Odour	—	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	190
6	Calcium (as CaCO3)	mg/l	IS 3025 (Part-40)	75	200	21.6
7	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	90
8	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	114
9	Chloride (as Cl)	mg/l	IS 3025 (Part-32)	250	1000	18
10	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL 0.01)
11	Sulphate (as SO4)	mg/l	IS 3025 (Part-24)	200	400	14
12	Magnesium (as Mg)	mg/l	IS 3025 (Part-46)	30	100	10.8

---END Report---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27±2°C and Relative Humidity 65±5 % in all testing area as per IS 3025(Part-5).
Abbreviation	NTU: Nephelometric Turbidity Unit, BDL: Below Detection Limit
Limit is Specified	IS 10500: 2012
Remark	Sample Complies with prescribed specification

Tested By: [illegible]

Sample Drawn By: Pujo Kumar Singh & Team

Quality Conformance Notes:	Reviewed by	Authorised Signatory
1. The results pertain exclusively to contents of the report. 2. This report shall not be reproduced except in full without written approval of the IEM. 3. The report is intended for only guidance and not to be used as proof in any court of law. 4. Any complaint about the report should be communicated in writing within 7 days of receipt. 5. Total liability of Institute for Environmental Management will be limited to fees received. 6. In case of Northern jurisdiction, please send your notice at [illegible] (*) Marked in Quality Conformance Notes are outside the National Accreditation Board for Testing and Calibration Laboratories (NABL) scope.	[illegible]	[illegible]
	Technical Manager	Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi-[illegible], Jharkhand, India
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Water	Sub Group: Ground Water
Report Issue Date: 27-09-2024		Test Report No.: [illegible]
Sample ID: 240924KC0002 & 240924MK0002		Sample Description: Ground Water (Dug well)
Challan No./P.O. No.: [illegible]		Challan No. / P.No. Date: [illegible]

Issued to:
Dalmia Cement (Bharat) Limited, (Jharkhand Cement Works)
Plot No IIIA-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: 24-09-2024
Protocol: CPCB Guidelines & IS Method 3025 Series	
Sampling Location: Pathariya Tank	
Field Meteorological Information: A. Temp. (°C): 29 | R.H. (%): 69 | W.C.: Partly Sunny | W.D.: SE to NW	
Sample Receiving date: 24-09-2024	Testing Started: 24-09-2024 | Testing Ended: 27-09-2024

---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 – 0.02)
2.	Chromium	mg/l	APHA 3111 B 2017	0.05 - No Relaxation	BDL (MDL – 0.02)
3.	Lead (Pb)	mg/l	APHA 3111 B 2017	0.01 - No Relaxation	BDL (MDL – 0.02)
4.	Manganese (Mn)	mg/l	APHA 3111 B 2017	0.1 - 0.3	BDL (MDL – 0.02)
5.	Total Coliform	MPN/100 mL	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
6.	E. Coli	MPN/100 mL	IS 1622: 1981		BDL (MDL-1.8)

---End Report---

Env. Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % – all testing done as per IS 196-(1966)
Abbreviation	MDL: Method Detection Limit, BDL: Below Detection Limit
Limit is specified	IS 10500: 2012
Remark	Sample complies with prescribed specifications

Tested By: Maheshwari Mishra

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Terms 1. The discrepancy should reach us within 15 days of the report. 2. This report shall not be reproduced except in full without written approval of the IEM. 3. This report is intended for only guidance and not for legal purposes with disclaimers. 4. Any complaint about the 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 further complaints, please write at mail: mail@ieindia.com	Reviewed by: Technical Signatory Technical Manager Director
On the basis of Quality Checked and Technically certified by the authorised signatory, the report is issued for the charity of the organization	

Corporate office : A-8, Shalk Heights, Opp. All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site : Plot - A-13, Sukhi Villas, Near Sitkore Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph : 8427804233, 8427804231, Email : [illegible]@ieindia.com

ANNEXURE -11

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 0 2 1 3 9		
Discipline: Chemical	Group: Water	Sub-Group: Ground Water
Report Issue Date: 27-12-2024	Test Report No.: RN-241105008GW1	
Sample ID: 241224WA01001	Sample Description: Ground Water (Dug well)	
Challan No./P.O. No.: 4548043344/237	Challan No./ P.No. Date: 05-11-2024	
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: 24-12-2024	
Protocol: CPCB Guideline& IS Method 3025 Series		
Sampling Location: Bhutkuru		
Sample Receiving date: 24-12-2024	Testing Started: 24-12-2024	Testing Ended: 27-12-2024

—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	7.4
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	<1
3.	Colour	Hazen	IS 3025 (Part-04)	5	15	<5
4.	Odour	—	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	224
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	30.5
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	88
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	138
9.	Chloride (as Cl-)	mg/l	IS 3025 (Part-32)	250	1000	29
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL-0.07)
11.	Sulphate (as SO_4^{-2})	mg/l	IS 3025 (Part-24)	200	400	32
12.	Magnesium (as Mg+2)	mg/l	IS 3025 (Part-46)	30	100	15.1

—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(E).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 : 2012
Remark	Sample Complie with prescribed specification

Tested By: Mahendranath Mahto

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.		

Corporate office : A-6, Shell Heights, City- Of India Kadla Motors, Kuru Road, Ranchi, Jharkhand - 834002
Laboratory Unit : 6.7Km - A-10, Balaji Vihar, Near Sahni Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.: 8407924155, 8407924151, Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Water	**Sub-Group:** Ground Water
Report Issue Date: 27-12-2024		**Test Report No.:** IEM 241205004GW1
Sample ID: 241234RC010016243224M002000		**Sample Description:** Ground Water (Dug well)
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024
Issued to: Daimia 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:** 24-12-2024
Protocol: CPCB Guideline & IS Method 3025 Series		
Sampling Location: Bhurkunda		
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—Test Result—

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
13.	Copper	mg/l	APHA 3111 B 2017	0.5-1.5	BDL (MDL – 0.2)
14.	Chromium	mg/l	APHA 3111 B 2017	0.05 - No Relaxation	BDL (MDL – 0.2)
15.	Lead (Pb)	mg/l	APHA 3111 B 2017	0.01 - No Relaxation	BDL (MDL – 0.2)
16.	Manganese (Mn)	mg/l	APHA 3111 B 2017	0.1 - 0.3	BDL (MDL – 0.2)
17.	Total Coliform	MPN/100 mL	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
18.	E. Coli	MPN/100 mL	IS 1622: 1981		BDL (MDL-1.8)

—End Report—

Env.Condition of Lab.	Laboratory is maintaining Temperature 21± 2°C and Relative Humidity 55±5 % in all testing area as per IS 196:2006(C)
Abbreviation	MDL: Minimum Detection Limit; BDL: Below Detection Limit
Limit is Specified	IS 10500 :2012
Remark	Sample Complies with prescribed specification

Tested By: Manendranath Mahto

Sample Drawn By: Siddharth Kumar & Team

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	(Tauqeer Ahmad)	(Dr. S. C. Jain)
On the basis of Quality Checklist and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : A-8, Akash Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834002
Laboratory Site : 15,Ka - A/13, Sakti Vihar, Near Sakti Station, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph - 9667674255, 9470626271, Email - [illegible]

Institute for Environmental Management

Test Report

ULR No.	T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 4 0		
Discipline: Chemical	Group: Water	Sub-Group: Ground Water	
Report Issue Date: 27-12-2024		Test Report No.: RN-241105004GW2	
Sample ID: 241224W/021003		Sample Description: Ground Water (Dug well)	
Challan No./P.O. No.: 4500913144/237		Challan No./ P.No. Date: 05-12-2024	
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: 24-12-2024	
Protocol: CPCB Guidelines & IS Method 3025 Series			
Sampling Location: Pokharya Tank			
Sample Receiving date: 24-12-2024	Testing Started: 24-12-2024	Testing Ended: 27-12-2024	

—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	7.2
2	Turbidity	NTU	IS 3025 (Part-10)	1	5	<1
3	Colour	Hazen	IS 3025 (Part-04)	5	15	<5
4	Odour	—	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	198
6	Calcium (as Ca^{+2})	mg/l	IS 3025 (Part-40)	75	200	24.0
7	Total Alkalinity (as $CaCO_3$)	mg/l	IS 3025 (Part-23)	200	600	94
8	Total Hardness (as $CaCO_3$)	mg/l	IS 3025 (Part-21)	200	600	112
9	Chloride (as Cl)	mg/l	IS 3025 (Part-32)	250	1000	21
10	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL/MDL 0.01
11	Sulphate (as SO_4^{-2})	mg/l	IS 3025 (Part-24)	200	400	23
12	Magnesium (as Mg^{+2})	mg/l	IS 3025 (Part-46)	30	100	12.6

—END Report—

Env. Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 55±5 % in all testing area as per IS 196 (1991).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 : 2012
Remark	Sample complies with prescribed specification.

Tested By: Manendranath Mahto

Sample Drawn By: Siddharth Kumar & Team

Specific Conditions Note	Reviewed By	Authorized Signatory
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Corporate office : A-9, Abdul Razzaq Apartment, Near Hotel Ranchi Palace, Ranchi, Jharkhand - 834001
Laboratory Info : H.No. - A-13, Sagar Vihar, Near Sahara Bhawan, Harmu Housing Colony, Ranchi, Jharkhand, India
Ph. : 6207504204, 8420696201, Email : [illegible]

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Water	**Sub-Group:** Ground Water
Report Issue Date: 27-12-2024		**Test Report No.:** IEM-241105004GW2
Sample ID: 241224RC01002 & 241224MM01002		**Sample Description:** Ground Water (Dug well)
Challan No./P.O. No.: 4549043344/237		**Challan No./ P.No. Date:** 05-11-2024
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:** 24-12-2024
Protocol: CPCB Guideline& IS Method 3025 Series		
Sampling Location: Pokhariya Tanki		
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024

—Test Result—

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
13.	Copper	mg/l	APHA 3111 B 2017	0.5-1.5	BDL (MDL – 0.2)
14.	Chromium	mg/l	APHA 3111 B 2017	0.05 - No Relaxation	BDL (MDL – 0.2)
15.	Lead (Pb)	mg/l	APHA 3111 B 2017	0.01 - No Relaxation	BDL (MDL – 0.2)
16.	Manganese (Mn)	mg/l	APHA 3111 B 2017	0.1 - 0.3	BDL (MDL – 0.2)
17.	Total Coliform	MPN/100 mL	IS 1622: 1981	Shall not be detectable in any 100 ml sample	80% (MDL-1.8)
18.	E. Coli	MPN/100 mL	IS 1622: 1981		80% (MDL-1.8)

—End Report—

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

Tested By: Mahendranath Mahto

Sample Drawn By: Siddharth kumar & Team

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

Corporate Office : A.K. Mukherjee Lane, Opp. All India Radio Station, Kalu Road, Ranchi, Jharkhand - 834001
Laboratory Site : IEM, A-10, Balaji Vihar, Near Kshira Bhawan, Patratu Housing Colony, Ranchi-834027, Jharkhand, India
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.	T C 1 5 7 9 7 2 5 8 8 8 8 8 8 5 7 9		
Discipline: Chemical	**Group:** Water	**Sub-Group:** Ground Water	
Report Issue Date: 10-03-2025		**Test Report No.:** RN 241105884GW1	
Sample ID: 250307WA01001		**Sample Description: Ground Water** (Dug well)	
Challan No./P.O. No.: 4540043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 07-03-2025	
Protocol: CPCB Guidelines& IS Method 3025 Series			
Sampling Location: Bhutkuri			
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—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	7.5
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	<1
3.	Colour	Hazen	IS 3025 (Part-04)	5	15	<5
4.	Odour	—	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	198
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	33.7
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	87
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	142
9.	Chloride (as Cl-)	mg/l	IS 3025 (Part-32)	250	1000	28
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL-0.07)
11.	Sulphate (as SO_4^{-2})	mg/l	IS 3025 (Part-24)	200	400	34
12.	Magnesium (as Mg+2)	mg/l	IS 3025 (Part-46)	30	100	14.1

—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 as Specified	IS 10500:2012
Remark	Sample Complie with prescribed specifications

Tested By: Yashwant Kumar

Sample Drawn By: Siddharth Kumar & Team

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

Corporate office : A-8, Modi Heights, Opp. 40 Indra Parkir Station, Main Road, Ranchi, Jharkhand, 834001
Laboratory Site : H.No. – A-13, Saket Vihar, Near Tribal Museum, Gurme Housing Colony, Ranchi 834002, Jharkhand, India
Ph. 8407804258, 8417804251, Email: [illegible]@gmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Water	**Sub-Group:** Ground Water
Report Issue Date: 10-03-2025		**Test Report No.:** RN 241205004GW1
Sample ID: 250307RC01001 & 250307MB01001		**Sample Description: Ground Water** (Dug well)
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024
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:** 07-03-2025
Protocol: CPCB Guidelines& IS Method 3025 Series		
Sampling Location: Bhutkuru.		
Sample Receiving date:07-03-2025	**Testing Started:**07-03-2025	**Testing Ended:**10-03-2025

---Test Result---

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
13.	Copper	mg/l	APHA 3111 B:2017	0.5-1.5	BDL (MDL – 0.2)
14.	Chromium	mg/l	APHA 3111 B:2017	0.05 - No Relaxation	BDL (MDL – 0.2)
15.	Lead (Pb)	mg/l	APHA 3111 B:2017	0.01 - No Relaxation	BDL (MDL – 0.2)
16.	Manganese (Mn)	mg/l	APHA 3111 B:2017	0.1 – 0.3	BDL (MDL – 0.2)
17.	Total Coliform	MPN/100 mL	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
18.	E. Coli	MPN/100 mL	IS 1622: 1981		BDL (MDL-1.8)

---End Report---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27±2°C and Relative Humidity 55±5 % in all testing area as per IS 196 (1966)(E).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2012
Remark	Sample Comply with prescribed specification.

Tested By: Sanjay Kumar & Maher Fatmi

Sample Drawn By: Siddharth Kumar & Team

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

Corporate office : [illegible]
Laboratory Site : [illegible]
Ranchi-834002, Jharkhand, India
[illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 2 5 0 0 0 0 0 0 5 3 0			
Discipline: Chemical	**Group:** Water	**Sub-Group:** Ground Water	
Report Issue Date: 10-03-2025		**Test Report No.:** RN-241105004GW2	
Sample ID: 250307WA01002		**Sample Description: Ground Water** (Dug well)	
Challan No./P.O. No.: 4544043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 07-03-2025	
Protocol: CPCB Guideline& IS Method 3025 Series			
Sampling Location: PakhariyaTand			
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—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	7.4
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	1
3.	Colour	Hazen	IS 3025 (Part 04)	5	15	<5
4.	Odour	—	IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	180
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	24.8
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	98
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	116
9.	Chloride (as Cl-)	mg/l	IS 3025 (Part-32)	250	1000	19
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL 0.07)
11.	Sulphate (as SO_4^{-2})	mg/l	IS 3025 (Part-24)	200	400	28
12.	Magnesium (as Mg+2)	mg/l	IS 3025 (Part-46)	30	100	13.1

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

Tested By: Yashomal Kumar

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorised Signatory
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On the basis of Quality Checked and Technical data verified by the Authorised signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office : A. K. Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
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Ph.: 8407804153, 8407804151, Email : iem2012@yahoo.com

Institute for Environmental Management

Test Report

Discipline: Chemical	**Group:** Water	**Sub-Group:** Ground Water
Report Issue Date: 10-03-2025		**Test Report No.:** IEM 241100040GW2
Sample ID: 250307RC01002 & 250307MD01002		**Sample Description:** Ground Water (Dug well)
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024

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:** 07-03-2025
Protocol: CPCB Guideline& IS Method 3025 Series	
Sampling Location: Pakhariya Tand	

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

---Test Result---

Sl. No.	Tested Parameter	Unit	Method No.	Limits	Results
13.	Copper	mg/l	APHA 3111 B 2017	0.6-1.5	BDL (MDL – 0.2)
14.	Chromium	mg/l	APHA 3111 B 2017	0.05 - No Relaxation	BDL (MDL – 0.2)
15.	Lead (Pb)	mg/l	APHA 3111 B 2017	0.01 - No Relaxation	BDL (MDL – 0.2)
16.	Manganese (Mn)	mg/l	APHA 3111 B 2017	0.1 - 0.3	BDL (MDL – 0.2)
17.	Total Coliform	MPN/100 mL	IS 1622: 1981	Shall not be detectable in any 100 ml sample	BDL (MDL-1.8)
18.	E. Coli	MPN/100 mL	IS 1622: 1981		BDL (MDL-1.8)

---End Report---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(E).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	IS 10500 :2012
Remark	Sample Complies with prescribed specification

Tested By: Sanjay Kumar & Mater Fatmi

Sample Drawn By: Siddharth kumar & Team

Specific Contractual Notes -	Reviewed by	Authorized Signatory
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	(Tauqeer Ahmad)	(Dr. S. C. Jain)
On the basis of Quality Checks and Technical data verified by the Authorised signatory, the report is issued by the Director of the Organization.	Technical Manager	Director

Corporate office - A-8, Modi Heights Opp. All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site: D.No. - A-12, Gaon Khas, Near Aditya Hospital, Karma Hatway Colony, Ranchi, Jharkhand, India
Ph - 8407804123, 8427804281, Email - info@iemindia.com

Annexure-12

STP Outlet water quality analysis report from October 2024 to March 2025

STP Outlet water quality analysis report from October 2024 to March 2025						
Sr. No	Parameter	PH	Suspended solids mg/lit	COD mg/lit	BOD mg/lit	Oil & Grease mg/lit.
	Norms	5.5-9.0	100	250	30	10
1	October-2024	7.8	31	52	12.0	BDL
2	November-2024	7.7	25	44	12.4	BDL
3	December-2024	7.9	30	64	16.5	BDL
4	January-2025	8.1	28	60	15.7	BDL
5	February-2025	7.8	21	64	10.5	BDL
6	March-2025	8.0	23	68	11.1	BDL
	Min.	7.7	21	44	10.5	0
	Max.	8.1	31	68	16.5	0
	Avg.	7.9	26	58	13.2	0.0

STP Outlet water quality analysis report from NABL/JSPCB approved lab

Institute for Environmental Management

Test Report

ULR No.:	T C 1 5 2 9 2 2 5 0 0 9 6 0 0 3 3 8		
Discipline: Chemical	Group: Pollution & Environment	Sub-Group: Waste Water	
Report Issue Date: 10-03-2025		Test Report No.: IEM-241105000Water(2)	
Sample ID: 00000TPE00002		Sample Description: Waste Water (STP)	
Challan No./P.O. No.: 4500043344/237		Challan No./ P.No. Date: 05-11-2024	
Issued to: Dalmia Cement Bharat Limited, Plot No A04-TP, Bokaro Industrial Area Sector Bokaro Steel City, Bokaro-827014 Jharkhand India			
Type of Industry: Cement		Customer Representative: Sanjeev Verma	
Sample Drawn by:IEM Team		Sampling Date: 07-03-2025	
Protocol: CPCB Guideline & IS Method 3025 Series			
Sampling Location: NEAR STP PLANT (OUTLET)			
Sample Receiving date:07-03-2025	Testing Started: 07-03-2025	Testing Ended: 10-03-2025	

—Test Result—

Sl. No.	Tested Parameters	Unit	Method No.	Norms**	Results
1.	pH value at 25°C	—	IS 3025 (Part-11)	5.5 to 9.0	8.0
2.	Total Suspended Solids (TSS)	mg/l	IS 3025 (Part-17)	100	23
3.	Biochemical Oxygen Demand (BOD)	mg/l	IS 3025 (Part-44)	30	11.1
4.	Chemical Oxygen Demand (COD)	mg/l	IS 3025 (Part-58)	250	68

—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, NA: None Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule – 1986
Remark	Sample Comply with prescribed specification.

Tested By: Yashwanth Kumar

Sample Drawn By: Siddharth Kumar & 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 IEM. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about the 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/complaint, please write us mail at info@iemindia.net	Reviewed by: Authorized Signatory (Tanjeer Ahmad) (B. C. Jain) Technical Manager Director
On the basis of Quality Checks and Technical data verified by the Authorized signatory, the report is issued to the Client of the Organization	

Page 1 of 2

Corporate office - A-8, Mitali Heights, Opp. All India Radio Station, Ranchi Road, Ranchi, Jharkhand - 834001
Laboratory Site - Al No. - A-13, Sakti Vihar, Near Indian Bisquit, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.- 8407804255, 8407804251, Email - iem2012@rediffmail.com

Institute for Environmental Management

Test Report

Discipline: Chemical	Group: Pollution & Environment	Sub-Group: Waste Water
Report Issue Date: 10-03-2025		Test Report No.: IEM-241125004(WW)(I)
Sample ID: 250327P000002		Sample Description: Waste Water (ETP)
Challan No./P.O. No.: 4548043446/727		Challan No./ P.No. Date: 05-11-2024

Issued to:

Dalmia Cement Bharat Limited, Plot No N/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: 07-03-2025
Protocol: CPCB Guideline & IS Method 3025 Series	
Sampling Location: NEAR ETP PLANT (OUTLET)	
Sample Receiving date:07-03-2025	Testing Started: 07-03-2025 / Testing Ended: 10-03-2025

—Test Result—

Sl. No.	Tested Parameters	Unit	Method No.	Norms**	Results
3.	Oil & Grease	mg/l	IS:3025 (Part-39)	10	BDL(MDL 4.0)

—End of Report—

Env Condition of Lab	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 60±5 % in all testing area as per IS 196 (Part-1)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specifications

Tested By: Yashshree Kumari

Sample Drawn By: Siddharth Kumar & team

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5. Free legally of analyse in Environmental Management will be limited to monetary remuneration only.
6. In case of feedback complaints, please send an email at info.iem@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.

Reviewed by: Authorized Signatory

Tauseef Ahmad — Technical Manager

Dr. S. C. Jain — Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph. / [illegible], Email : [illegible]

ANNEXURE-13

Office of the Director, Ground Water Directorate, Jharkhand, Ranchi.
"Abhiyantran Bhawan", Kutchery Chowk, Ranchi-834001
Phone-0651-2217141-Fax-0651-2214830
E.Mail-dirgwdran-wrd-jhr@nic.in

Letter No.G.W.D.320/ Ranchi, dated... 06/09/2013

From,

Director,
Ground Water Directorate, Jharkhand,
Water Resources Department,
Govt. of Jharkhand.

To,

Brig (Retd) S.K. Hajela,
Bokaro Jaypee Cement Plant,
Plot No.-IV/A-7(P),
Bokaro Industrial Area, Balidih,
Bokaro Steel City, Jharkhand-827014.

Sub:- **Technical Approval of your Design and Plan of "Rain Water Harvesting" for Ground Water Recharging to be provided at Plot No.-IV/A-7(P), Bokaro Industrial Area, Balidih, Bokaro Steel City.**

Ref:- Your Design and Plan of "Rain Water Harvesting" submitted to this office on 24.08.2013 vide your Letter No.-Nil dated-24.08.2013.

Sir,

Kindly refer to your Design & Plan of "Rain Water Harvesting" for Ground Water Recharging, along with associated Geophysical & Hydrological report of the area, submitted to this office on 24.08.2013, vide your letter no.- Nil dated-24.08.2013. Your "Rain Water Harvesting" for Ground Water Recharging Plan envisages to harvest 50,607.11M^3 of rainfall run-off per annum, resulting in Groundwater Recharge of the order of 30,364.27M^3, annually.

The Plan Comprises of **3 nos. of Recharge Pits of dimension (3Mx3Mx3M)** with one no of boring of 8"/6" dia and 45 meter depth at the center of each pit. 2 nos. of Recharge Pits are provided in colony and plant area and one no. in Northern part of the plant. The plan also provides for **two nos. of Injection Wells,** having 8"/6" dia and 45M depth in the colony and plant area. One no. **Storage Cum Percolation Pond (SCPP)** of dimension (10Mx08Mx03M) with one no. recharge shaft of 2M diameter and 1.5M depth in the Northern Area. Proper drainage system with required gradient will be developed by the plant to collect optimum rainfall run-off from rooftop as well as open area, as mentioned in the report. According to the plan, water requirement of 550M^3 per day is met through BIADA water supply from Garga Dam.

For further recharge to ground water, it is advised to provide atleast one no. **Additional Recharge pit** of proposed dimension and boring near the point P_5 of fig. 4.2, at suitable place.

P.T.O.-2

The plan submitted by you for "Rain Water Harvesting" is technically approved subject to the following conditions: -

1. That the Rainfall run-off in the premises should get **primary treatment** to make the run-off free from suspended impurities by passing through fine mash screen, grid chambers for removal of grit/sand etc. and passing through settling chamber. Necessary chemical treatment should also be undertaken, if required.
2. Your entire "Rain Water Harvesting" Project for Ground Water Recharging must be completed within 60 days of the approval of the plan.
3. The Proposed Rain Water Harvesting Recharge Pits must be constructed as per standard design of filter materials and boring in the pits, annexed with this letter.
4. The water required for Industrial purpose during the non-monsoon period be met through surface water storage, adopting Rain Water Harvesting practices, as far as possible.
5. The Ground Water Level in at least 3-4 dug wells in and around your plant, must be monitored in the first week of every month and the data be necessarily made available to this office.
6. The quality of Ground Water in and around the plant area must be monitored periodically (every 6 months) and the data be necessarily made available to this office as well as to Jharkhand State Pollution Control Board, Dhurwa, Ranchi.
7. The Recharge Pits to be constructed by you must be maintained properly, for all times to come. The top-coarse sand-layer in the pit, must be changed every alternate year, before the onset of monsoon.
8. The Completion Report of the entire project within the stipulated period (60 days), must be communicated to this office as well as to Jharkhand State Pollution Control Board, immediately after completion of the project.
9. **"This premises has elaborate Rain Water Harvesting Facility"**, must also be displayed prominently at the entrance and other places of your Plant, in order to sensitize more people about Rain Water Harvesting.

Enclosures: - (1) Technically Approved Rain Water Harvesting Plan.
(2) Standard Design and Plan of Recharge Pit.

Yours sincerely,

2013

Director
Ground Water Directorate,
Jharkhand, Ranchi.

DALMIA CEMENT BHARAT LIMITED, BOKARO

RAIN WATER HARVESTING SYSTEM

Roof top Rain Water Harvesting System have installed in CCR, Raw Material Hopper Building, Cement Mill, Bag House & Packing Plant Building in our plant area. Rain water collected from roof top through gutter and carrying by pipe lines in recharge tranches. Recharge Pits are also connected with recharge trench. In plant area depth of ground water level is varying between 3 to 5 meter and no hard rock strata are available above ground water level. Rain water easily percolated and recharges ground water level. Inspection of Rain water Harvesting System has done by Regional Officer, JSPCB, and Ranchi on 30.05.2013 and approved from Ground Water Board, Ranchi vide latter no. GWD 320/ Ranchi Dated 06.09.2013

RAINWATER HARVESTING SYSTEM DISPLAY INSIDE THE PLANT

Rain water harvesting recharge pit constructed in railway siding & Cement mill area

Rain water harvesting recharge pit near FHS Hostel & Rain water recharge trench in-front of CCR main building

Rainwater harvesting recharge trench near bag house and near cement mill 2 area

Rainwater harvesting recharge trench near CCR building & near E type quarter

Rainwater harvesting recharge trench trench near E & F type quarter

Wells renovation by Dalmia Cement East Limited near surrounding village area

Wells renovation by Dalmia Cement East Limited near surrounding village area

Pond renovation near surrounding village area by DCEL Bokaro to conserve the rain water

Annexure-14

DALMIA CEMENT BHARAT LIMITED, BOKARO

Water Flow meter installed at the main gate of the factory

ANNEXURE 15

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 4 5 2 4 0 0 0 0 0 2 1 3 0			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Noise Levels (Excluding Vibration)	
Report Issue Date: 27-12-2024		Test Report No.: RN-241105004N1	
Sample ID:241224AP02001		Sample Description: Ambient Noise	
Challan No./P.O. No.: 4548043344/237		Challan No./ P.No. Date: 05-11-2024	
Issued to: Dalmia Cement (Bharat) Limited. (Jharkhand Cement Works) Plot No IVIA-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:23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline & IS Method 9989-1981			
Sampling Location: Near Main Gate			
Field Meteorological Information	A. Temp. (°C): 18	R.H. (%): 45	W.C.: Partly Sunny	W.D.: SW to NE
Sample Receiving date:24-12-2024	Testing Started:24-12-2024	Testing Ended:27-12-2024	

—Test Result—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	66.9	54.5	D-75 N-70

—End of Report—

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 45±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: Siddharth Kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.		

Page 1 of 1

Corporate Office – A-5, Modi Heights, Opp-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Sec – 10,No. – A-15, Sahay Villas, Near Sahay Bhawan, Dhurwa Housing Colony, Ranchi, 834002, Jharkhand, India
Ph: 9407804255, 9407804257, Email - ion201@rediffmail.com

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 3 1			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Noise Levels (Excluding Vibration)	
Report Issue Date: 24-12-2024		**Test Report No.:** RN-241105084N2	
Sample ID: 241224AP02002		**Sample Description:** Ambient Noise	
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline & IS Method 9989:1981			
Sampling Location: Near Fabrication Yard			
Field Meteorological Information	**A. Temp. (°C):** 18 **R.H. (%):** 68	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—Test Result—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	68.8	52.4	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 so relates 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 23± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196-1966(E).
Abbreviation	MDL: Minimum Detection Limit
Limit is Specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Complie with prescribed specification

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes
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On the basis of Quality Checked and Technical data verified by the Authorised signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Tauqeer Ahmad) Technical Manager	Dr. S. C. Jain Director

Corporate office : [illegible]
Laboratory No. : [illegible]
Ranchi 834002, Jharkhand, India
Ph. : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 1 5 1 5 2 4 0 0 0 0 0 2 1 1 2			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Noise Levels (Excluding Vibration)	
Report Issue Date: 24-12-2024		**Test Report No.:** Rfe-241105004N3	
Sample ID: 241224AP02003		**Sample Description:** Ambient Noise	
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 23-12-2024 to 24-12-2024	
Protocol: CPCB Guideline & IS Method 9989:1981			
Sampling Location: Near Colony			
Field Meteorological Information	**A. Temp. (°C):** 18	**R.H. (%):** 66	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024	**Testing Ended:** 27-12-2024	

—Test Result—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	50.5	41.2	D-55 N-45

—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 suitable 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 45±5 % in all testing area as per IS 196:1966(C).
Abbreviation	NDL: Maximum Detection Limit
Limit is Specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sounath

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes -	Reviewed by	Authorized Signatory
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Corporate office : A-9, Modi Heights, Opp. Gil Lake Hotel, Main Road, Ranchi, Jharkhand - 834001
Laboratory Site : H.No. - A-33, Nagar Vihar, Near Indian Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph : [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 3 3 5 3 5 2 4 0 0 0 0 0 2 1 3 4		
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Noise Levels (Including Vibration)
Report Issue Date: 24-12-2024		**Test Report No.:** IEM-241205004N4
Sample ID: 241224APU004		**Sample Description:** Ambient Noise
Challan No./P.O. No.: 4540E9348/237		**Challan No./P.No. Date:** 05-11-2024

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:** 23-12-2024 to 24-12-2024

Protocol: CPCB Guideline & IS Method 9989:1981

Sampling Location: Near Wagon Tippler

Field Meteorological Information	**A. Temp. (°C):** 18	**R.H. (%):** 60	**W.C.:** Partly Sunny	**W.D.:** SW to NE
Sample Receiving date: 24-12-2024	**Testing Started:** 24-12-2024		**Testing Ended:** 27-12-2024	

—Test Results—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	61.5	56.3	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 over a specified period.

Env. Condition of Lab	Laboratory is maintaining temperature 27± 2°C and Relative Humidity 45±5 % in all testing area as per IS 196:1966(1).
Abbreviation	MDL: Minimum Detection Limit
Limit as Specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Complying with given check specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Gajendra Kumar & Team

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Corporate office : [illegible]
Laboratory Unit : [illegible]
Ranchi, [illegible], Jharkhand, India
Ph : [illegible]

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 2 5 0 0 0 0 0 0 0 5 1 0			
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Noise Levels (Excluding Vibration)	
Report Issue Date: 10-03-2025		**Test Report No.:** IEM 241105034N1	
Sample ID: 250307AP04001		**Sample Description:** Ambient Noise	
Challan No./P.O. No.: 4500043344/237		**Challan No./ P.No. Date:** 05-11-2024	
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:** 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline & IS Method 9989:1981			
Sampling Location: Near Main Gate			
Field Meteorological Information	**A. Temp. (°C):** 22 **R.H.** (%): 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—Test Result—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	65.8	53.4	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. Zonal 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 adjusted to follow hearing.
5. In "decibel" it is 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 55±5 % to be as testing area as per IS 9989:1981(RC)
Abbreviation:	MDL: Minimum Detection Limit
Limit is Specified:	As per Noise Pollution (Regulation and Control) Rules, 2000
Remark:	Sample Complied with prescribed specifications.

Tested By: Ananisha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes:	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the authorized signatory, the report is issued by for Division of the Organization	(Tauqeer Ahmad) Technical Manager	(Dr. S. C. Jain) Director

Corporate office : [illegible]
Laboratory Site : [illegible]
Ph. [illegible], Email : [illegible]

Institute for Environmental Management

Test Report

ULR No.:	T C 1 5 2 9 2 2 5 0 0 0 0 0 0 3 1 1		
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Noise Levels (Excluding Vibration)	
Report Issue Date: 07-03-2025		**Test Report No.:** RN-241105084N2	
Sample ID: 250307AP04002		**Sample Description:** Ambient Noise	
Challan No./P.O. No.: 4548043344/237		**Challan No./ P.No. Date:** 05-11-2024	

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:** 06-03-2025 to 07-03-2025

Protocol: CPCB Guideline & IS Method 9989:1981

Sampling Location: Near Fabrication Yard

Field Meteorological Information	**A. Temp. (°C):** 22	**R.H.** (%): 47	**W.C.:** Sunny	**W.D.:** NW to SE

Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025

—Test Result—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	67.7	51.3	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 recognize to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting or the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq 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 45±5 % in all testing area as per IS 196 (Part-1).
Abbreviation	NTU: Nephelometric Turbidity Units
Limit is Specified	As per Noise Pollution (Regulation and Control) Rules, 2000
Remark	Sample Collected with prescribed specifications.

Tested By: Akarsha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes:	Reviewed by:	Authorized Signatory
1. The laboratory accepts responsibility for content of the report. 2. This report shall not be reproduced except in full, without written approval of the IEM. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about the report should be communicated in writing within 7 days of the issue. 5. Total liability of Institute for Environmental Management will be limited to invoiced amount only. 6. In case of feedback/complaints, please write an email at info@iemindia.com	(Tauqeer Ahmad) Technical 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 - 6-B Modi Heights, Opp. Air India Hotel Station, Kanke Road, Ranchi, Jharkhand - 834009
Laboratory site - H.No. - A/23, Saket Vihar, Near Bihar Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India
Ph.: 8407804251, 8407808251, Email: iem2012@rediffmail.com

Institute for Environmental Management

Test Report

ULR No.: T C 1 5 2 9 2 2 5 0 5 0 0 0 0 5 1 2			
Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Noise Levels (Including Vibration)	
Report Issue Date: 07-03-2025		Test Report No.: IEM-241105004N3	
Sample ID: 250307AP04003		Sample Description: Ambient Noise	
Challan No./P.O. No.: 4548043344/237		Challan No./ P.No. Date: 05-11-2024	
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: 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline & IS Method 9989:1981			
Sampling Location: Near Colony			
Field Meteorological Information	A. Temp. (°C): 22	R.H. (%): 47	W.C.: Sunny	W.D.: NW to SE
Sample Receiving date: 07-03-2025	Testing Started: 07-03-2025	Testing Ended: 10-03-2025	

—Test Result—

Sl. No.	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	49.4	40.1	D-55 N-45

—End of Report—

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 correlates to frequency response characteristics of the human ear.
6. Leq is an energy mean of the noise level over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 25± 2°C and Relative Humidity (55±5 %) in all testing area as per IS 4666:1968.
Abbreviation	NDL: Maximum Permissible Limit
Limit as Specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
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 IEM. 3. This report is intended for only guidance and not for legal purpose or for advertisement. 4. Any complaint about the report should be communicated in writing within 7 days of its issue. 5. Total liability of Institute for Environmental Management will be limited to maximum amount of Rs. 6. In case of feedback/complaint, please send an email at info@iemindia.com	T. Ahmad	
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	(Tauqeer Ahmad) Technical Manager	Dr. S. C. Jain Director

Corporate office : A-8, Modi Heights, Opp. All India Radio Station, Ranchi Road, Ranchi, Jharkhand - 834001
Laboratory Site : H. No. - A-13, Sakar Vihar, Near Tulsi Bhawan, Hanuman Housing Colony,
Jamshedpur-834002, Jharkhand, India
Ph.- 8417054251, 8417054251, Email - info2017@iemindia.com

Institute for Environmental Management

Test Report

ULR No.:	T C 1 5 2 9 2 2 5 0 0 0 0 0 0 5 1 3		
Discipline: Chemical	**Group:** Atmospheric Pollution	**Sub-Group:** Ambient Noise Levels (Excluding Vibration)	
Report Issue Date: 07-03-2025		**Test Report No.:** BN-241105004N4	
Sample ID: 250307A904004		**Sample Description:** Ambient Noise	
Challan No./P.O. No.: 4548043344/217		**Challan No./ P.No Date:** 05-11-2024	
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:** 06-03-2025 to 07-03-2025	
Protocol: CPCB Guideline & IS Method 9989:1981			
Sampling Location: Near Wagon Tippler			
Field Meteorological Information	**A. Temp. (°C):** 22	**R.H. (%):** 47	**W.C.:** Sunny	**W.D.:** NW to SE
Sample Receiving date: 07-03-2025	**Testing Started:** 07-03-2025	**Testing Ended:** 10-03-2025	

—Test Result—

Sl. No	Parameter	Method	Unit	Day Time	Night Time	Limits
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	50.4	55.2	D-75 N-70

—End of Report—

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 55±5 % in all testing areas as per IS 270:1986(C).
Abbreviation	NDL: Non-detectable Limits
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: Siddharth Kumar & Team

Specific Contractual Notes	Reviewed by	Authorized Signatory
1. The laboratory accepts responsibility for content of the report 2. This report shall not be reproduced except in full without written approval of the IEM 3. This report is intended for only guidance and not for legal purpose or for advertisement 4. Any complaint about the 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 info@iemindia.com	(Tauqeer Ahmad)	(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	Technical Manager	Director

Corporate office : A-6, Modi Heights, Opp. All India Radio Station, Main Road, Ranchi, Jharkhand | 834001
Laboratory Site : H.No – A 23, Sakar Vihar, Near Sahrai Bhawan, Hinoo Housing Colony
Ranchi-834002, Jharkhand, India
Ph - 8407804251, 8407804151, Email - iem2012@rediffmail.com

Annexure-16

DALMIA CEMENT BHARAT LIMITED, BOKARO

Solar lights installed at different location of the plant

CCR BUILDING

ADMIN BUILDING

CIVIL OFFICE

ENVIRONMENT OFFICE

NEAR TOILET

Annexure-17

DALMIA CEMENT (BHARAT) LIMTED, BOKARO

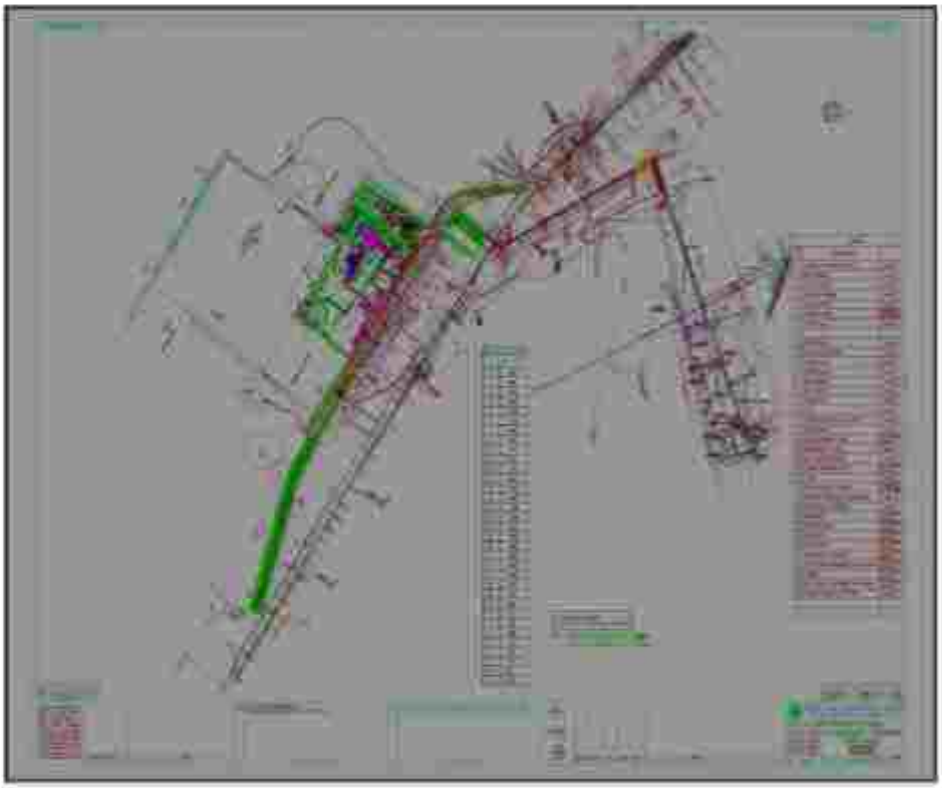
TREE PLANTATION DETAILS

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

YEAR WISE TREE PLANTATION DETAILS GIVEN AS FOLLOWS

Sl. No	Year	Number of plants	Area (in Acres)
1	1st (2011-2012)	5000	5
2	2nd (2012-2013)	2000	4
3	3rd (2013-2014)	2820	3
4	4th (2014-2015)	7620	5
5	5th (2015-2016)	5100	4
6	6th (2016-2017)	1000	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	11th (2021-2022)	500	
12	12th (2022-2023)	350	
13	12th (2023-2024)	400	
14	13th (2024-2025)	225	
	Total	**26364**	**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 Babon,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,Kaju
11	2021-2022	Chatni,Mihigini,,Mango,Kaju,Amala, Neem, Gulmohar
12	2022-2023	Chatni,Mihigini,,Mango, Neem, Gulmohar
13	2023-2024	Chatni,Mihigini,,Mango, Neem, Gulmohar
14	2024-2025	Chatni,Gulmohar,Neem,Mihigini,Guava,Mango,Amala,Neem



Greenbelt pics at DCBL Bokaro

Tree plantation done railway siding

Annexure18

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 very 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

Categorys	UOM	2020-21	2021-22	2022-23	2023-24
Scope-1 Emissions from Coal & Diesel consumption for the process of Cement Manufacturing	Kg CO2 /Tone of Cementitious material	41	43	48	47

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

1. Electricity consumption from Grid.

GHG Emission from power consumption

Categorys	UOM	2020-21	2021-22	2022-23	2023-24
Scope-2 Emissions from Electricity consumption	Kg CO2 /Tone of Cementitious material	44	46	42	41

\

Summary report of GHG emission last five years in below table

Categories	UoM	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24
Scope-1 Emissions from Coal & Diesel consumption for the process of Cement Manufacturing.	Kg CO2 /Tone of Cementitious material	53	58	52	41	43	48	47
Scope-2 Emissions from Electricity consumption	Kg CO2 /Tone of Cementitious material	59	61	42	44	46	42	41

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

OCBL 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. Clinker silo constructed 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-19

Corporate Environment Responsibility & CSR report for the period of October 2024 to March 2025

Sl. No	Name of Activity	Place of Activity/ Village	Expense (in Rs.)
1	Tailoring Training	Bishnupur, Gorabali south	35000.00
2	Softtoys making training	Gorabali North	40000.00
3	Distribution of Goats	Gorabali (N), Gorabali (S), Kanari, Khuntri Panchayat	291815.00
4	Distribution of Poultry Chicks	Kanari	51000.00
5	General Medicine and Gynecology Camp	Gorabali North	15000.00
6	Gram Parivartan Projects	Gorabali (N), Gorabali (S), Kanari, Khuntri Panchayat	200000.00
7	Distribution of Goats	Gorabali (N), Gorabali (S), Kanari, Khuntri Panchayat	450000.00
8	Support to District Administration	Gorabali North	7600.00
9	Plantation	Gorabali	39000.00
10	Aanganwadi and Community Centre Renovation, Purnaland	Khuntri	312156.00
11	Republic Day	Bokaro Dikshik	25000.00
12	Blanket Distribution	Gorabali (N), Gorabali (S), Kanari, Khuntri and Narkara Panchayat	148991.00
13	Skill training to local youths at Bokaro Dikshik	Bokaro	1000000.00
14	Digital Literacy through WoW Bus	Jamsh, Bhubaru	857000.00
15	International Women's day celebration	DCBL	35000.00
15	Well Renovation	Gorabali North	247123.00
	Total		**3961686.00**

Renovation of Aganwadi

Tree plant distributed in village for plantation

Distribution of Goats in nearby village

Promotion of micro enterprise

Broom Making Training

Tailoring Training

Skill training to local youths at Bokaro Diksha

Skill training to local youths at Bokaro Diksha

Annexure: 20

CORPORATE ENVIRONMENT POLICY

DALMIA BHARAT LIMITED

Regd. Office: Dalmiapuram – 621651, Dist. Tiruchirapalli, Tamil Nadu
[CIN: L26939TN2006PLC059516]
Tel. No.: [illegible] **Website:** [illegible] **E-mail:** [illegible]

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 one hundred listed entities based on market capitalisation calculated as on March 31 of a given 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. [illegible] dated November 04, 2015 has prescribed nine key principles to assess the fulfilment of listed entities and a description of the core elements under these principles. This Policy is accordingly hoisted 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 all its scheme of activities and while dealing with both the internal and external stakeholders, 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 illegal conduct or exercise undue influence over any other third party.
- Not indulge in giving extravagant, lavish or unnecessary gifts to Authorities which may obligate or inappropriately influence the recipient.
- Ensure touch 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 efforts 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, whenever 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 accumulation 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:21

Capital cost investment on Environment protection up to March 2025

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 2025				
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	19198042.2	
b	Bag house fan	5500000014	1197240.4	
c	Bag house for cement mill	5500000037	9901023.02	
d	Bag house fan	5500000046	185484.52	
e	Spin Bag house fan -mill -1	5500000016	6300867.1	
f	Spin Bag house fan -mill -2	5500000017	6300867.53	
g	Bag filter from silo to packing plant EEI 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	
k	Bag filter Dry fly ash silo Top storage bin Sep		1300000	
l	Packer 4 Bag filter		1700000	
			290493690.8	
2	INVESTMENT ON FUGITIVE DUST EMISSION CONTROL			8.64
a	Construction of Tarpaulin shed near packing plant	5200000052	1791749.78	
f	Road Swapping machine	5900000083	129982	
g	Water spray tanker	5060000016	100000	
h	Deleva Road Swapping Machine	5500001172	2432069.2	
i	Steel Silo for storage of PCC	5500000185	28113894.14	
j	Plant Roads construction	5200000210	53848342.93	
			86386976.9	
3	INVESTMENT IN WATER POLLUTION CONTROL MEASURES			0.78
a	Rain water Harvesting system implemented	5200000034	50547.38	
b	Sewer line connected to plant toilet to STP	5200000054	954795.98	
c	Bio Toilet at Wagon Tippler & Railway parcel Yard	5200000055	89308.58	
d	Construction of Sewage treatment Plant	5200000067	4772895.03	
e	Water treatment plant	5040000011	1335559.52	

f	Toilets & Bathroom for Labour Camp	5200000016	1074911.5	
g	Water treatment plant	5240000213	683090.06	
			7778108.04	
4	**ENVIRONMENT POLLUTION MONITORING EQUIPMENT**			
1	CAAQM -SO2 & NOx Analyzer	5500000068	1408594	
2	Laboratory balance	5500000074	35344	
3	Opacity meter From Cheetrols industries LTD	5490000033	88889.55	
4	Opacity meter From Cheetrols industries LTD	5490000034	88889.55	
5	Data connectivity to CPCB Server	5800000013	188100	
6	Stack monitoring kit from form Innebes manthal	5010000057	10596.16	
7	Incubator	5500000029	19000.32	
8	On line CAAQM station Environment SA	5500000066	2522852.76	
9	Up gradation Software of CAAQMS	5800000001	290800	
10	Construction of 2 no CAAQMS Room	5200000031	434879	**0.61**
11	Respirable Dust Sampler 4SU BL PM -10 /4no	Environment Lab	260000	
12	Respirable Dust Sampler 4SU BL PM- 2.5 /4no	Environment Lab	300000	
13	Vayubodhan Stack monitoring Kit VSSI	Environment Lab	75000	
14	Spectrophotometer	Environment Lab	290000	
			6320847.34	
	Capital cost Investment from October 2024 to March 2025			**Nil**
	Total Capital Cost Investment on Environment measures up to March 2025			**39.08**

DALMIA CEMENT (BHARAT) LIMITED, BOKARO	
Recurring cost expenditure on Environment protection activities from October 2024 to March 2025	

1	Cost on Schedule maintenance Bags replacement with new bags, Bags cleaning, De dusting line checking, cleaning and repairing work, Bag filters fan maintenance etc)	71.84
2	Power consumption in Pollution control equipment (Bag House & Bag Filter) 8361613 KWH x 5.83	487.48
2	Third Party Environmental Monitoring & Analysis	0.6
3	AMC of CEMS Data transmission to JSPCB& CPCB	0.17
4	AMC of CAAQMS Maintenance, Servicing and Calibration,	0.64
5	AMC of CAAQMS Data transmission to JSPCB & CPCB	0.5
6	Calibration of Pollution Monitoring Equipment's (CEMS)	1.5
7	Calibration of Pollution monitoring instrument (RDS &Stack VSSL,Noise level meter)	0.15
8	Air Pollution Monitoring Accessories' Pump maintenance kit & PM-10 & 2.5 Filter paper	1.00
9	Water Pollution Management (AMC of STP, R.O Plant, D.M Plant, & Softener Plant), Cleaning of Nala,	0.25
10	STP Operation & Maintenance	2.89
11	Road Sweeping Machine Operation & Maintenance	2.2
12	Disposal of Bio medical waste	0.09
13	Fuel consumption in water sprinkling tanker of water on dusty area	0.17
14	Green Belt Development	7.3
TOTAL RECURRING COST EXPENDITURE FROM OCTOBER 2024 TO MARCH 2025 (Rs)		**575.78**

Annexure:22

Environment Internal audit report

October 2024-March-2025

Date: 16.01.2025

Following below members present in Environment Audit:
1. Arvind Kumar: (Head Mechanical)
2. I.R Patel: (Head E&I)
3. Deepal Singh : (Dy Quality Head)

Sr. No	Environment internal audit observation points	Environmental Compliance Status	Auditor Observation
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 instrument 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	Fugitive dust emission measures taken.	Complied
12	Status of Green belt development	Complied Green belt maintained 33% of the plant	Complied
13	Rain water harvesting system	Rain water harvesting system constructed and maintained	Complied
14	Status of Bag filter /Bag house	All plant Bag filter and bag house is working condition.	Complied
15	Submission of Environment statement to JSPCB	Environment Statement submitted with in time for the year 2023-2024	Complied
16	Status of water spray tanker for control of fugitive dust emission	Water spray tanker regular water spray on the roads and dust prone area for the control of fugitive dust emission and record maintained	Complied
17	Status of road sweeping machine	Regular cleaning of the roads and concreated area by road swapping machine and record maintained	Complied
18	Status of Solar light	Solar light installed at different location in the plant	Complied
19	Status of Water sprinkler	Water sprinkler and water fog system working plant gate main road	Complied
20	Status of Raw material covering	Raw material are covered with tarpaulin control of fugitive dust emission	Complied

Annexure-23

Advertisement in newspaper for receiving of EC from SEIAA

hindustantimes | region | 03

PUBLIC NOTICE

आज

सार्वजनिक सूचना

EC Copy submitted to local authority & another Govt. Department

Dalmia
Bharat Cement

Dalmia
Bharat Cement

To,

Date: 01.10.2019

Managing Director
Jharkhand Industrial Area Development Authority (JIADA)
Bokaro Industrial Area
Bokaro Steel City
Bokaro - 827004

Sub: Environment Clearance for "Upgradation of Technology at existing Hardstone Cement Grinding unit from 3.0 MTPA to 3.70 MTPA of M/s Dalmia Cement (Bharat)Ltd. at Plot no. H/28 PPD, Bokaro Industrial Area Bokaro"

Dear Sir,

At the outset we extend our sincere thanks for the cooperation extended to us by the JIADA for previous 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 Impact Assessment Authority (SEIAA) vide letter no. 312/SEIAA/EIA 19/21/08/2019/KN 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
Sr.Vice President & Plant Head (Director)

Encl:a/a

Dalmia Cement (Bharat) Limited
Regd. Office: 11th Floor, Hansalaya Building, 15, Barakhamba Road, New Delhi - 110001
CIN: L26942DL1985PLC020227
Website: www.dalmiabharat.com

Annexure-29

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 Letter no. SC/SEIAA/2018-19/1158/2019/KTA, 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. 10/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://www.nic.in

Unit Head & Authorised Signatory

आज

www.ajnidaily.com रांची (झारखंड) • अंक

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

[illegible]

इकाई प्रमुख एवं अधिकृत हस्ताक्षरकर्ता

Annexure-30

EC Copy submitted to local authority and other Govt. Department

Dalmia
Bharat Cement

Date: 03.10.2019

To,

Shri Ganesh Thakur ji
Mukhiya
Village/Basti : Baldih
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/2018/19/2138/2018/474 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

Dalmia Cement (Bharat) Limited

Dalmia
Bharat Cement

To,

Date: 03.10.2019

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. FC/SEIAA/2018-19/1138/2019/474 dated 23rd September 2019 (Copy of EC enclosed)

This is submitted for your kind information & record please.

Thanks & Regards

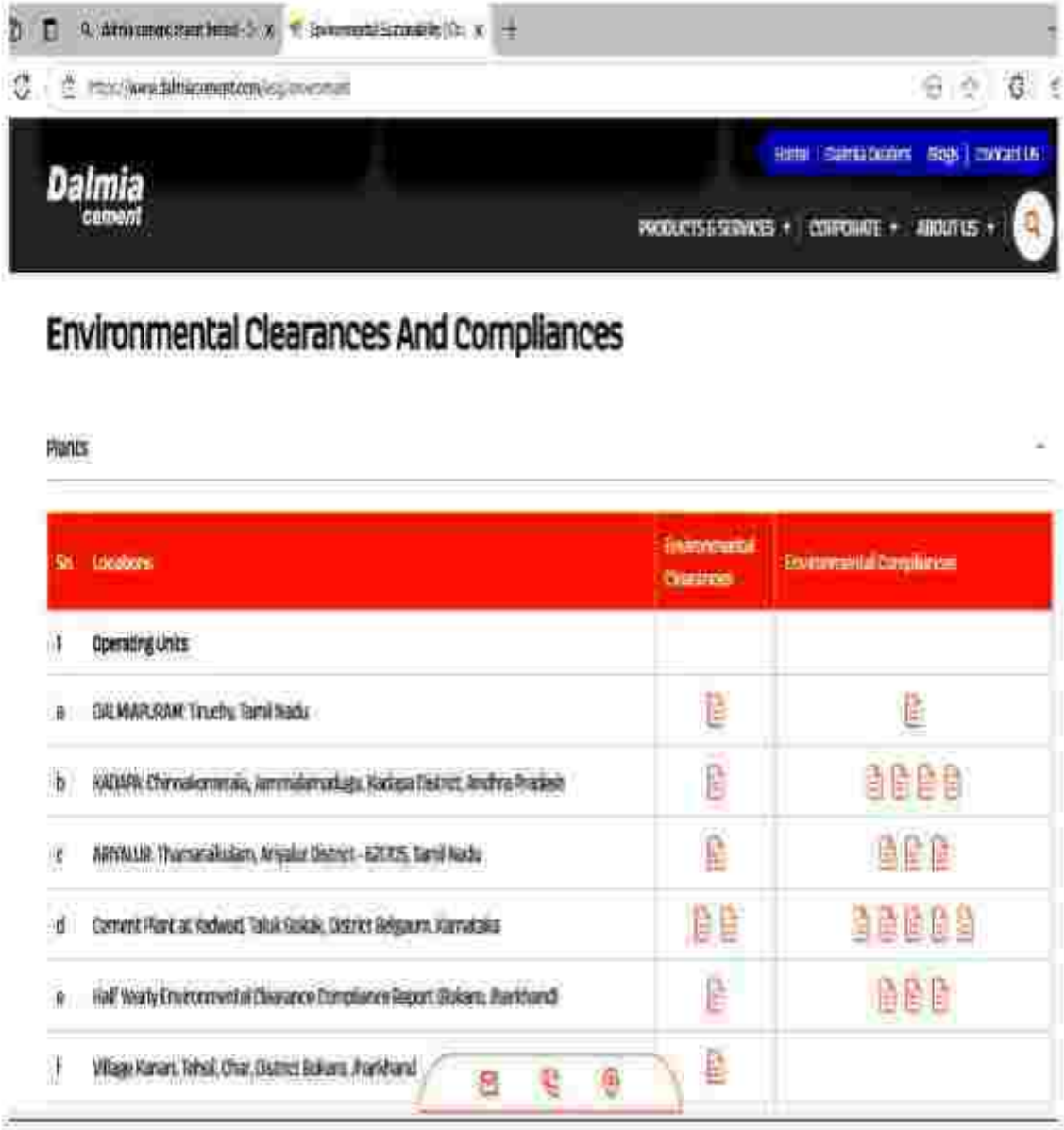
Yours Sincerely
For Dalmia Cement (Bharat) Limited

Mukesh Kumar Garg
(Unit Head & Assistant Executive Director)

Encl A/a

Annexure-31

EC Compliance report uploaded in Dalmia Cement official website



Dalmia cement

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Environmental Clearances And Compliances

Plants

Sn	Locations	Environmental Clearances	Environmental Compliances
I	Operating Units		
a	DALMIAPURAM Trichy, Tamil Nadu		
b	KADAPA Chinnakommarla, Jammalamadugu, Kadapa District, Andhra Pradesh		
c	ARIYALUR Thumaraikudam, Ariyalur District - 621705, Tamil Nadu		
d	Cement Plant at Kodwad, Taluk Gokak, District Belgaum, Karnataka		
e	Half Yearly Environmental Clearance Compliance Report Bokaro, Jharkhand		
f	Village Kanari, Tehsil, Chai, District Bokaro, Jharkhand		

Annexure-32

Display board of real time ambient air quality installed at factory main gate

Annexure-33

EC Compliance report uploaded Parivesh 2.0 portal of MoEF and CC website

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	SIA/JH/IND/105812/2017
Compliance ID	126405802
Compliance Number(For Tracking)	EC/M/COMPLIANCE/126405802/2025
Reporting Year	2025
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	08-05-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.

Annexure-34

Environment Statement Form (V) Uploaded in Company official website

Annexure-35

DCBL Public Liability Insurance policy copy

The Oriental Insurance Company Limited

LIABILITY INSURANCE (UNDER PUBLIC LIABILITY INSURANCE ACT, 1991) POLICY SCHEDULE

Policy No.	[illegible]	Prev. Policy No.	[illegible]
Cover Note No.		Cover Note Date	
Insured's Code	[illegible]	Issue Office code	312120
Insured's Name	M/s Dalmia Cement (Bharat) Ltd. (GSTIN: [illegible])	Issue Office Name	RO KOLKATA (GSTIN: [illegible])
Address	Dalmiapuram, Trichi Tamilnadu, Tiruchirapalli - 621651 TRICHIRAPALLI TAMIL NADU / 621651	Address	7 FREE CHURCH PLACE KOLKATA WEST BENGAL 700001
Tel./Fax/Email	/ / / NA	Tel./Fax/Email	/ / / pancreh.bhawan@orientalinsurance.co.in

Agent/Broker Details

Dev.Off.Code	
Agent/Broker	L C090000065 EXTRA COVER INSURANCE BROKERS PVT LTD
Address	21 HEMANT BASU SARANI, DALHOUSIE, KOLKATTA 700001 WEST BENGAL,MOB NO [illegible],CALCUTTA,WEST BENGAL,700001
Tel/Fax/Email	[illegible]

Period of Insurance	FROM 00:00 ON [illegible] TO MIDNIGHT OF [illegible]						
Collection No. & Dt.	[illegible]						
Gross Premium	[illegible]	GST	[illegible]	Stamp Duty	5	Total	[illegible]
Coinsurance Details	NIL						

Nature of Business	MANUFACTURING		
Category of Industry	GREEN	Policy Purchase Category	Plant

Indemnity Limit

Rs. 2,500,000.00/- Any One Accident

Rs. 5,000,000.00/- Aggregate during the Policy Period (Not exceeding three times of any one accident of Indemnity Limit.)

Retroactive Date: 08/10/2025

Contribution to the Environmental Relief Fund: 4,00,000.00 (Included in the Total Premium)

TERRITORY/JURISDICTION: INDIA / INDIA

The insurance under this policy is subject to conditions, clauses, warranties, exclusions which are available on Company's website www.orientalinsurance.org.in or on demand from the policy issuing office.

Specific Conditions if any:

Place: KOLKATA

Date: 07/10/2025

This Document is Digitally Signed
Signer: DO THE ORIENTAL INSURANCE COMPANY LIMITED
Date: Tue Oct 7 2025 13:52:07
Reason: Signing Policy As DOC

Attached to and forming part of policy number 312100/48/2026/208

In the event of a claim under the policy exceeding Rs. 1 lac or a claim for refund of premium exceeding Rs. 1 lac,the insured will comply with the provisions of the AML policy of the Company. The AML policy is available in all our operating offices as well as Company's website.

If the policy has an imposed excess clause in the schedule ,then higher of the two, Compulsory excess or imposed excess, would prevail.

This Agreement excludes any loss or claims arising from:

¿ Radioactive contamination exclusion clause.
¿ Patent and Trade secret infringement
¿ Fines and Penalties uninsurable under the Law.
¿ Punitive and exemplary damages
¿ War, Invasion, acts of foreign enemies including by not limited to, acts involving the use of operation, as a means of inflicting harm or causing loss, of any computer , computer system, software programme,malicious code, computer virus or process or any other electronic system or any other electronic system hostilities or warlike operations(whether war be declared or not),civil
war,rebellion,revolution,insurrection,civil commotion assuming the proportions of or amounting to an uprising,military or usurped power.
¿ Liability arising out of Terrorism can be covered upto a limit of INR100,000,000 any one policy
¿ Nuclear Energy Risks exclusion clause
¿ Gradual Environmental Impairment Exclusion Clause
¿ North American Absolute Environmental Impairment Exclusion Clause
¿ Airlines,aircraft and airside operation of airports,including refuelling,control tower liability and construction & repair work within the airport perimeter.
¿ Workmen¿s Compensation Insurance
¿ Any Electro Magnetic Fields (EMF) liability arising from Electric Utilities and Manufacturers of Mobile Phones
¿ Public Liability of Indian Railways as a railway operator.
¿ Manufacturers and/or production and/or storage of fireworks, fuses, ammunition, cartridges and explosives.
¿ Any liability arising from or in anyway connected to the use or incorporation of exposure to, contact with or contamination by asbestos(including claims expenses)whether incurred directly or indirectly.

Excess : 0.25% of ADA limit subject min of Rs 1000/- for each and every Claim.
5% of claim amount minimum of Rs.5.00 lacs for each & every claim.

Financier Names are as per the list attached : Not applicable

Place : KOLKATA
Date : 07/10/2025

This Document is Digitally Signed
Signer: Dn: "THE ORIENTAL INSURANCE COMPANY LIMITED"
Date: Tue, Oct 7, 2025 18:43:52 IST
Reason: Signing Policy for OICL

Attached to and forming part of policy number 312108/46/2026/208

This Agreement excludes any loss or claims arising from:
¿ Financial Guarantee and insolvency
¿ Sanction limitation and exclusion clause
¿ Communicable disease exclusion clause
¿ Cyber liability exclusion clause
¿ No Cover for products manufactured, assembled, formulated in USA, Canada
¿ Fiduciary liability unless where incidental to operations.
¿ Ocean marine liability including shipowner¿s liability
¿ Any liability arising out of Mining processing manufacturing distributing storage and/or removal of pure asbestos and/or products made entirely or mainly of asbestos.
¿ Use of product made entirely or mainly of asbestos.
¿ Ownership operation or use of
¿ Aircraft and air cushioned vehicles including construction repair or installation work on aircraft
¿ Vessels including their navigation
¿ Motor insurance as per Motor Vehicles Act 1988 in India or equivalent in any other jurisdiction with the exception of Motor Excess Insurance.
¿ Manufacture and/or production of
Fireworks/weapons cartridges,ammunition,powder,nitroglycerine or any explosives
¿ Mining risks other than¿ Drift¿ and/or¿ Open-cast¿ (applicable to General Public Liability only).
¿ Offshore risk/act

This Agreement excludes any loss or claims arising from:
¿ Underground and underwater mines and collieries and all underground services in connection therewith
¿ Product Liability and product completed operations
¿ Structure professional liability exclusion
¿ Contractual Liability assumed by the Insured and which would not have attached in the absence of such contract
¿ Perfluorinated compounds, perfluoroalkyl and polyfluoroalkyl substances (PFAS) Exclusion
¿ Product Liability, recall, warranty, guaranty and inefficacy
¿ Professional Indemnity, D&O liability, Clinical Trials, Medical Malpractice
¿ Pure & Consequential financial loss
¿ Political Risks, War and Sabotage, Terrorism Liability NMA 2918
¿ Workmen Compensation, Employer¿s liability
¿ Auto Liability
¿ Aviation Liability, Airside Liability, Damage to aircraft, Drone Liability
¿ Marine Liability , Hauler Liability, Damage to Watercraft, Vessel
¿ Asbestos, Silica, lead
¿ SMO, TSE, Toxic Mold, EMF
¿ T&D lines
¿ PFAS,PFOA
¿ Fluctuation/Failure to Supply

OTHER TERMS & CONDITIONS
¿ Claims Made policy
¿ No knowledge of circumstances that might lead to a loss
¿ No additional limits to be sought without consonance of OICL
¿ If there exists any other policy covering the same risk, our policy would contribute proportionately in case of a claim.
¿ The insured should not have any global policy for higher limits, i.e. our policy should not act as a Deductible buyback for the larger policy
¿ Above approval is subject to Written confirmation from the client, of no known or reported losses / circumstances which may lead to a claim / liability in future.
¿ Right to defend
¿ Designated premises for & details of surrounding area to be provided prior to binding
¿ List of hazardous goods to be provided prior to binding
¿ Warranted that All environmental clearances and operating licenses from regulatory authorities to be in place
¿ Warranted that Accurate record of hazardous material being handled should be maintained at all times.
¿ Warranted that safety audits to be regularly conducted at prescribed time limits
¿ Warranted that All regulatory compliances in place at all times
¿ Warranted that Disaster Management Plan with regard to on-site emergency response plan, mock drills, trained safety personnel to be available and followed at all times
¿ Warranted that all safety and security protocols to be followed at all times
¿ Any change in exposure / risk to be duly informed to the u/w and approval to be taken for the same

DEDUCTIBLE: 5% of claim amount minimum of Rs 5.00 lacs for each & every claim. Any other deductible/policy excess, if mentioned elsewhere in this policy schedule, is null valid.
EXTENSIONS ALLOWED UNDER THE POLICY As per Public Liability Act, 1991 insurance policy. HO Approval uploaded.
RETRO DATE: 08/10/2024- LIMIT: Rs 15,00,00,000 (AOY) / Rs 5,00,00,000/- (AGA)

Warranted that in case of dishonour of premium cheque(s) the Company shall not be liable under the policy and the policy shall be void ab initio (from inception).

In witness whereof the undersigned being duly vested by and on behalf of the Company has hereunto hereto set his/her hands at KBO KOLKATA (GSTIN: 19AAACT0627R3ZU) on 07TH DAY OF OCTOBER 2025

Place : KOLKATA
Date : 07/10/2025

This Document is Digitally Signed

Signer DN: [illegible] INSURANCE COMPANY LIMITED
Date: Tue, [illegible]
Reason: Signing [illegible]

The Oriental Insurance Company Limited

Attached to and forming part of policy number 512100/46/2026/208

Entered By : MR SANJOY BHATTACHARYYA

Examined By : R.K.DAS

Policy Printed By : 339687 IP :

Policy Printed On : 07-OCT-25 13:43:52 MAC :

Digitally Signed
By
Authorised Signatory

This is an electronically generated document (Policy Schedule).The Policy document duly stamped will be sent by post.
In case of any query regarding the Policy please call Toll Free No. 1800 11 9480 and 011 33208465.
CIN: U66010DL1947GOI007158. All the Amounts mentioned in this policy are in Indian Rupees
IRDA Regn. No. 556 - Now you can buy and renew selected policies online at www.orientalinsurance.org.in and through other digital platforms including Whatsapp (Send "Hi" to 9555711200)

Place : KOLKATA
Date : 07/10/2025