

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

Date: 10.05.2023

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

Ref: EC Letter no: EC/SEIAA/2022-23/2646/2023/366, Ranchi, Date: 08.02.2023, EC Identification no.EC23B000JH199098

Dear Sir,

Please find enclosed herewith half yearly Environment Clearance compliance report of Bokaro Cement Manufacturing works unit of Dalmia Cement (Bharat) Limited, Bokaro, Jharkhand for the period of October '2022 to March '2023 for your kind perusal.

Thanking you.

Yours Sincerely,

For M/s. Dalmia Cement (Bharat) Limited.
(Unit: Bokaro Cement Manufacturing works)



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, HIG-1, Sardar Patel Nagar, Hirapur Dhanbad-826001

Enclosed:

1. EC Compliance Report
2. Annexure -I to XVI

Dalmia Cement (Bharat) Limited

Unit : Bokaro Cement Manufacturing Works

Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro-827014, Jharkhand, India

T +91 6542 253 278 / +91 6542 253 047 Toll Free 1800 2020 W www.dalmiacement.com CIN :U65191TN1996PLC035963

Registered Office : Dalmiapurani, District Tiruchirapalli, Tamil Nadu - 621 651, India.

A **Dalmia Bharat Group** Company, www.dalmiabharat.com

Bokaro Cement Manufacturing Works

(A Greenfield Standalone Grinding Unit of Dalmia Cement (Bharat) Limited)

At Plot No. IV/a-7(p)4, Village- Gorabali, Notified Bokaro Industrial Area Under JIADA,
Balidih Phase-4, Bokaro, Jharkhand

STATUS OF COMPLIANCE OF ENVIRONMENTAL CLEARANCE FROM OCTOBER 2022 TO MARCH 2023

EC Letter no: EC/SEIAA/2022-23/2646/2023/366, Ranchi, Date: 08.02.2023, EC Identification no.EC23B000JH199098

| S. No. | EC Conditions | Compliance |
|--------------------------------|--|---|
| Specific Conditions | | |
| i. | <p>This Environmental Clearance is valid subject to the following condition below —</p> <p>That this project has-</p> <p>a. Obtained all legal rights to operate at concerned place.</p> <p>b. Complied with all existing concerned laws of the land and</p> <p>c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.</p> | <p>Complied</p> <p>a. The project is located in Notified Industrial area. The land is allotted by JIADA to DCBL at Plot No. IV/A-7(P)4, Notified Bokaro Industrial Area Balidih Phase-4, Bokaro-827014, Jharkhand and is in possession of DCBL.</p> <p>b. All existing concerned laws are being complied.</p> <p>c. CTE and CTO obtained from JSPCB Ranchi for the construction and operation of the plant..</p> |
| I. Statutory Compliance | | |
| 1. | <p>The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act. 1986, in case of the diversion of forest land for non- forest purpose involved in the project.</p> | <p>Not Applicable as there is No Forest land in plant area.</p> <p>The unit is located in notified Industrial area at JIADA, Bokaro, Jharkhand with due allocation through Govt of Jharkhand. Obtained all necessary statutory clearance to operate the plant.</p> |
| 2. | <p>The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.</p> | <p>Not Applicable. This clause is not applicable to our unit, as there is no wild life sanctuary within 10 km radius of our unit. NOC of DFO Territorial & DFO Wildlife in this regard has been obtained vide Letter no. 3546 dated 21.12.2021 and 2058 dated 28.11.2021 respectively. The same was submitted during appraisal of plant and also is attached herewith as Annexure I & II.</p> |
| 3 | <p>The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife</p> | <p>Not Applicable</p> |

| S. No. | EC Conditions | Compliance |
|--------|--|---|
| | 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 six- monthly compliance report. (in case of the presence of schedule –I species in the study area) | The unit is located in notified industrial area at JIADA, Bokaro. There is no record of schedule –I species within 10 km radius of our unit. Hence this condition is not applicable. |
| 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-15399804/2023/128, Dated 23.02.2023 and CTO obtained from JSPCB Ranchi vide letter no. JSPCB/HO/RNC/CTO-13611071/2023 /512 dated 22.03.2023 attached as Annexure-III &IV |
| 5 | The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of for drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project. | Complied. The permission for water connection has been obtained from JIADA and Drinking Water and Sanitation Sub-Division, Bokaro vide letter no 36 dated 13.04.2022. The same is attached herewith as an Annexure-V. |
| 6 | The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules 2016 as amended from time to time. | To be complied. Authorization under the Hazardous and other Waste Management Rules 2016 will be obtained. |
| 7 | No mining / activity shall be undertaken in the forest land or deemed forest without obtaining requisite prior forestry clearance. | Not Applicable |
| 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. | Noted |
| 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 fauna occurs/ is found in the project | Not Applicable and EC has already been obtained |

| S. No. | EC Conditions | Compliance |
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| | area or if the area involves forest land or wildlife habitat i.e. core zone of elephant /tiger reserve etc. and or located within 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 accrue to them unless all clearance are obtained. | Not Applicable. |
| II. Air quality monitoring and preservation | | |
| 1 | The project proponent shall install 24 x 7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R no 612 (E) dated 25 August 2014 (Cement) and subsequent amendment dated 9 th May 2016 (Cement) and connected to SPCB and CPCB online 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. | Complied. Continuous emission monitoring system at process stacks installed to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R no 612 (E) dated 25 August 2014 (Cement) and subsequent amendment dated 9 th May 2016 (Cement) and connected to SPCB and CPCB online servers. This will be regularly calibrated. |
| 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 | Noted for compliance. |
| 3 | The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emission) within and outside the plant area at an angle of 120-degree each) covering upwind and downwind directions. (case to case basis small plant: Manual: large plants: Continuous) | On line CAAQMS installation of equipment completed Data connectivity to JSPCB & CPCB work is under progress. Manual AAQM checking started. Ambient air quality monitoring report attached as per Annexure: VI |

| S. No. | EC Conditions | Compliance |
|--------|--|--|
| 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 | Noted for compliance. CEMS data will submit plant operation phase. Manual Ambient air quality monitoring started. AAQM monitoring report attached as per Annexure-VI |
| 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 with. Bag House at the VRM and 31 Bag filters installed at all the material transfer and handling point to keep the emission within the standard specified by MOEFCC/CPCB. List of APC the same is attached as Annexure VII |
| 6 | The project shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags. | Complied with. Regular maintenance of bag filters, leakage checking, cleaning of bag filter 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 with. Project is only grinding unit, Clinkerisation is not involved. Applicable Pollution control measures as per CREP guideline of CPCB implemented. Attached Annexure VIII |
| 8 | Sufficient number of mobile or stationary vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly. | Complied with. Stationary vacuum cleaners 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. | Complied with. All raw materials/products is being transferred within plant by covered conveyor belt. Inward & outward transportation of Raw materials & products done in covered tarpaulin trucks/ bulkers/ rail to control material spillage as well as fugitive dust emission. |
| 10 | Provide wind shelter fence and chemical spraying on the raw material stock piles | Complied with All the raw material, fuel and products stored within the covered storage yard and silos. |

| S. No. | EC Conditions | Compliance |
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| 11 | Have separate truck parking area and monitor vehicular emissions at regular interval. | Complied with. PUC certified equipment as well as trucks are deployed. Separate truck parking facility provided. Regular checking of vehicles PUC certificates is being done to control of vehicular emission. |
| 12 | Efforts shall be made to reduce impact of the transport of the raw materials and end product on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport. | Noted for compliance. All measures, detailed in PFR & EMP report, implemented to reduce impact of the transport. Covered conveyor belt are being used for transportation of raw material & product within plant. All raw materials and products transported in covered trucks, bulkers, and railways to reduce the fugitive dust emission. Regular water sprinkling is being done on the roads within plant 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, and cement bagging plants. | Complied with. Ventilation system arrangement done at motor houses, and cement bagging plants. |
| III. 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 € dated 25 th August, 2014 (Cement) and subsequent amendment dated 9 th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these systems 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). | Not applicable There is no requirement of water for manufacturing process. Water will be required for cooling of equipment/machinery in closed loop & dust suppression. The water is either consumed or recycled, hence no effluent generation is foreseen. 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) sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment | Not Applicable. Ground water withdrawal is not proposed for the plant. There will not be any effluent generation from the plant. Sewage will be properly treated in STP and treated water will be used within plant for greenbelt development. |

| S. No. | EC Conditions | Compliance |
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| | (Protection) Act.1986 and NABL accredited laboratories. | However, ground water quality and ground water depth level of surrounding village regularly monitored. same report attached as per Annexure-IX |
| 3 | The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluents 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 will not be any effluent generation from the plant. |
| 4 | Adhere to 'Zero Liquid Damage' | Noted to comply. |
| 5 | Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards. | Compliance under progress. |
| 6 | Garland drains and collection pits shall be provided for each stock piles 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 drains and collection pits provided for each stock piles 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 proponent shall practice rainwater harvesting to maximum possible extent. | Compliance under progress Technical approval RWH structure under progress at GWD Ranchi. Roof top storm water will be collected and will be used for various plant activities. |
| 8 | Water meter shall be provided at the inlet to all unit processes to maximum possible extent. | Complied with. Water meter installed at the inlet of the unit. |
| 9 | The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water. | Complied with. Optimum use of water is being practiced and All necessary efforts will be made to reduce water consumption in our plant. Sewage will be treated in STP and treated water will be reused for greenbelt & dust suppression. |
| IV. 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. | Complied with. Noise level is being regularly monitored in different locations as per the prescribed guidelines and will be submitted to Regional Officer of the Ministry along with Half Yearly Compliance Report. |

| S. No. | EC Conditions | Compliance |
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| 2 | Ambient noise levels shall conform to the standards prescribed under EPA rules viz. 75dB (A) during day time and 70db (A) during night time. | Complied with. Noise level report attached as per Annexure- X |
| V. 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. | Shall be complied. Solar based LED lights installed at different location of the plant. |
| 2 | Provide the project proponent for LED lights in their offices and residential areas. | Complied with LED lights installed for lighting purpose |
| 3 | Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS Standards. | Complied Portland Slag Cement (PSC) using waste products such as Slag (about 65 %) as per BIS norms. |
| VI. Waste Management | | |
| 1 | The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & other waste (Management & Transboundary Movement) Rules 2016. | Noted for compliance |
| 2 | Kitchen waste shall be composted or composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant). | Noted for compliance Kitchen waste will be composted and manure will be used in greenbelt development. |
| VII. 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. | Compliance under progress Greenbelt/plantation will be done over 33% of the total project area i.e., about 5.2 acres (2.105 ha). The green belt will inter alia cover the entire periphery of the plant. Native species with large canopy will be selected for plantation in accordance with CPCB guidelines. Green belt development report attached as per Annexure: XI |
| 2 | The project proponent shall prepare GHG emission inventory for the plant and shall submit the program for reduction of the same including carbon sequestration including plantation. | Noted the condition. |
| VIII. Public Hearing and Human Health issues: | | |

| S. No. | EC Conditions | Compliance |
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| 1 | Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented | Complied with. On site emergency Preparedness plan, Hazard identification and Risk Assessment (HIRA) prepared and same is approved by Chief Factory Inspector of Jharkhand. |
| 2 | The PP shall provide Personal Protection Equipment (PPE) as per the norms of factory act. | Complied with. All Personal protective equipment's (PPE) Safety shoes, Nose mask, safety helmet, earplug, provided to all employees and contract workers for their safety. Safety training is being regularly given to the employees for the awareness of safe working culture. |
| 3 | Provision shall be made for the housing of construction labor 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. Local people are employed for the construction purpose. No housing facilities will be required for them. However, all necessary infrastructure / facility is being provided to all workers. Also the amenities available in the adjacent unit are made accessible. |
| 4 | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Periodic medical health checkup of employees and workers is being done for every six months. Reports will be maintained as per Factory Act. |

IX. Corporate Environment Responsibility:

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| 1 | The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-14. III dated 1 st May 2018, as applicable, regarding Corporate Environment Responsibility. | Noted for compliance. The company proposes to invest around 1.5 Crores on the various socio-economic developmental activities on the basis of findings of Participatory rural appraisal which will be conducted periodically by DBF. All socio-economic developmental activities mentioned in submitted PFR & EMP report will be implemented. Apart, from this, company will spend 2% of the profit for implementation of various developmental activities for the nearby area as part of Corporate Social Responsibility Under Section 135 of Companies Act 2013 once plant commences operation. CER report for the year 2022-23 attached as per Annexure- XII |
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| S. No. | EC Conditions | Compliance |
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| 2 | The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and I or shareholders / stakeholders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report. | Complied The Company has a well laid down corporate Environmental Policy governed by all the units and head office. Accordingly, a full-fledged Environmental Management Cell (EMC) for environmental monitoring and control will be established. The hierarchical system or administrative order of the Company is attached as an Annexure XIII . |
| 3 | A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control senior Executive, who will directly report of 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). |
| 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 SEIAA/Ministry, Regional office along with the six Monthly compliance Report. | Complied and will be complied during operation phase. Action plan for EMP Implementation during construction phase 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 will be regularly submitted to Ministry and his Regional Office as a part of Six Monthly EC compliance report. Expenditure on Environment protection From April 2022 to March 2023 attached as per annexure- XIV |
| 5 | Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out. | The condition will be complied during operational phase of the project. |
| 6 | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented. | Noted for compliance during operation. Project is only grinding unit, Clinkerisation is not involved. Applicable Pollution control measures as per CREP guideline of CPCB will be implemented. |

| S. No. | EC Conditions | Compliance |
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| 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 newspaper 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 A public notice informing about grant of EC has been published in two newspapers named "The Pioneer" and "Aaj" on 02.03.2023 in English as well as in vernacular language i.e. Hindi. Copy of Advertisements are attached herewith as an Annexure XV . The Newspapers with advertisement along with copy of EC have been submitted to the Regional Office of MoEFCC, MS-SEIAA and MS- JSPCB. Copy of submission receipts are attached herewith as an Annexure-XVI . |
| 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. | Complied. We have submitted copy of Environment Clearance to Regional Office of MoEFCC, MS-SEIAA, MS- JSPCB, local Panchayat and other Govt. bodies, district head quarter. Copy of submission receipts are attached herewith as an Annexure-XVI |
| 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. | Noted for compliance. |
| 4 | The project proponent shall monitor the criteria pollutants level namely; PM 10, SO2, NOx (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. | The condition will be complied during operational phase of the project. |
| 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. | Shall be complied. |
| 6 | The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned | The condition will be complied during operational phase of the project. |

| S. No. | EC Conditions | Compliance |
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| | State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company. | |
| 7 | The project proponent shall inform the Regional Office as well as 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: 27 April '2022 Date of start of Land development work: 29.04.2022 Date of Production date: Yet to start production as plant is under construction phase. Date of financial closure: Will be informed to Regional Office as well as Ministry. |
| 7.1 | The project authorities must strictly adhere to the stipulation made by the State Pollution Control Board and the State Government. | Noted for compliance. |
| 7.2 | 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. | To be complied during operation of plant |
| 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) | Noted for compliance |
| 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. | Noted & agreed. |
| 10 | The SEIAA, Jharkhand or any other competent Authority may alter modify the above conditions or stipulate any further conditions in the | Noted & agreed |

| S. No. | EC Conditions | Compliance |
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| 11 | No further expansion or modifications in the plant shall be carried out without prior Approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC) | Noted & agreed |
| 12 | Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986. | Noted & agreed |
| 13 | The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory. | Noted & agreed |
| 14 | The ministry may reserve the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions. | Noted & agreed |
| 15 | The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information /monitoring reports. | Noted & agreed |
| 16 | The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter. | Noted & agreed |
| 17 | Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010. | Noted & agreed |
| 18 | This environmental clearance is valid for seven years from the date of issue. | Noted & Agreed |

Annexure-I

No forest land in plant area, Clearance letter from DFO Territorial, Bokaro vide Letter no. 3546 dated 21.12.2021

| Government of Jharkhand | | |
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| Department of Forest, Environment and Climate Change | | |
| Permission Letter : LETTER20211220 | | |
| Acknowledgment No: SWSFST111202131031 | Issue Date: 21-12-2021 | |
| Name Of Applicant : | Dalmia Cement Bharat Limited | |
| Email ID : | sinha.rajeevkumar@dalmiacement.com. | Contact no.: 9771478206 |
| Report of Distance from Forest, Forest Reserve and Sanctuary | | |
| SNo | Checkpoint | Divisional Forest Officer |
| 1 | Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? | Yes |
| 2 | Whether Project location come under No Mining Zone? | No |
| 3 | Does there any National park located within 10 km from project location? | No |
| 4 | Does there any Wildlife sanctuary located within 10 km distance from project location? | No |
| 5 | Does there any ESZ available within 10 km distance from project location? | No |
| 6 | Whether Proposed project comes under prohibited category of ESZ (Yes or No)? | No |
| | | Name : _____ |
| Note :-The order dated 12.12.1996 in case no. 202/95 passed by Hon'ble Apex Court will be applicable in respect of GMJJ Land. | | Designation : _____ |
| | | Signature : _____ |
| | | Divisional Forest Officer Bokaro Forest Division Bokaro |
| *The certificate to be issued by the Divisional Forest Officer of the respective Divisions and upload | | |



Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant Dalmia Cement Bharat Limited
Institution Type Non Government

Email ID sinha.rajeevkumar@dalmiacement.com Contact no.: 9771478206

Location of Proposed Land

District Bokaro

Battery Point Gorabali

Thana No.: 14

Thana Name: Jaridih

Khata No.: 134,76,177,46,45,171,47,145,78,65,135,72

892 (F),781 (P),777 (F),784 (P),779 (P),778 (P),782 (P),783 (P),887 (P),890 (F),888 (P),880 (P),852 (P),891 (F),960(P),850(P),893 (P),851 (P),858 (P),871 (F),957 (P),870 (P),958 (F),884 (F),885 (F),886 (F),776 (P),883 (F),882 (F),875 (F),862 (F),876 (F),881 (F),879 (F),878 (F),874 (F),863 (F),866 (F),873 (F),864 (F),868 (P),861 (F),867 (P),865 (F)

| # | Checkpoint | Range Forest Officer | Divisional Forest Officer |
|---|--|----------------------|---------------------------|
| 1 | Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? * | Yes | Yes |
| 2 | Whether Project location come under No Mining Zone? * | No | No |
| 3 | Does there any National park located within 10 km from project location? * | No | No |
| 4 | Does there any Wildlife sanctuary located within 10 km distance from project location? * | No | No |
| 5 | Does there any ESZ available within 10 km distance from project location? * | No | No |
| 6 | Whether Proposed project comes under prohibited category of ESZ (Yes or No)? * | No | No |

Note :-The order dated 12.12.1996 in case no. 202/95 passed by Hon'ble Apex Court will be applicable in respect of GMJJ Land.

Division DFO Bokaro

Letter No. 3546

Date of issue 21/12/2021

Signature

Name

Divisional Forest Officer
Bokaro Forest Division
Bokaro
Divisional Forest Officer

11/28/21, 5:06 PM

Inspection Report of Distance from Forest, Forest Reserve and Sanctuary



Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant Dalmia Cement Bharat Limited
Institution Type Non Government

Email ID sinha.rajeevkumar@dalmiacement.com Contact no.: 9771478206

Location of Proposed Land

District Bokaro

Battery center

Thana No.: 14

Thana Jaridih
Name:

Khata No.: 134,76,177,46,45,171,47,145,78,65,135,72

Khesra Name:

892 (F),781 (P),777 (F),784 (P),779 (P),778 (P),782 (P),783 (P),887 (P),890 (F),888 (P),880 (P),852 (P),891 (F),960(P),850(P),893 (P),851 (P),858 (P),871 (F),957 (P),870 (P),958 (F),884 (F),885 (F),886 (F),776 (P),883 (F),882 (F),875 (F),862 (F),876 (F),881 (F),879 (F),878 (F),874 (F),863 (F),866 (F),873 (P),864 (F),868 (P),861 (F),867 (P),865 (F)

| # | Checkpoint | Range Forest Officer | Divisional Forest Officer |
|---|--|----------------------|---------------------------|
| 1 | Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? * | No | No |
| 2 | Whether Project location come under No Mining Zone? * | No | No |
| 3 | Does there any National park located within 10 km from project location? * | No | No |
| 4 | Does there any Wildlife sanctuary located within 10 km distance from project location? * | No | No |
| 5 | Does there any ESZ available within 10 km distance from project location? * | No | No |
| 6 | Whether Proposed project comes under prohibited category of ESZ (Yes or No)? * | Yes | Yes |

क्र०स०-1 एवं 2- भूमि की प्रकृति एवं वनभूमि से दूरी संबंधित वांछित सूचना वन प्रमण्डल पदाधिकारी, बोकारो वन प्रमण्डल के कार्यालय से प्राप्त करें।

क्र०स०-3 से 6- के संदर्भ में प्रतिवेदित करना है कि प्रस्तावित परियोजना हेतु आवेदित स्थल Battery Point (23.6961985N 86.0644832E) से निकटतम संरक्षित क्षेत्र (Protected Area) तोपचांची वन्यप्राणी आश्रयणी अवस्थित है, तथा वन, पर्यावरण एवं जलवायु परिवर्तन मंत्रालय भारत सरकार द्वारा पारसनाथ एवं तोपचांची वन्यप्राणी आश्रयणी के अधिसूचित ESZ के सीमा से बाहर अवस्थित है।

Note- उपरोक्त सूचना आवेदक द्वारा समर्पित अभिलेख एवं GPS Point भारत सरकार द्वारा प्रकाशित ESZ के अधिसूचना तथा आवेदित स्थल से निकटतम संरक्षित क्षेत्र (Protected Area) के आधार पर दी गयी है।

Division DFO Wildlife Hazaribagh

Letter No. 2058

Date of issue 28.11.2021

Signature

Name **Divisional Forest Officer**
Wildlife Division, Hazaribagh

Divisional Forest Officer

Range Forest Officer
वन प्रमण्डल, बोकारो
वन्य प्राणी प्रमण्डल, बोकारो

Annexure-III

CTE obtained from JSPCB, Ranchi vide letter no JSPCB/ HO/RNC/CTE-15399804/2023/128, Dated 23.02.2023



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-15399804/2023/128

Dated : 2023-02-23

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

- Reference: Application (s) No.- 15399804 / dated : 31/01/2023 of Bokaro Cement Manufacturing Works (A Unit of DCBL), Priya Ranjan 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
- Documents Relied Upon:**
 - The content of Environmental Clearance (EC) granted vide memo no. EC/SEIAA/2022-23/26462022/366, dated 30.01.2023.
 - The content of Consent to Establish (CTE), vide ref. no. JSPCB/HO/RNC/CTE-12699959/2022/195, dated 28.04.2022 for the production of Cement - 2.0 Million TPA and D.G. Set of 1000 KVA (2 x 500 KVA) as per EC valid for the period of one year.
 - The content of check-list vide ref. no. 157, dated 09.02.2023.
 - The content of copy of the land lease document issued by BIADA for 30 yrs. w.e.f. 28.10.2021.
 - The content of certificate of DFO, vide ref. no. 2058, dated 28.11.2021.
 - The content of undertaking regarding procurement of raw material from valid sources.
 - The content of investment figure certified by CA.
- 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- Gorabali, P S -Bokaro, District-BOKARO as follows:

| Project | Site-Area | | Investment (Rs)/ Year | Product & Capacity | Period of CTE |
|--------------|--------------------------------------|------------|-----------------------|--|---------------|
| | Plot Nos. | Area | | | |
| In Expansion | Industrial Area Plot No. IV/A-7(P)4, | 15.75 Acre | 35.50 Crore | Expansion of capacity:- Cement-2.0 MTPA to 3.1 MTPA; DG set - 2x500=1000 KVA | As per EC |

(A) Specific Conditions:

1. That, the occupier shall make Work area and transport roads and approach road off the main road concrete/ black top.
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 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.
6. 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.
7. That, the occupier shall use fly ash and or fly ash bricks in construction of the project.
8. That, the occupier shall install only green D G Set(s) with acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.
9. That, the occupier shall obtain NOC from Central Ground Water Authority as per the norms.
10. That, the occupier shall dispose the solid waste as per applicable norms.
11. That, the occupier shall dispose the hazardous waste as per applicable norms and shall obtain authorization under HoWM Rules' 2016.
12. That, the occupier shall adhere to ZLD.
13. That, the occupier shall devvelop greenery in an atleast 33 percent of area.
14. That, the occupier shall submit compliance of CTE and EC conditions on six monthly basis to JSPCB and other concerned organizations.
15. That, the occupier shall apply for CTO and shall submit compliance of CTE and EC conditions alongwith the photographs.

(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 text 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) / 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 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: 2023.02.23
10:31:56 +05'30'

**(Yatindra Kumar Das)
Member Secretary**

Memo No. : JSPCB/HO/RNC/CTE-
15399804/2023/128

Dated : 2023-02-23

Copy to : M/s Bokaro Cement Manufacturing Works (A unit of Dalmia Cement (Bharat) Limited, At- Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, 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: 2023.02.23
10:31:37 +05'30' **(Yatindra Kumar Das)
Member Secretary**

Annexure-IV

CTO obtained from JSPCB Ranchi vide letter no.JSPCB/HO/RNC/CTO-13611071/2023/512 Dated 22.03.2023



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/CTO-13611071/2023/512

Dated : 2023-03-22

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

- Application (s) dated 2023-03-07 of Bokaro Cement Manufacturing Works (A Unit of DCBL), Occupier Name :Priya Ranjan 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..
- Documents Relied Upon:**
 - The content of Environmental Clearance (EC) granted vide memo no. EC/SEIAA/2022-23/26462022/366, dated 30.01.2023.
 - The content of Consent to Establish (CTE), vide ref. no. JSPCB/HO/RNC/CTE-12699959/2022/195, dated 28.04.2022 for the production of Cement - 2.0 Million TPA and D.G. Set of 1000 KVA (2 x 500 KVA) as per EC valid for the period of one year.
 - The content of Consent to Establish (CTE), vide ref. no. JSPCB/HO/RNC/CTE-15399804/2023/128, dated 23.02.2023 for the production of Expansion of capacity:- Cement - 2.0 MTPA to 3.1 MTPA; DG set - 2x500=1000 KVA for the period as per EC.
 - The content of check-list vide ref. no. 157, dated 09.02.2023.
 - The content of copy of the land lease document issued by BIADA for 30 yrs. w.e.f. 28.10.2021.
 - The content of certificate of DFO, vide ref. no. 2058, dated 28.11.2021.
 - The content of undertaking regarding procurement of raw material from valid sources.
 - The content of investment figure certified by CA.
- 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 -Gorabali , P S -Bokaro , District -BOKARO , as follows:

| Project | Site-Area | | Investment (Rs) | Product & Capacity | Period of CTO |
|--------------|-------------------------------------|------------|-----------------|--|------------------|
| | Plot Nos. | Area | | | Date of issue To |
| In Expansion | Industrial Area Plot No. IV/A7(P)4, | 15.75 Acre | 611.54 Crore | Cement- 3.1 MTPA, DG set - 2x500=1000 KVA [as per application] | 31/03/2024 |

(A) Specific Conditions:

1. That, the occupier shall make Work area and transport roads and approach road off the main road concrete/ black top.
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 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.
6. 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.
7. That, the occupier shall implement all pollution control measures as recommended in EIA/EMP.
8. That, the occupier shall comply the recommendations of CREP.
9. That, the occupier shall use all solid wastes as resource as a raw material or a product.
10. That, the occupier shall install only green D G Set(s) with acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norms.
11. That, the occupier shall ensure 100 % transportation of raw material by rail and 70% product by rail.
12. That, the occupier shall adhere to Zero Liquid Dischare.
13. That, the occupier shall dispose the solid waste as per applicable norms.
14. That, the occupier shall dispose the hazardous waste as per applicable norms and shall obtain authorization under HoWM Rules' 2016.
15. That, the occupier shall install 24 x 7 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 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.

16. That, the occupier shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emission) within and outside the plant area at an angle of 120-degree each) covering upwind and downwind directions.

17. That, the occupier shall install STP of adequate capacity and submit its report to the Board.

18. That, the occupier shall construct rain water harvesting system and shall operate and maintain the same.

19. That, the occupier shall submit ERP within six months along wit the compliance report.

20. That, the occupier shall provide Personal Protection Equipment (PPE) as per the norms of factory act.

21. That, the occupier shall upgrade the pollution control equipment as and when required.

22. That, the occupier shall submit compliance of EC and CTO conditions on six monthly basis to the Board.

23. That, the occupier shall submit applications for renewal of 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 again 120 days prior to the date of expiry of this consent with requisite fee and documents showing compliance of all of the above conditions.

(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 (SO ₂), µg/m ³ | Annual 24 hours | 50 80 | 20 80 |
| 2. | Nitrogen Dioxide (NO ₂), µg/m ³ | Annual 24 hours | 40 80 | 30 80 |
| 3. | Particulate Matter (size less than 10 µm) or PM ₁₀ , µg/m ³ | Annual 24 hours | 60 100 | 60 100 |
| 4. | Particulate Matter (size less than 2.5 µm) or PM _{2.5} , µg/m ³ | Annual 24 hours | 40 60 | 40 60 |
| 5. | Ozone(O ₃), µg/m ³ | 8 hours 1 hour | 100 180 | 100 180 |
| 6. | Lead (Pb) µg/m ³ | Annual 24 hours | 0.50 1.0 | 0.50 1.0 |
| 7. | Carbon Monoxide (CO) mg/m ³ | 8 hours 1 hour | 02 04 | 02 04 |
| 8. | Ammonia (NH ₃) µg/m ³ | Annual 24 hours | 100 400 | 100 400 |
| 9. | Benzene (C ₆ H ₆) µg/m ³ | Annual | 05 | 05 |
| 10. | Benzo(a) Pyrene(BaP) Particulate Phase only ng/m ³ | Annual | 01 | 01 |
| 11. | Arsenic (As) ng/m ³ | Annual | 06 | 06 |
| 12. | Nickel (Ni) ng/m ³ | 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/Nm ³ |

- (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 analyses 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
(Yatindra Kumar Das)
Member Secretary

Digitally signed by
Yatindra Kumar Das
Date: 2023.03.22
18:09:48 +05'30'

Dated : 2023-03-22

Memo No. : JSPCB/HO/RNC/CTO-
13611071/2023/512

Copy to: M/s Bokaro Cement Manufacturing Works (A unit of Dalmia Cement (Bharat) Limited, At-Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, 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
(Yatindra Kumar Das)
Member Secretary

Digitally signed by
Yatindra Kumar Das
Date: 2023.03.22
18:10:04 +05'30'

Water permission letter from JIADA

झारखण्ड औद्योगिक क्षेत्र विकास प्राधिकार
बोकारो प्रक्षेत्र, बियाडा भवन, बालीडीह, बी०एस०सिटी-14.
email : mdbiadabokaro@gmail.com

पत्रांक :

दिनांक :

सेवा मे,

अवर प्रमण्डल पदाधिकारी,
पेय जल एवं स्वच्छता अवर प्रमण्डल
चास,
बोकारो स्टील सिटी ।

विषय:-इकाई के जलापूर्ति के संबंध में।

महाशय,

उपर्युक्त विषय आपका दिनांक
आलोक में इकाई सर्वश्री डालमिया सीमेंट (भारत) संख्या-
क्षेत्र, बी०एस०सिटी-14 के 1.50 (एक लाख पचास हजार) लीटर प्रति दिन जल आपूर्ति
दी ।

विश्वासभाजन,
Erb
क्षेत्रीय निदेशक
जियाडा, बोकारो प्रक्षे

ज्ञापांक :

प्रतिलिपि : सर्वश्री डालमिया सीमेंट (भारत) संख्या-
औद्योगिक क्षेत्र, बी०एस०सिटी-14 को सूचनार्थ प्रेषित ।

संख्या-

क्षेत्रीय निदेशक
जियाडा, बोकारो प्र



Office of the Sub-Divisional Officer
Drinking Water and Sanitation Sub-Division, Bokaro

Letter No. 36

Chas, Dated 13/4/22

To,

Regional Director
BIADA, Bokaro

Sub: Regarding Water Connection for M/S Dalmia cement (Bharat) Ltd. under BIADA.
Reference: Your letter no. 35 dated 25.01.22, 185 dated 05.04.22, this office letter no 24 dated 24.02.22 and agreement for water supply between unit and BIADA on dated 17.3.11

Madam,

With reference to the above cited subject, M/S Dalmia cement (Bharat) Ltd is asking for another 1.50 Lakhs litre water per day for their 2nd unit. I would like to inform you that the above firm have water agreement of 5.5 lakhs litre per day with BIADA for their 1st unit, out of which approx 2.0 – 2.5 lakhs litre water per day is being taken by Dalmia cement to meet the requirement of their 1st unit. M/S Dalmia cement (Bharat) Ltd already have approx 3.0 lakhs litre water allocated as surplus (extra). M/S Dalmia cement (Bharat) Ltd can meet the another 1.50 Lakhs litre water per day for their 2nd unit from the existing water agreement. This is for your information and necessary action.

Thanking You

P. Mohan
13/4/22
Sub-Divisional Officer
DWS Sub-Division,
Bokaro

Bokaro/Date 13/4/22

Memo No. 36

Copy to: M/S Dalmia cement (Bharat) Ltd. for your information and further necessary action.

P. Mohan
13/4/22
Sub-Divisional Officer
DWS Sub-Division,
Bokaro

Ambient Air Quality Monitoring report



Institute for Environmental Management

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National Accreditation Board for Testing Laboratory (NABL) vide TC-11515
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



Test Report

| | | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|---|-------------------|---|-----------------------------|--------------|---|------------------------|---|---------------------------|---|----------------|---|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Discipline: Chemical | Group: Atmospheric Pollution | | | | | | | Sub-Group: Ambient Air | | | | | | | | | | |
| Report Issue Date: 25-03-2023 | Test Report No.: RN-230308001A05 | | | | | | | | | | | | | | | | | |
| Sample ID: 230321AP11005 | Sample Description: Ambient Air | | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | | |
| Issued to: Bokaro Cement Manufacturing Works, Unit of Dalmia Cement (Bharat) Limited Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India | | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 18-03-2023 to 19-03-2023 | | | | | | | | | |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series | | | | | | | | | | | | | | | | | | |
| Sampling Location: Gorabali Near Temple | | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | A. Temp. (°C): 25 | | | R.H. (%): 55 | | | W.C.: Cloudy | | | W.D.: NW to SE | | | | | | |
| Sample Receiving date: 21-03-2023 | | | | | Testing Started: 21-03-2023 | | | | | Testing Ended: 24-03-2023 | | | | | | | | |

---Test Results---

| Sl. No. | Parameters | Test Method No. | Unit | Norms as per NAAQS - 2009 | Results |
|---------|---|----------------------|-------------------|---------------------------|--------------|
| 1. | Particulate Matter (PM ₁₀) | IS 5182 Part 23:2006 | µg/m ³ | 100 | 64.45 |
| 2. | Particulate Matter (PM _{2.5}) | IS 5182 Part 24:2019 | µg/m ³ | 60 | 28.26 |
| 3. | Sulphur Dioxide (SO ₂) | IS 5182 Part-02 | µg/m ³ | 80 | 10.79 |
| 4. | Nitrogen Dioxide (NO ₂) | IS 5182 Part-06 | µg/m ³ | 80 | 21.38 |
| 5. | Ammonia (NH ₃) | IS 5182 Part 25 | µg/m ³ | 400 | 18.35 |
| 6. | OZONE (O ₃) | IS 5182 Part 09 | µg/m ³ | 100 | 28.54 |
| 7. | ARSENIC (as As) | USEPA I.O. 3.2 | ng/m ³ | ---- | BDL (MDL-02) |
| 8. | LEAD (as Pb) | IS 5182 Part 22 | µg/m ³ | 1.0 | 0.04 |
| 9. | NICKEL (Ni) | IS 5182 Part 26 | ng/m ³ | ---- | BDL (MDL-4) |

---End of Report---

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

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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.

| | |
|---|---|
| Quality Checked by | Authorized Signatory |
|  (Shreya Soria) Dy. Quality Manager |  (Dr. S. C. Jain) Director |

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

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

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



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Test Report

| | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|---|-------------------|-----------------------------|---|--------------|------------------------|---------------------------|---|---|---|----------------|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| Discipline: Chemical | Group: Atmospheric Pollution | | | | | | Sub-Group: Ambient Air | | | | | | | | | | |
| Report Issue Date: 25-03-2023 | Test Report No.: RN-230308001A06 | | | | | | | | | | | | | | | | |
| Sample ID: 230321AP11006 | Sample Description: Ambient Air | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | |
| Issued to: Bokaro Cement Manufacturing Works, Unit of Dalmia Cement (Bharat) Limited Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 18-03-2023 to 19-03-2023 | | | | | | | | |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series | | | | | | | | | | | | | | | | | |
| Sampling Location: Pakhariya Tand Village | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | A. Temp. (°C): 25 | | | R.H. (%): 55 | | | W.C.: Cloudy | | | W.D.: NW to SE | | | | | |
| Sample Receiving date: 21-03-2023 | | | | Testing Started: 21-03-2023 | | | | Testing Ended: 24-03-2023 | | | | | | | | | |

----Test Results----

| Sl. No. | Parameters | Test Method No. | Unit | Norms as per NAAQS - 2009 | Results |
|---------|---|----------------------|-------------------|---------------------------|--------------|
| 1. | Particulate Matter (PM ₁₀) | IS 5182 Part 23:2006 | µg/m ³ | 100 | 67.37 |
| 2. | Particulate Matter (PM _{2.5}) | IS 5182 Part 24:2019 | µg/m ³ | 60 | 26.96 |
| 3. | Sulphur Dioxide (SO ₂) | IS 5182 Part-02 | µg/m ³ | 80 | 17.54 |
| 4. | Nitrogen Dioxide (NO ₂) | IS 5182 Part-06 | µg/m ³ | 80 | 25.27 |
| 5. | Ammonia (NH ₃) | IS 5182 Part 25 | µg/m ³ | 400 | 15.48 |
| 6. | OZONE (O ₃) | IS 5182 Part 09 | µg/m ³ | 100 | 17.03 |
| 7. | ARSENIC (as As) | USEPA I.O. 3.2 | ng/m ³ | ---- | BDL (MDL-02) |
| 8. | LEAD (as Pb) | IS 5182 Part 22 | µg/m ³ | 1.0 | 0.05 |
| 9. | NICKEL (Ni) | IS 5182 Part 26 | ng/m ³ | ---- | BDL (MDL-4) |

----End of Report----

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

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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.

Quality Checked by Authorized Signatory




(Shreya Soni) (Dr. S. C. Jain)

Dy. Quality Manager

Director

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

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

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



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Test Report

| | | | | | | | | | | | | | | | | | | | |
|---|-------------------------------------|---|---|-------------------|---|-----------------------------|------------------------|--------------|---|---|---|---------------------------|---|---|---|----------------|---|--|--|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | | |
| Discipline: Chemical | Group: Atmospheric Pollution | | | | | | Sub-Group: Ambient Air | | | | | | | | | | | | |
| Report Issue Date: 25-03-2023 | Test Report No.: RN-230308001A07 | | | | | | | | | | | | | | | | | | |
| Sample ID: 230321AP11007 | Sample Description: Ambient Air | | | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | | | |
| Issued to: Bokaro Cement Manufacturing Works, Unit of Dalmia Cement (Bharat) Limited Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India | | | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 18-03-2023 to 19-03-2023 | | | | | | | | | | |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series | | | | | | | | | | | | | | | | | | | |
| Sampling Location: Near Project Office | | | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | | A. Temp. (°C): 28 | | | | R.H. (%): 69 | | | | W.C.: Cloudy | | | | W.D.: NW to SE | | | |
| Sample Receiving date: 21-03-2023 | | | | | | Testing Started: 21-03-2023 | | | | | | Testing Ended: 24-03-2023 | | | | | | | |

----Test Results----

| Sl. No. | Parameters | Test Method No. | Unit | Norms as per NAAQS - 2009 | Results |
|---------|---|----------------------|-------------------|---------------------------|--------------|
| 1. | Particulate Matter (PM ₁₀) | IS 5182 Part 23:2006 | µg/m ³ | 100 | 68.51 |
| 2. | Particulate Matter (PM _{2.5}) | IS 5182 Part 24:2019 | µg/m ³ | 60 | 34.08 |
| 3. | Sulphur Dioxide (SO ₂) | IS 5182 Part-02 | µg/m ³ | 80 | 14.14 |
| 4. | Nitrogen Dioxide (NO ₂) | IS 5182 Part-06 | µg/m ³ | 80 | 28.24 |
| 5. | Ammonia (NH ₃) | IS 5182 Part 25 | µg/m ³ | 400 | 19.20 |
| 6. | OZONE (O ₃) | IS 5182 Part 09 | µg/m ³ | 100 | 25.18 |
| 7. | ARSENIC (as As) | USEPA I.O. 3.2 | ng/m ³ | ---- | BDL (MDL-02) |
| 8. | LEAD (as Pb) | IS 5182 Part 22 | µg/m ³ | 1.0 | 0.03 |
| 9. | NICKEL (Ni) | IS 5182 Part 26 | ng/m ³ | ---- | BDL (MDL-4) |

----End of Report----

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

| | | |
|---|---------------------|----------------------|
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| | (Shreya Sonal) | (Dr. S. C. Jain) |
| On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization. | Dy. Quality Manager | Director |

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

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

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Test Report

| | | | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|---|---|-------------------|---|-----------------------------|---|------------------------|---|---|---|---------------------------|---|---|---|----------------|---|--|--|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | | |
| Discipline: Chemical | Group: Atmospheric Pollution | | | | | | | Sub-Group: Ambient Air | | | | | | | | | | | |
| Report Issue Date: 25-03-2023 | Test Report No.: RN-230308001A07 | | | | | | | | | | | | | | | | | | |
| Sample ID: 230321AP11007 | Sample Description: Ambient Air | | | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | | | |
| Issued to: Bokaro Cement Manufacturing Works, Unit of Dalmia Cement (Bharat) Limited Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India | | | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 18-03-2023 to 19-03-2023 | | | | | | | | | | |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series | | | | | | | | | | | | | | | | | | | |
| Sampling Location: khutri Village | | | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | | A. Temp. (°C): 28 | | | | R.H. (%): 69 | | | | W.C.: Cloudy | | | | W.D.: NW to SE | | | |
| Sample Receiving date: 21-03-2023 | | | | | | Testing Started: 21-03-2023 | | | | | | Testing Ended: 24-03-2023 | | | | | | | |

---Test Results---

| Sl. No. | Parameters | Test Method No. | Unit | Norms as per NAAQS - 2009 | Results |
|---------|---|----------------------|-------------------|---------------------------|--------------|
| 1. | Particulate Matter (PM ₁₀) | IS 5182 Part 23:2006 | µg/m ³ | 100 | 62.61 |
| 2. | Particulate Matter (PM _{2.5}) | IS 5182 Part 24:2019 | µg/m ³ | 60 | 31.08 |
| 3. | Sulphur Dioxide (SO ₂) | IS 5182 Part-02 | µg/m ³ | 80 | 12.14 |
| 4. | Nitrogen Dioxide (NO ₂) | IS 5182 Part-06 | µg/m ³ | 80 | 26.24 |
| 5. | Ammonia (NH ₃) | IS 5182 Part 25 | µg/m ³ | 400 | 17.20 |
| 6. | OZONE (O ₃) | IS 5182 Part 09 | µg/m ³ | 100 | 21.18 |
| 7. | ARSENIC (as As) | USEPA I.O. 3.2 | ng/m ³ | ---- | BDL (MDL-02) |
| 8. | LEAD (as Pb) | IS 5182 Part 22 | µg/m ³ | 1.0 | 0.05 |
| 9. | NICKEL (Ni) | IS 5182 Part 26 | ng/m ³ | ---- | BDL (MDL-4) |

---End of Report---

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

| | | |
|---|---------------------|----------------------|
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| | (Shreya Sonal) | (Dr. C. Jain) |
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Laboratory Site - H.No. - A-13, Saket Vihar, Near Scharai Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand, India

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

Annexure-VII

LIST OF POLLUTION CONTROL EQUIPMENTS (BAG FILTERS)

| BOKARO CEMENT MANUFACTURING WORKS, (A unit of DALMIA CEMENT BHARAT LIMITED) | | | | | | | |
|--|---------------------|--|------------------|-------------------------------|-----------------------------|------------|-------------------------------|
| LIST OF POLLUTION CONTROL EQUIPMENTS | | | | | | | |
| S. No. | Location | Description | Application | Design dust Emission (mg/Nm3) | Volume of bag filter (m3/h) | Fan Volume | Outlet dust Emission (mg/Nm3) |
| Bag House | | | | | | | |
| 1. | Cement Mill Venting | Bag House 563BF4 | Cement | 10 | 1030000 | 1150000 | ≤ 30 |
| LIST of Nuisance Dust Collectors | | | | | | | |
| 1 | TT-1 492 BF1 | Belt conveyor from WT to clinker silo new & existing (492 BC1) at TT-1/Clinker | Clinker | 10 | 10000 | 11500 | ≤ 30 |
| 2 | TT-2 492 BF2 | Belt conveyor 492BC1 discharging to 492BC2 & BC4 at TT-2/Clinker | Clinker | 10 | 10000 | 11500 | ≤ 30 |
| 3 | TT-3 492BF4 | Bag filter 492 BF3 for conveyor 492BC3 discharging to 492 BC4 | Clinker | 10 | 10000 | 11500 | ≤ 30 |
| 4 | 492BF5 | 492 BC3 discharge and clinker silo top/ Clinker | Clinker | 10 | 15000 | 17250 | ≤ 30 |
| 5 | TT-4 512BF1 | Belt conveyor 512BC1 discharge to 512BC3 at TT-4/ Clinker | Clinker | 10 | 12500 | 14375 | ≤ 30 |
| 6 | TT-5 | Belt conveyor 512BC2 discharge to 512BC3 at TT-5/ Clinker | Clinker | 10 | 10000 | 11500 | ≤ 30 |
| 7 | TT-6 512 BF3 | Belt conveyor 512BC3 discharge to 512BC4 at TT-6/ Clinker | Clinker | 10 | 7500 | 8625 | ≤ 30 |
| 8 | 512 BF4 | Belt conveyor 512BC4 discharge to 512BE1 at TT-3 bottom/ Clinker | Clinker | 10 | 5000 | 5750 | ≤ 30 |
| 9 | CMH Top 533 BF1 | Cement mill hopper top/ Clinker & Gypsum | Clinker & Gypsum | 10 | 10000 | 11500 | ≤ 30 |
| 10 | 533 BF3 | CMH extraction | Clinker & Gypsum | 10 | 15000 | 17250 | ≤ 30 |
| 11 | 533 BF2 | Mill feed conveyor | Clinker & Gypsum | 10 | 10000 | 11500 | ≤ 30 |

**BOKARO CEMENT MANUFACTURING WORKS,
(A unit of DALMIA CEMENT BHARAT LIMITED)**

LIST OF POLLUTION CONTROL EQUIPMENTS

| S. No. | Location | Description | Application | Design dust Emission (mg/Nm ³) | Volume of bag filter (m ³ /h) | Fan Volume | Outlet dust Emission (mg/Nm ³) |
|--------|--------------------|--|-------------|--|--|------------|--|
| 12 | 563 BF1 | Cement Mill BE feed/ Reject Material | Cement | 10 | 12500 | 14375 | ≤ 30 |
| 13 | 563 BF2 | Cement Mill BE Top/ Reject Material | Cement | 10 | 10000 | 11500 | ≤ 30 |
| 14 | 563 BF3 | Cement Mill reject BC/ Reject Material | Cement | 10 | 10000 | 11500 | ≤ 30 |
| 15 | 594 BF1 | Baghouse Extraction/ Cement | Cement | 10 | 5000 | 5750 | ≤ 30 |
| 16 | 594 BF2 | Baghouse Extraction/ Cement | Cement | 10 | 5000 | 5750 | ≤ 30 |
| 17 | BRU K12BF1 | K12 BF1 for BRU 1 & 2 (With pneumatic dampers) | Coal | 10 | 30000 | 34500 | ≤ 30 |
| 18 | TT9 K12 BF2 | K12 BF2 for TT9 (Coal Handling) | Coal | 10 | 12500 | 14375 | ≤ 30 |
| 19 | FBC Hopper K12 BF3 | K12 BF3 for FBC (Coal Handling) | Coal | 10 | 7500 | 8625 | ≤ 30 |
| 20 | 492 BF3 | 492 BF3 (492BC2 to 492BC3) TT14 | Clinker | 10 | 10000 | 11500 | ≤ 30 |
| 21 | 232BF2 | Air slide venting | Fly ash | 10 | 4000 | 4600 | ≤ 30 |
| 22 | 614BF1 | Cement silo cone | Cement | 10 | 4000 | 4600 | ≤ 30 |
| 23 | 613BF1, | Cement silo cone | Cement | 10 | 4000 | 4600 | ≤ 30 |
| 24 | 595BF1 | Cement silo top | Cement | 10 | 7500 | 8625 | ≤ 30 |
| 25 | 594BF3 | Cement silo top | Cement | 10 | 7500 | 8625 | ≤ 30 |
| 26 | 613BF2 | Airslide venting | Cement | 10 | 5000 | 5750 | ≤ 30 |
| 27 | 613BF3 | Airslide venting | Cement | 10 | 6000 | 6900 | ≤ 30 |
| 28 | 646BF1 | Packing Plant | Cement | 10 | 15000 | 17250 | ≤ 30 |
| 29 | 647BF1 | Packing Plant | Cement | 10 | 15000 | 17250 | ≤ 30 |

**BOKARO CEMENT MANUFACTURING WORKS,
(A unit of DALMIA CEMENT BHARAT LIMITED)**

LIST OF POLLUTION CONTROL EQUIPMENTS

| S. No. | Location | Description | Application | Design dust Emission (mg/Nm³) | Volume of bag filter (m³/h) | Fan Volume | Outlet dust Emission (mg/Nm³) |
|---------------|-----------------|--------------------|--------------------|---|---|-------------------|---|
| 30 | 646BF2 | Packing Plant | Cement | 10 | 35000 | 40250 | ≤ 30 |
| 31 | 647BF2 | Packing Plant | Cement | 10 | 35000 | 40250 | ≤ 30 |

Compliance of CREP Conditions

BOKARO CEMENT MANUFACTURING WORKS

| S.No. | CREP Conditions | Compliance |
|--------------|---|--|
| 1 | <p>Cement plants/Standalone grinding units, which are not complying* with notified standards, shall do the following to meet the standards:</p> <ul style="list-style-type: none">• Augmentation of existing air pollution control devices- by July 2003• Replacement of existing air pollution control devices- by July 2004 | <p>M/s. Dalmia cement (Bharat) Limited will comply with all the Stipulated standards given by MoEFCC/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 practiced.</p> |
| 2 | <p>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/Nm³. 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.</p> | <p>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/nuisance filters will be installed in Packing Plant and all material transfer points.</p> |
| 3 | <p>The new cement kilns to be accorded NOC/ Environmental clearance w.e.f. 01.04.2003 will meet the limit of 50 mg/Nm³.</p> | <p>Unit is Stand-alone Grinding Unit only and will comply with new emission norms.</p> |
| 4 | <p>CPCB will evolve load-based standards by December 2003.</p> | <p>This is a Stand-alone grinding unit; Load based standards issued by the MoEFCC is for Kiln only for clinckerisation. Hence, this condition is not applicable.</p> |
| 5 | <p>CPCB and NCBM will evolve SO₂ and NO_x emission standards by June 2004</p> | <p>Unit is Stand-alone Grinding Unit only and there will not be SO₂ and NO_x emission during manufacturing process; this condition is not applicable.</p> |
| 6 | <p>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</p> | <p>Unit is Stand-alone Grinding Unit only and there will not be SO₂ and NO_x emission during manufacturing process; this condition is not applicable.</p> |

| | | |
|----|--|--|
| | National Task Force (NTF) The NTF shall submit its recommendations within three months. | To control the fugitive emissions the following measures are adopted/proposed: <ul style="list-style-type: none"> ● 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 conveyer 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, NCBM, 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) will be installed at Cement Mill Stack and real time emission monitoring data will be 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; as the proposal is for Stand-alone Grinding Unit. However, high efficiency Bag House will be provided for Cement Mill |
| 10 | Industries will submit the target date to enhance the utilization of waste material by April 2003. | After expansion, GU will also 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-IX

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

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

GROUND WATER QUALITY REPORT NEAR VILLAGE AREA



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Test Report

| | | | | | | | | | | | | | | | | | |
|--|--------------|---|---|---|---|-----------------------------|---|---|--|---|---|---------------------------|---|---|----------------------|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Discipline: Chemical | Group: Water | | | | | | | | | | Sub-Group: Ground Water | | | | | | |
| Report Issue Date: 27-03-2023 | | | | | | | | | | | Test Report No.: RN-230308001GW1 | | | | | | |
| Sample ID: 230321WA01001 | | | | | | | | | | | Sample Description: Ground Water (Dug well) | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | | | | | | | | | | | Challan No./ P.No. Date: 17-09-2022 | | | | | | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 19-03-2023 | | | | | | | | |
| Protocol: CPCB Guideline & IS Method 3025 Part-01 | | | | | | | | | | | | | | | | | |
| Sampling Location: Bhutkuru | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | | | | A. Temp. (°C): 27 | | | R.H. (%): 61 | | | W.C.: Cloudy | | | W.D.: North to South | | |
| Sample Receiving date: 21-03-2023 | | | | | | Testing Started: 21-03-2023 | | | | | | Testing Ended: 24-03-2023 | | | | | |

---Test Result---

| Sl. No. | Tested Parameter | Unit | Method No. | Limit | | Results |
|---------|----------------------------------|-------|-------------------|------------|---------------|---------------|
| | | | | Acceptable | Permissible | |
| 1. | pH value at 25°C | ---- | IS 3025 (Part-11) | 6.5 – 8.5 | No Relaxation | 7.09 |
| 2. | Turbidity | NTU | IS 3025 (Part-10) | 1 | 5 | 4.1 |
| 3. | Colour | Hazen | IS 3025 (Part-04) | 5 | 15 | 5.0 |
| 4. | Odour | ---- | IS 3025 (Part-05) | Agreeable | Agreeable | Agreeable |
| 5. | Total Dissolved Solids (TDS) | mg/l | IS 3025 (Part-16) | 500 | 2000 | 693.0 |
| 6. | Calcium (as Ca+2) | mg/l | IS 3025 (Part-40) | 75 | 200 | 110.62 |
| 7. | Total Alkalinity (as CaCO3) | mg/l | IS 3025 (Part-23) | 200 | 600 | 225.0 |
| 8. | Total Hardness (as CaCO3) | mg/l | IS 3025 (Part-21) | 200 | 600 | 452.0 |
| 9. | Chloride (as Cl) | mg/l | IS 3025 (Part-32) | 250 | 1000 | 89.33 |
| 10. | Free Residual Chlorine | mg/l | IS 3025 (Part-26) | 0.2 | 1.0 | BDL (MDL-2.0) |
| 11. | Sulphate (as SO4 ⁻²) | mg/l | IS 3025 (Part-24) | 200 | 400 | 95.67 |
| 12. | Magnesium (as Mg+2) | mg/l | IS 3025 (Part-46) | 30 | 100 | 42.77 |

---END Report---

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

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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.

Quality Checked by _____ Authorized Signatory

Shreya Sonar  
(Shreya Sonar) (S. C. Jain)

Dy. Quality Manager  Director

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Test Report

| | | |
|--|---|---------------------------|
| Discipline: Chemical | Group: Water | Sub-Group: Ground Water |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW1 | |
| Sample ID: 230321WA01001 | Sample Description: Ground Water (Dug well) | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | |
| Type of Industry: Cement | Customer Representative: Sanjeev Verma | |
| Sample Drawn by: IEM Team | Sampling Date: 19-03-2023 | |
| Protocol: CPCB Guideline & IS Method 3025 Part-01 | | |
| Sampling Location: Bhutkuru | | |
| Field Meteorological Information | A. Temp. (°C): 27 | R.H. (%): 61 |
| | W.C.: Cloudy | W.D.: North to South |
| Sample Receiving date: 21-03-2023 | Testing Started: 21-03-2023 | Testing Ended: 24-03-2023 |

---Test Result---

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

---END Report---

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

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Quality Checked by _____ Authorized Signatory

Shreyasna
(Shreyasna)
Dy. Quality Manager



Director



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Test Report

| | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|-----------------------------|----------------------------------|---|--|---|---|--------------|---|---|----------------------|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Discipline: Chemical | Group: Residues and Contaminants in Water | | | | | | Sub-Group: Trace Metals elements | | | | | | | | | | |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW1 | | | | | | | | | | | | | | | | |
| Sample ID: 230321RC01001 | Sample Description: Ground Water (Dug well) | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 19-03-2023 | | | | | | | | |
| Protocol: IS Method & CPCB Guideline | | | | | | | | | | | | | | | | | |
| Sampling Location: Bhutkuru | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | | | | A. Temp. (°C): 27 | | | R.H. (%): 61 | | | W.C.: Cloudy | | | W.D.: North to South | | |
| Sample Receiving date: 21-03-2023 | | | | | | Testing Started: 21-03-2023 | | | Testing Ended: 24-03-2023 | | | | | | | | |

----Test Result----

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

----End Report----

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

| | | |
|--|---------------------|----------------------|
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| | (Shreya Sonal) | (D. S. C. Jain) |
| On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization. | Dy. Quality Manager | Director |

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Test Report

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

---Test Result---

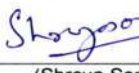

| Sl. No. | Tested Parameter | Unit | Method No. | Limits | Results |
|---------|------------------|------|-------------------|---------------------|------------------|
| 1. | Iron (Fe) | mg/l | APHA 3111 B.2017 | 1.0 - No Relaxation | 0.25 |
| 2. | Aluminium (Al) | mg/l | IS 3025 Part - 55 | 0.03 -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

---End Report---

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

| | | |
|--|--|---|
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| |  |  |
| | (Shreya Sonal) | (S. C. Jain) Dy. Quality Manager * Ranchi * Director |



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Test Report

| | | | | | |
|--|--|-----------------------------|---|---------------------------|----------------------|
| Discipline: Biological | | Group: Water | | Sub-Group: Ground Water | |
| Report Issue Date: 27-03-2023 | | | Test Report No.: RN-230308001GW01 | | |
| Sample ID: 230321MB01001 | | | Sample Description: Ground Water (Dug well) | | |
| Challan No./P.O. No.: 4548023834/237 | | | Challan No./ P.No. Date: 17-09-2022 | | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | |
| Type of Industry: Cement | | | Customer Representative: Sanjeev Verma | | |
| Sample Drawn by: IEM Team | | | Sampling Date: 19-03-2023 | | |
| Protocol: CPCB Guideline & IS Method 3025 Part-01 | | | | | |
| Sampling Location: Bhutkuru | | | | | |
| Field Meteorological Information | | A. Temp. (°C): 27 | R.H. (%): 61 | W.C.: Cloudy | W.D.: North to South |
| Sample Receiving date: 21-03-2023 | | Testing Started: 21-03-2023 | | Testing Ended: 24-03-2023 | |

----Test Result----

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

----END Report----

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

Tested By: Khushi

Sample Drawn By: Rajiv Kr. Singh & Team

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Quality Checked by _____ Authorized Signatory _____

Shreya Sonal 
 (Shreya Sonal) 
 Dy. Quality Manager Director



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Test Report

| | | | | | | | | | | | | | | | | | |
|--|---|---|-------------------|---|-----------------------------|--------------|---|-------------------------|--|---------------------------|---|----------------------|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Discipline: Chemical | Group: Water | | | | | | | Sub-Group: Ground Water | | | | | | | | | |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW2 | | | | | | | | | | | | | | | | |
| Sample ID: 230321WA01002 | Sample Description: Ground Water (Dug well) | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 19-03-2023 | | | | | | | | |
| Protocol: CPCB Guideline & IS Method 3025 Part-01 | | | | | | | | | | | | | | | | | |
| Sampling Location: POKHARIA TAND | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | A. Temp. (°C): 27 | | | R.H. (%): 61 | | | W.C.: Cloudy | | | W.D.: North to South | | | | | |
| Sample Receiving date: 21-03-2023 | | | | | Testing Started: 21-03-2023 | | | | | Testing Ended: 24-03-2023 | | | | | | | |

----Test Result----

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

----END Report----

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

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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.

Quality Checked by

Shreyas

(Shreya Sonal)

Dy. Quality Manager

Authorized Signatory

(Signature)
 (D. C. Jain)
 Director

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

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

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



Institute for Environmental Management



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Test Report

| | | |
|--|---|---------------------------|
| Discipline: Chemical | Group: Water | Sub-Group: Ground Water |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW2 | |
| Sample ID: 230321WA01002 | Sample Description: Ground Water (Dug well) | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | |
| Type of Industry: Cement | Customer Representative: Sanjeev Verma | |
| Sample Drawn by: IEM Team | Sampling Date: 19-03-2023 | |
| Protocol: CPCB Guideline & IS Method 3025 Part-01 | | |
| Sampling Location: POKHARIA TAND | | |
| Field Meteorological Information | A. Temp. (°C): 27 | R.H. (%): 61 |
| | W.C.: Cloudy | W.D.: North to South |
| Sample Receiving date: 21-03-2023 | Testing Started: 21-03-2023 | Testing Ended: 24-03-2023 |

----Test Result----

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

----END Report----

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

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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.

Quality Checked and Authorized Signatory


 (Shreya Soni)

Dy. Quality Manager, Ranchi Director



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

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

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





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



Test Report

| | | | | | | | | | | | | | | | | | |
|--|---|---|-------------------|-----------------------------|---|--------------|--|----------------------------------|--------------|---|---|----------------------|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| Discipline: Chemical | Group: Residues and Contaminants in Water | | | | | | | Sub-Group: Trace Metals elements | | | | | | | | | |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW2 | | | | | | | | | | | | | | | | |
| Sample ID: 230321RC01002 | Sample Description: Ground Water (Dug well) | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | Sampling Date: 19-03-2023 | | | | | | | | | | |
| Protocol: IS Method & CPCB Guideline | | | | | | | | | | | | | | | | | |
| Sampling Location: POKHARIA TAND | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | A. Temp. (°C): 27 | | | R.H. (%): 61 | | | W.C.: Cloudy | | | W.D.: North to South | | | | | |
| Sample Receiving date: 21-03-2023 | | | | Testing Started: 21-03-2023 | | | | Testing Ended: 24-03-2023 | | | | | | | | | |

---Test Result---



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

---End Report---

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

| | | |
|---|--|---|
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| |  (Shreya Sora) Dy. Quality Manager |  S. C. Jain Director |

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

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

| | | |
|---|--|---|
| Discipline: Chemical | Group: Residues and Contaminants in Water | Sub-Group: Trace Metals elements |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW2 | |
| Sample ID: 230321RC01002 | Sample Description: Ground Water (Dug well) | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | |
| Type of Industry: Cement | Customer Representative: Sanjeev Verma | |
| Sample Drawn by: IEM Team | Sampling Date: 19-03-2023 | |
| Protocol: IS Method & CPCB Guideline | | |
| Sampling Location: POKHARIA TAND | | |
| Field Meteorological Information | A. Temp. (°C): 27 | R.H. (%): 61 |
| | W.C.: Cloudy | W.D.: North to South |
| Sample Receiving date: 21-03-2023 | Testing Started: 21-03-2023 | Testing Ended: 24-03-2023 |

----Test Result----

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

----End Report----

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

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Quality Checked by

Authorized Signatory

Shreyas Sonal

Dr. S. C. Jain

(Shreya Sonal)

(Dr. S. C. Jain)

Dy. Quality Manager

Director



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

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ISO 45001:2018



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

Test Report

| | | | | |
|---|--|---|---------------------|----------------------------------|
| Discipline: Biological | Group: Water | Sub-Group: Ground Water | | |
| Report Issue Date: 27-03-2023 | Test Report No.: RN-230308001GW02 | | | |
| Sample ID: 230321MB01002 | Sample Description: Ground Water (Dug well) | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | |
| Issued to: Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | |
| Type of Industry: Cement | | Customer Representative: Sanjeev Verma | | |
| Sample Drawn by: IEM Team | | Sampling Date: 19-03-2023 | | |
| Protocol: CPCB Guideline & IS Method 3025 Part-01 | | | | |
| Sampling Location: POKHARIA TAND | | | | |
| Field Meteorological Information | | A. Temp. (°C): 27 | R.H. (%): 61 | W.C.: Cloudy |
| | | W.D.: North to South | | |
| Sample Receiving date: 21-03-2023 | | Testing Started: 21-03-2023 | | Testing Ended: 24-03-2023 |

----Test Result----

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

----END Report----

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

Tested By: Khushi

Sample Drawn By: Rajiv Kr. Singh & Team

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| | |
|---------------------|----------------------|
| Quality Checked by | Authorized Signatory |
| <i>Shreyasoni</i> | <i>C. Jain</i> |
| (Shreya Sonali) | (C. Jain) |
| Dy. Quality Manager | Director |



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

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
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Ph - 8407804254, 8407804251, Email - icm2012@rediffmail.com



Noise Level report

Institute for Environmental Management

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



Test Report

| | | | | | | | | | | | | | | | | | | |
|--|---|---|---|--------------|---|---|---------------------------|---|---|---------------|---|---|---|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| Discipline: Chemical | Group: Atmospheric Pollution | | | | | Sub-Group: Ambient Noise Levels (Excluding Vibration) | | | | | | | | | | | | |
| Report Issue Date: 26-03-2023 | Test Report No.: RN-230308001N2 | | | | | | | | | | | | | | | | | |
| Sample ID: 230321AP13002 | Sample Description: Ambient Noise | | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | | |
| Issued to: | | | | | | | | | | | | | | | | | | |
| Bokaro Cement Manufacturing Works, Unit of Dalmia Cement (Bharat) Limited Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India | | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | Customer Representative: Sanjeev Verma | | | | | | | | | | | | | | | | | |
| Sample Drawn by: IEM Team | Sampling Date: 17-03-2023 to 18-03-2023 | | | | | | | | | | | | | | | | | |
| Protocol: CPCB Guideline & IS Method 9989:1981 | | | | | | | | | | | | | | | | | | |
| Sampling Location: Near Project Office | | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | A. Temp. (°C): 25 | | | R.H. (%): 65 | | | W.C.: Cloudy | | | W.D.: NW - SE | | | | | | | | |
| Sample Receiving date: 21-03-2023 | Testing Started: 21-03-2023 | | | | | | Testing Ended: 24-03-2023 | | | | | | | | | | | |

---Test Result---

| Sl. No | Parameter | Method | Unit | Day Time | Night Time | Limits |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1. | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 67.3 | 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. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

| | |
|---|--|
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| | Authorized Signatory: (Dr. S. C. Jain) Director |

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

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

| | | | | | | | | | | | | | | | | | | | |
|---|----------------|---|------------------------------|---|-----------------------------|-------------|---|---|---|---------------------------|---|---------------|---|---|---|---|---|---|--|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | |
| Discipline: | Chemical | | Group: Atmospheric Pollution | | | | | | Sub-Group: Ambient Noise Levels (Excluding Vibration) | | | | | | | | | | |
| Report Issue Date: | 26-03-2023 | | | | | | | | Test Report No.: RN-230308001N5 | | | | | | | | | | |
| Sample ID: | 230321AP13005 | | | | | | | | Sample Description: Ambient Noise | | | | | | | | | | |
| Challan No./P.O. No.: | 4548023834/237 | | | | | | | | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | |
| Issued to: | | | | | | | | | | | | | | | | | | | |
| Bokaro Cement Manufacturing Works, Unit of Dalmia Cement (Bharat) Limited Plot No IV/A-7(P)4, Bokaro Industrial Area Balidih Bokaro Steel City, Bokaro-827014 Jharkhand India | | | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | | | |
| Sample Drawn by: IEM Team | | | | | | | | | Sampling Date: 17-03-2023 to 18-03-2023 | | | | | | | | | | |
| Protocol: CPCB Guideline & IS Method 9989:1981 | | | | | | | | | | | | | | | | | | | |
| Sampling Location: Near Gorawali Temple | | | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | | | A. Temp. (°C): 25 | | | R.H. (%):55 | | | W.C.: Cloudy | | | W.D.: NW - SE | | | | | | | |
| Sample Receiving date: 21-03-2023 | | | | | Testing Started: 21-03-2023 | | | | | Testing Ended: 24-03-2023 | | | | | | | | | |

---Test Result---

| Sl. No | Parameter | Method | Unit | Day Time | Night Time | Limits |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1. | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 44.5 | 40.1 | D-75 N-70 |

---End of Reports---

Note: -

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha& Team

Specific Contractual Notes: -

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

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

| Quality Checked by | Authorized Signatory |
|---------------------|----------------------|
| (Shreya Soagi) | (Dr. S. C. Jain) |
| Dy. Quality Manager | Director |

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

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

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



Institute for Environmental Management

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



Test Report

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|--------------|---|---|---------------------------|---|---|---------------|---|---|---|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| Discipline: Chemical | Group: Atmospheric Pollution | | | | | | | | Sub-Group: Ambient Noise Levels (Excluding Vibration) | | | | | | | | | |
| Report Issue Date: 26-03-2023 | Test Report No.: RN-230308001N6 | | | | | | | | | | | | | | | | | |
| Sample ID: 230321AP13006 | Sample Description: Ambient Noise | | | | | | | | | | | | | | | | | |
| Challan No./P.O. No.: 4548023834/237 | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | | | | | | | | | |
| Issued to: Bokaro Cement Manufacturing Works. Unit of Dalmia Cement (Bharat) Limited Plot IV/A-7(P) 4, Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | | | | | | | | | | | | | | |
| Type of Industry: Cement | Customer Representative: Sanjeev Verma | | | | | | | | | | | | | | | | | |
| Sample Drawn by: IEM Team | Sampling Date: 17-03-2023 to 18-03-2023 | | | | | | | | | | | | | | | | | |
| Protocol: CPCB Guideline & IS Method 9989:1981 | | | | | | | | | | | | | | | | | | |
| Sampling Location: Thakurtand Village | | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | A. Temp. (°C): 25 | | | R.H. (%): 55 | | | W.C.: Cloudy | | | W.D.: NW - SE | | | | | | | | |
| Sample Receiving date: 21-03-2023 | Testing Started: 21-03-2023 | | | | | | Testing Ended: 24-03-2023 | | | | | | | | | | | |

---Test Result---

| Sl. No | Parameter | Method | Unit | Day Time | Night Time | Limits |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1. | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 45.8 | 39.3 | D-75 N-70 |

---End of Reports---

Note: -

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

Specific Contractual Notes: -

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

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

Quality Checked by: _____ Authorized Signatory

Shreya Sonar
(Shreya Sonar) S. C. Jain
Dy. Quality Manager Director

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

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

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



Institute for Environmental Management

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



Test Report

| | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|------------------------------|---|-----------------------------|---|---|---|---|---|---|---|---------------|---|---|---|---|---|
| ULR No.: | T | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Discipline: | Chemical | | Group: Atmospheric Pollution | | | | | | Sub-Group: Ambient Noise Levels (Excluding Vibration) | | | | | | | | | |
| Report Issue Date: | 26-03-2023 | | | | | | | | Test Report No.: RN-230308001N7 | | | | | | | | | |
| Sample ID: | 230321AP13007 | | | | | | | | Sample Description: Ambient Noise | | | | | | | | | |
| Challan No./P.O. No.: | 4548023834/237 | | | | | | | | Challan No./ P.No. Date: 17-09-2022 | | | | | | | | | |
| Issued to: | Bokaro Cement Manufacturing Works. Unit of Dalmia Cement (Bharat) Limited Plot IV/A-7(P) 4, Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014 | | | | | | | | | | | | | | | | | |
| Type of Industry: | Cement | | | | | | | | Customer Representative: Sanjeev Verma | | | | | | | | | |
| Sample Drawn by: | IEM Team | | | | | | | | Sampling Date: 17-03-2023 to 18-03-2023 | | | | | | | | | |
| Protocol: | CPCB Guideline & IS Method 9989:1981 | | | | | | | | | | | | | | | | | |
| Sampling Location: | Khutri village | | | | | | | | | | | | | | | | | |
| Field Meteorological Information | A. Temp. (°C): 28 | | | | R.H. (%): 69 | | | | W.C.: Cloudy | | | | W.D.: NW - SE | | | | | |
| Sample Receiving date: | 21-03-2023 | | | | Testing Started: 21-03-2023 | | | | Testing Ended: 24-03-2023 | | | | | | | | | |

---Test Result---

| Sl. No | Parameter | Method | Unit | Day Time | Night Time | Limits |
|--------|------------------------------|--------------|-------|----------|------------|--------------|
| 1. | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 49.3 | 41.6 | D-75 N-70 |

---End of Reports---

Note: -

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha & Team

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

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

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

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

Bokaro Cement Manufacturing works
Unit of Dalmia Cement (Bharat) Limited
Tree plantation pics



550 nos tree plantation done at plant boundary location



PROPOSED GREEN BELT DEVELOPMENT PLAN

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

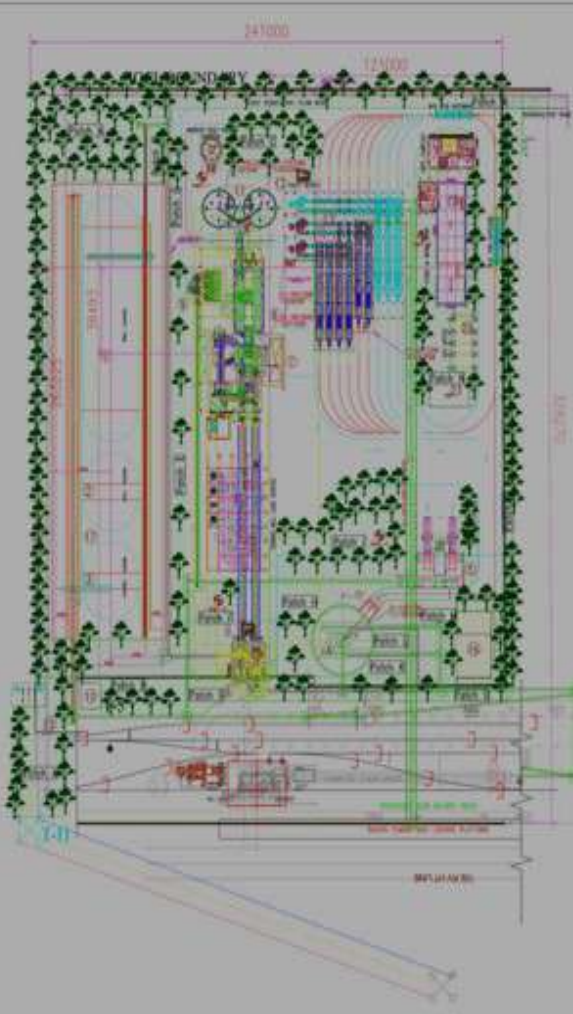
Green Belt development Plan for five years

| Table-12: Green Belt Development Plan Sl. No. | Years | Area (Acres) | No. of Trees |
|--|--------------|---------------------|---------------------|
| 01. | 1st Year | 1.2 | 1200 |
| 02. | 2nd Year | 1.0 | 1000 |
| 03. | 3rd Year | 1.0 | 1000 |
| 04. | 4th Year | 1.0 | 1000 |
| 05. | 5th Year | 1.0 | 1000 |
| TOTAL | | 5.2 | 5200 |

List of selected species for tree plantation

| Tree species | Common Name |
|---------------------------|--------------------|
| <i>Shorea robusta</i> | Sal |
| <i>Pongamia pinnata</i> | Karanj |
| <i>Madhuca longifolia</i> | Mahua |
| <i>Butea monosperma</i> | Palash |
| <i>Azadirachta indica</i> | Neem |
| <i>Acacia catechu</i> | Katha |
| <i>Boswellia serrata</i> | Lobaw |
| <i>Cassia fistula</i> | Amaltas |

| Tree species | Common Name |
|---------------------------------|--------------------|
| <i>Dalbergia latifolia</i> | Eastern Rosewood |
| <i>Erythrina indica</i> | Coral Tree |
| <i>Ficus bengalensis</i> | Banyan |
| <i>Ficus religiosa</i> | Peepal |
| <i>Dendrocalamus strictus</i> | Bamboo |
| <i>Moringa oleifera</i> | Drumstick |
| <i>Terminalia arjuna</i> | Arjun |
| <i>Tectona grandis</i> | Teak |
| <i>Mangifera indica</i> | Mango |
| <i>Albizia lebbek</i> | Siris |
| <i>Artocarpus heterophyllum</i> | Jackfruit |
| <i>Cocos nucifera</i> | Coconut |
| <i>Polypathia longifolia</i> | Ashok |



BOKARO CEMENT MANUFACTURING WORKS, A UNIT OF DALMIA CEMENT (BHARAT) LTD.

| S. No. | Item | Area (Hectare) |
|---------------------------|--|----------------|
| 1. | Plant Area | 1.35 |
| 2. | Thermal Area | 2.30 |
| 3. | Production Area | 2.30 |
| 4. | Storage Area | 0.87 |
| 5. | Office Area | 2.34 |
| 6. | Construction/Service Area (for plant area) | 1.26 |
| Total Project Area | | 14.78 |

Greenbelt Details

| Patch Number | Area |
|--------------|------------|
| Patch 1 | 1.78 |
| Patch 2 | 0.41 |
| Patch 3 | 0.20 |
| Patch 4 | 0.16 |
| Patch 5 | 0.20 |
| Patch 6 | 0.24 |
| Patch 7 | 0.21 |
| Patch 8 | 0.17 |
| Patch 9 | 0.45 |
| Patch 10 | 0.28 |
| Patch 11 | 0.14 |
| Patch 12 | 0.07 |
| Patch 13 | 0.20 |
| Patch 14 | 0.14 |
| Patch 15 | 0.1 |
| Total | 5.8 |

Storage Area Detail

| S.No. | Description | Area |
|---------------------------|----------------|------|
| 1. | Storage Silo 1 | 0.28 |
| 2. | Storage Silo 2 | 0.28 |
| 3. | Storage Silo 3 | 0.14 |
| 4. | Storage Silo 4 | 0.17 |
| 5. | Storage Silo 5 | 0.12 |
| Total Storage Area | 0.79 | |

Production Area Detail

| S.No. | Description | Area |
|------------------------------|--|------|
| 1. | Plant Area | 1.35 |
| 2. | Thermal Area | 2.30 |
| 3. | Production Area | 2.30 |
| 4. | Office Area | 2.34 |
| 5. | Construction/Service Area (for plant area) | 1.26 |
| Total Production Area | 11.55 | |

PROPOSED PLANT

(LEGEND)

| Sl. No. | GENERAL PLANT DESCRIPTION | Area |
|---------|--|------|
| 1. | Plant Area | 1.35 |
| 2. | Thermal Area | 2.30 |
| 3. | Production Area | 2.30 |
| 4. | Office Area | 2.34 |
| 5. | Construction/Service Area (for plant area) | 1.26 |
| 6. | Storage Area | 0.79 |
| 7. | Greenbelt Area | 5.8 |
| 8. | Water Treatment Plant | 0.1 |
| 9. | Power House | 0.1 |
| 10. | Raw Material Storage | 0.1 |
| 11. | Finished Cement Storage | 0.1 |
| 12. | Waste Water Treatment | 0.1 |
| 13. | Water Treatment Plant | 0.1 |
| 14. | Raw Material Storage | 0.1 |
| 15. | Finished Cement Storage | 0.1 |
| 16. | Waste Water Treatment | 0.1 |
| 17. | Water Treatment Plant | 0.1 |
| 18. | Raw Material Storage | 0.1 |
| 19. | Finished Cement Storage | 0.1 |
| 20. | Waste Water Treatment | 0.1 |
| 21. | Water Treatment Plant | 0.1 |
| 22. | Raw Material Storage | 0.1 |
| 23. | Finished Cement Storage | 0.1 |
| 24. | Waste Water Treatment | 0.1 |
| 25. | Water Treatment Plant | 0.1 |
| 26. | Raw Material Storage | 0.1 |
| 27. | Finished Cement Storage | 0.1 |
| 28. | Waste Water Treatment | 0.1 |
| 29. | Water Treatment Plant | 0.1 |
| 30. | Raw Material Storage | 0.1 |
| 31. | Finished Cement Storage | 0.1 |
| 32. | Waste Water Treatment | 0.1 |
| 33. | Water Treatment Plant | 0.1 |
| 34. | Raw Material Storage | 0.1 |
| 35. | Finished Cement Storage | 0.1 |
| 36. | Waste Water Treatment | 0.1 |
| 37. | Water Treatment Plant | 0.1 |
| 38. | Raw Material Storage | 0.1 |
| 39. | Finished Cement Storage | 0.1 |
| 40. | Waste Water Treatment | 0.1 |
| 41. | Water Treatment Plant | 0.1 |
| 42. | Raw Material Storage | 0.1 |
| 43. | Finished Cement Storage | 0.1 |
| 44. | Waste Water Treatment | 0.1 |
| 45. | Water Treatment Plant | 0.1 |
| 46. | Raw Material Storage | 0.1 |
| 47. | Finished Cement Storage | 0.1 |
| 48. | Waste Water Treatment | 0.1 |
| 49. | Water Treatment Plant | 0.1 |
| 50. | Raw Material Storage | 0.1 |
| 51. | Finished Cement Storage | 0.1 |
| 52. | Waste Water Treatment | 0.1 |
| 53. | Water Treatment Plant | 0.1 |
| 54. | Raw Material Storage | 0.1 |
| 55. | Finished Cement Storage | 0.1 |
| 56. | Waste Water Treatment | 0.1 |
| 57. | Water Treatment Plant | 0.1 |
| 58. | Raw Material Storage | 0.1 |
| 59. | Finished Cement Storage | 0.1 |
| 60. | Waste Water Treatment | 0.1 |
| 61. | Water Treatment Plant | 0.1 |
| 62. | Raw Material Storage | 0.1 |
| 63. | Finished Cement Storage | 0.1 |
| 64. | Waste Water Treatment | 0.1 |
| 65. | Water Treatment Plant | 0.1 |
| 66. | Raw Material Storage | 0.1 |
| 67. | Finished Cement Storage | 0.1 |
| 68. | Waste Water Treatment | 0.1 |
| 69. | Water Treatment Plant | 0.1 |
| 70. | Raw Material Storage | 0.1 |
| 71. | Finished Cement Storage | 0.1 |
| 72. | Waste Water Treatment | 0.1 |
| 73. | Water Treatment Plant | 0.1 |
| 74. | Raw Material Storage | 0.1 |
| 75. | Finished Cement Storage | 0.1 |
| 76. | Waste Water Treatment | 0.1 |
| 77. | Water Treatment Plant | 0.1 |
| 78. | Raw Material Storage | 0.1 |
| 79. | Finished Cement Storage | 0.1 |
| 80. | Waste Water Treatment | 0.1 |
| 81. | Water Treatment Plant | 0.1 |
| 82. | Raw Material Storage | 0.1 |
| 83. | Finished Cement Storage | 0.1 |
| 84. | Waste Water Treatment | 0.1 |
| 85. | Water Treatment Plant | 0.1 |
| 86. | Raw Material Storage | 0.1 |
| 87. | Finished Cement Storage | 0.1 |
| 88. | Waste Water Treatment | 0.1 |
| 89. | Water Treatment Plant | 0.1 |
| 90. | Raw Material Storage | 0.1 |
| 91. | Finished Cement Storage | 0.1 |
| 92. | Waste Water Treatment | 0.1 |
| 93. | Water Treatment Plant | 0.1 |
| 94. | Raw Material Storage | 0.1 |
| 95. | Finished Cement Storage | 0.1 |
| 96. | Waste Water Treatment | 0.1 |
| 97. | Water Treatment Plant | 0.1 |
| 98. | Raw Material Storage | 0.1 |
| 99. | Finished Cement Storage | 0.1 |
| 100. | Waste Water Treatment | 0.1 |

BOKARO CEMENT MANUFACTURING WORKS - A UNIT OF M/s DALMIA CEMENT (BHARAT) LTD. (BOKARO)

PROPOSED PLANT LAYOUT AND GREENBELT PLAN

SCALE: 1:1000

Annexure:XII

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

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

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

DETAILS OF CREP ACTIVITIES DONE FOR THE YEAR 2022-23

A. Well Renovation: -

Before



After



Beneficiary Name: Lakhani Mohli Village Name: Bhutkuru

Before



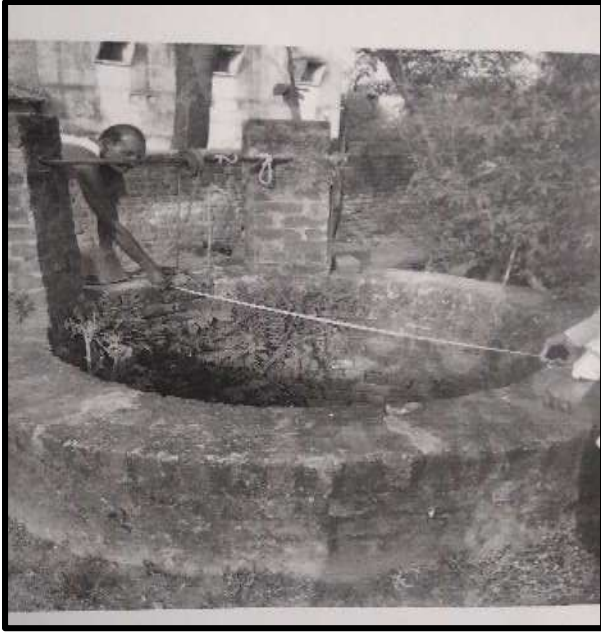
After



Beneficiary Name: Milan Mohli

Village Name: Bhutkuru

Before



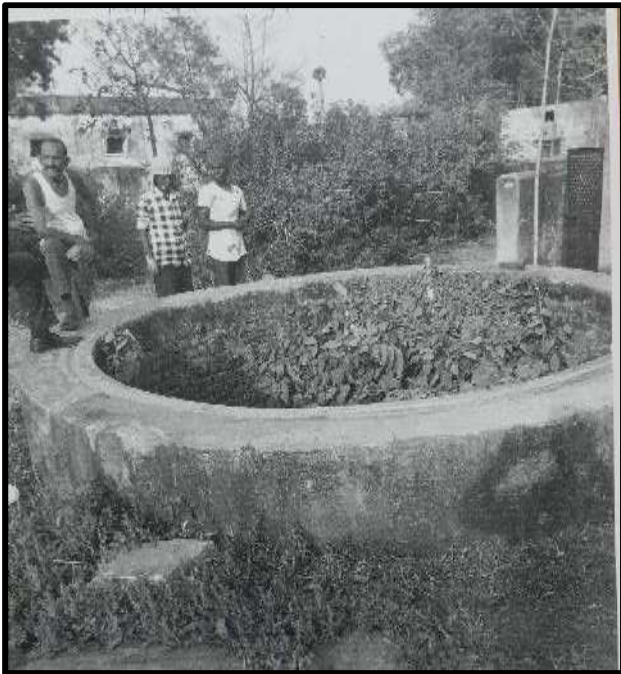
After



Beneficiary Name: Ramchandra Singh

Village: Bhutkuru

Before



After



Before

After

Beneficiary Name: Roop Lal Singh Village Name : Bhutkuru

Before



After



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

Before



After



- Beneficiary Name: Wakil Singh
- Village Name: Bhutkuru

B. Stone Pitching: -



- Place: Badka Talab
- Village Name: Gorabali

C. Godat Pond Ghat, Gorabal



C. Dustbin Construction



- Place: Godat Talab
- Village Name: Gorabali

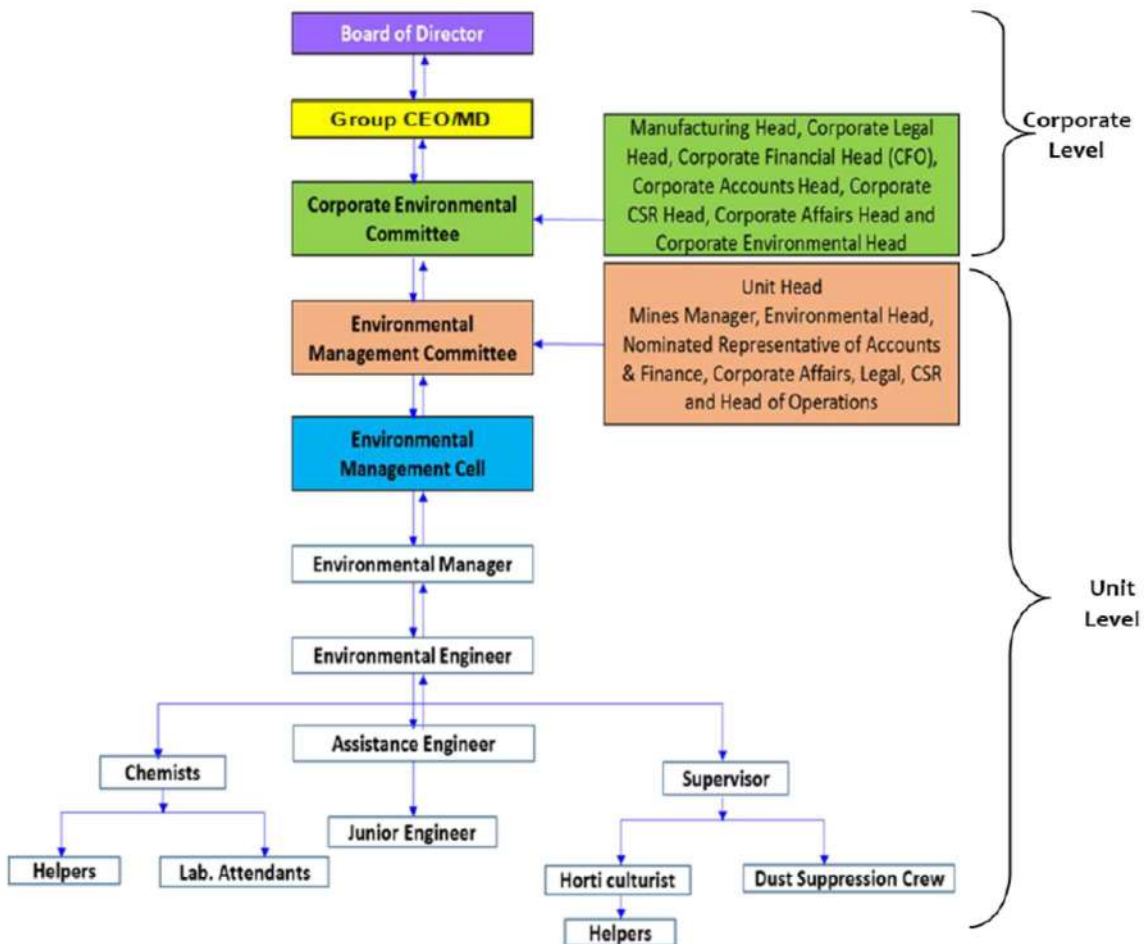
Lotan Pond Ghat Construction



- Place: Lotan Pond
- Village Name: Gorabal

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.



BOKARO CEMENT MANUFACTURING WORKS
UNIT OF DALMIA CEMENT (BHARAT) LIMITED

PROPOSED BUDGET FOR ENVIRONMENT MANAGEMENT AS PER EMP

| Sn | Item | Cost (Rs. in Crores) |
|-----------|---|-----------------------------|
| 1 | Cost of Air Pollution Control Systems | |
| A | APCEs like Bag house with stack & auxiliary Bag filters cost | 25 |
| B | Cost of CAQMS & Opacity Meter and Digital Display Board | 1.5 |
| C | Road Sweeping Machine & Dry Fog Systems | 0.5 |
| D | Auto water Sprinkling system and Water Tanker | 0.5 |
| E | Concreting of internal Road | 2.5 |
| | Sub Total | 30 |
| 2 | Cost of Water conservation & Pollution Control | |
| A | STP of 15 KLD | 0.25 |
| B | Rain water harvesting system with drainage pipes, Flow meter for raw water, Sprinklers & drip irrigation systems for greenbelt/plantation etc. | 0.25 |
| | Sub Total | 0.5 |
| 3 | Cost of Solid Waste Management System-Storage with concrete flooring for Solid & Hazardous waste | 0.5 |
| 4 | Green belt development | 0.1 |
| 5 | Noise Reduction Systems-enclosures for machineries with suitable absorption material, vibration isolators for all fans, compressors etc. | 0.5 |
| | Grand Total | 31.6 |

BOKARO CEMENT MANUFACTURING WORKS

UNIT OF DALMIA CEMENT (BHARAT) LIMITED

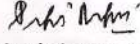
INVESTMENT ON ENVIRONMENT PROTECTION

MAY 2022 TO March 2023

| Sr.no | Item | Cost (Rs. in Crores) |
|----------|--|----------------------|
| 1 | Cost of Air Pollution Control Systems | |
| A | APCEs like Bag house with stack & auxiliary Bag filters cost | 17.0 |
| B | Cost of CAQMS & Opacity Meter and Digital Display Board | 1.0 |
| C | Road Sweeping Machine cost | 0.30 |
| D | 2.Nos water spray tanker | 0.05 |
| E | Concreting of internal roads and drainage system | 2.0 |
| a | Stacker Reclaimer shed | 12.30 |
| 2 | Cost of Water conservation & Pollution Control | |
| A | Rain water harvesting system with drainage pipes, Flow meter for raw water etc. | 0.02 |
| B | Soak pit and drainage settling chambers constructed | 0.03 |
| 3 | Cost of Solid Waste Management System-Storage with concrete flooring for Solid & Hazardous waste | 0.02 |
| 4 | Green belt development | 0.06 |
| 5 | Noise Reduction Systems-enclosures for machineries with suitable absorption material, vibration isolators for all fans, compressors etc. | 0.10 |
| | Total | 32.88 |

Annexure-XVI

Receipts of copy of Environment Clearance submitted to the Regional Office of MoEFCC, MS-SEIAA, MS- JSPCB, local Panchayat and other Govt. bodies, district head quarter:

| | | |
|--|---|--|
| Dalmia cement FUTURE TODAY | <p>EJ2579564251N IVR:6974257956425 SP BSCITY RB SD <827010> Counter No:1,04/03/2023,16:17 To:THE REGIONAL OFFICER,DHANBAD PIN:826001, Dhanbad HD From:SANJEEV VERMA,DALMIA CEMENT Wt:81gms Amt:41.38(Cash)Tax:6.38 <Track on www.indiapost.gov.in> <Dial 1998266888> <Wear Masks></p> | cement! sugar! refractories! power! |
| <p>Regional Officer, Jharkhand State Pollution Control Board H.I.G.-1, Sardar Patel Nagar, Hirapur Dhanbad - 826001</p> | | Date:02.03.2023 |
| <p>Sub.: Proposed Expansion of Cement Production Capacity of "Bokaro Cement Manufacturing Works", A Standalone Grinding Unit of Dalmia Cement (Bharat) Limited, from 2.0 Million TPA to 3.1 Million TPA at Plot No. IV/a-7(p)4, Village- Gorabali, Notified Bokaro Industrial Area Under JIADA, Balidih Phase-4, Bokaro, Jharkhand. Reg. Submission of copy of Environmental Clearance.</p> | | |
| <p>Ref.: 1. Environmental Clearance granted by State Level Environment Impact Assessment Authority (SEIAA), Jharkhand vide EC Identification No.: EC23B000JH199098; File No: EC/SEIAA/2022-23/26462023; letter no EC/SEIAA/2022-23/ 2646/2022/366, dated 30.01.2023 & EC issuance date 08.02.2023.</p> | | |
| <p>2. Consent to Establish granted by Jharkhand State Pollution Control Board vide Ref. No.: JSPCB/HO/RNC/CTE-15399804/2023/128 dated 23.02.2023</p> | | |
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| <p>Thanking You Yours Faithfully For M/s. Dalmia Cement (Bharat) Ltd. (Unit: Bokaro Cement Manufacturing Works)</p> | | |
| <p> Authorized Signatory Encl: As above</p> | | |
| <p>Dalmia Cement (Bharat) Limited Unit : Bokaro Cement Manufacturing Works Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro-827014, Jharkhand, India T +91 6542 253 279 / +91 6542 253 047 Toll Free 1800 2020 W www.dalmiacement.com CIN: U65191TN1996PLC035963 Registered Office : Dalmiapuram, District Tiruchirappalli, Tamil Nadu - 621 651, India. A Dalmia Bharat Group Company, www.dalmiabharat.com</p> | | |

Dalmia cement

FUTURE TODAY

To
The Director,
Ministry of Environment, Forest and Climate Change,
2nd floor Head quarter -Jharkhand State Housing Board
Harmu Chowk, Ranchi -Jharkhand
Pin- 834002



ement! sugar! refractories! power!

Date: 02.03.2023

Sub.: Proposed Expansion of Cement Production Capacity of "Bokaro Cement Manufacturing Works", A Standalone Grinding Unit of Dalmia Cement (Bharat) Limited, from 2.0 Million TPA to 3.1 Million TPA at Plot No. IV/a-7(p)4, Village- Gorabali, Notified Bokaro Industrial Area Under JIADA, Balidih Phase-4, Bokaro, Jharkhand. Reg. Submission of copy of Environmental Clearance.

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(Unit: Bokaro Cement Manufacturing Works)

Authorized Signatory
Encl: As above

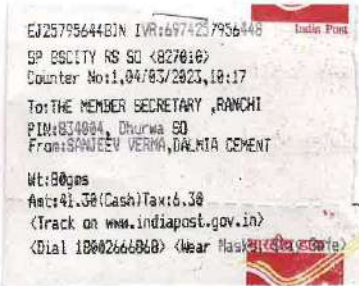
Dalmia Cement (Bharat) Limited

Unit : Bokaro Cement Manufacturing Works

Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro-827014, Jharkhand, India
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Registered Office : Dalmiapuram, District Tiruchirappalli, Tamil Nadu - 621 651, India.
A Dalmia Bharat Group Company, www.dalmiabharat.com

Dalmia
cement
FUTURE TODAY

To
Member Secretary,
Jharkhand State Pollution Control Board,
Township Administration Building (Ground Floor)
HEC Complex, Dhurwa
Ranchi-834004



cement! sugar! refractories! power!

Date:02.03.2023

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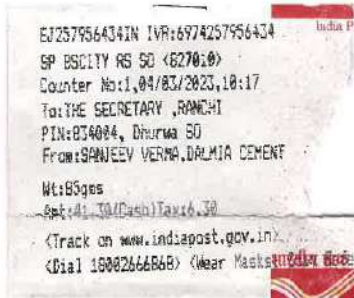
For M/s. Dalmia Cement (Bharat) Ltd.
(Unit: Bokaro Cement Manufacturing Works)

Authorized Signatory
Encl: As above

Dalmia Cement (Bharat) Limited
Unit : Bokaro Cement Manufacturing Works
Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro-827014, Jharkhand, India
T +91 6542 253 278 / +91 6542 253 047 Toll Free 1800 2020 W www.dalmiacement.com CIN :U65191TN1996PLC035963
Registered Office : Dalmiapuram, District Tiruchirapalli, Tamil Nadu - 621 651, India.
A Dalmia Bharat Group Company, www.dalmiabharat.com

Dalmia **cement**

FUTURE TODAY



cement! sugar! refractories! power!

Date:02.03.2023

To
The Secretary,
Industry Department
Govt.of Jharkhand
Ranchi (Jharkhand)

Sub.: Proposed Expansion of Cement Production Capacity of "Bokaro Cement Manufacturing Works", A Standalone Grinding Unit of Dalmia Cement (Bharat) Limited, from 2.0 Million TPA to 3.1 Million TPA at Plot No. IV/a-7(p)4, Village- Gorabali, Notified Bokaro Industrial Area Under JIADA, Balidih Phase-4, Bokaro, Jharkhand. Reg. Submission of copy of Environmental Clearance.

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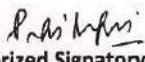
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Yours Faithfully
For M/s. Dalmia Cement (Bharat) Ltd.
(Unit: Bokaro Cement Manufacturing Works)


Authorized Signatory
Encl: As above

Dalmia Cement (Bharat) Limited
Unit : Bokaro Cement Manufacturing Works
Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro-827014, Jharkhand, India
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A **Dalmia Bharat Group** Company, www.dalmiabharat.com

Dalmia cement

FUTURE TODAY

cement! sugar! refractories! power!

To
The Deputy Commissioner,
Bokaro Steel City
Bokaro Jharkhand

Date:02.03.2023

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(Unit: Bokaro Cement Manufacturing Works)

Soumitra
09/03/23
D. S. Mishra
Authorized Signatory
Encl: As above

Dalmia Cement (Bharat) Limited

Unit : Bokaro Cement Manufacturing Works

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Date:02.03.2023

Shri Ganesh Thakur Ji
Mukhiya
Village/Basti:Balidih
Gorabali (South) Gram Panchayat
Bokaro (Jharkhand)

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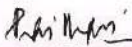
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मुखिया
ग्राम पंचायत गोड़ाबली दों
प्रखण्ड-बास (बोकारो)

Dalmia Cement (Bharat) Limited

Unit : Bokaro Cement Manufacturing Works

Plot No. IV/A-7(P)4, Bokaro Industrial Area, Balidih, Bokaro Steel City, Bokaro-827014, Jharkhand, India
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Dalmia
cement
FUTURE TODAY

EJ257956403IN IWR:6774257956403
SP BSCITY RS 50 <B27010>
Counter No:1,84/83/2823,16:17
To:THE MEMBER SECRETARY ,RANCHI
PIN:834004, Dhurwa SO
From:SAHJEEV VERMA,DALMIA CEMENT
Wt:85gms
Amt:₹1.38 (Cash) Tax:6.38
<Track on www.indiapost.gov.in>
<Dial 1002668688> <Wear Masks, सुरक्षा टिकट

cement! sugar! refractories! power!

Date:02.03.2023

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

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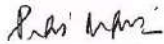
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