

cement! sugar! refractories! power!

DCBL/ENV-ES/22-23/01

Date: 18.09.2023

To,

The Member Secretary, Jharkhand State Pollution Control Board, T.A Division Building (Ground Floor) HEC Campus, Dhurwa, Ranchi- 834004

Subject: Submission of Environment Statement Report (Form-V) of Bokaro Cement Manufacturing Works Unit of Dalmia Cement Bharat Limited for the financial year ending the 31st March'2023

Dear Sir,

We are submitting herewith Environment Statement Report (Form-V) of Bokaro Cement Manufacturing Works Unit of Dalmia Cement (Bharat) Limited, Bokaro, Jharkhand for the period of financial year April' 2022 – March'2023 for your kind perusal and record please.

Thanking you.

Yours faithfully For Dalmia Cement (Bharat) Limited

Priya Ranjan Authorized Signatory

Encl: Environment Statement Report (Form-V)

CC: Environmental Officer
Regional Office, JSPCB, Dhanbad
H.i.G-1, Sardar Patel Nagar, Hirapur,
Dhanbad-826001, Jharkhand

# ENVIRONMENT STATEMENT (FORM-V) Financial Year 2022-2023



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

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

#### INTRODUCTION

Founded by Mr Jaidayal Dalmia in 1939, Dalmia Cement is one of India's pioneering homegrown cement companies. Headquartered in New Delhi, the company operates as Dalmia Cement (Bharat) Ltd, which is a 100% subsidiary of Dalmia Bharat Ltd and is listed on the National Stock Exchange and the Bombay Stock Exchange.

The company operates a manufacturing capacity of 43.7 MnT per annum (MTPA), across 15 cement plants and grinding units which are spread across 10 states. With over 33,000 dealers and sub-dealers, the company presently services more than 22 states and is among the leading players in every region where it is present in. To scale the business as well as venture into new geographies, both, acquisitions and greenfield expansions have been key for the company. Dalmia Cement is the only company with at least one plant in each of the four key eastern states of West Bengal, Bihar, Jharkhand and Odisha.

The company offers a range of cement variants through its brand portfolio of three marquee brands: Dalmia Cement, Dalmia DSP and Konark Cement. These brands are available as Portland Pozzolana Cement, Portland Slag Cement, Composite Cement and Ordinary Portland Cement in select markets. Dalmia Cement is India's largest manufacturer of slag cement and is a category leader in super-speciality cement used for oil wells, railway sleepers, and airstrips. Dalmia Cement works with engineers and technocrats around the country to develop a wide variety of customised cement which is manufactured for specific engineering and construction needs.

For nearly eight decades, Dalmia Cement has delivered value-added products and reliable postsale services. It has played a catalytic role in India's infrastructural growth.

As a prominent Indian cement manufacturer and thought leader, Dalmia Cement continues to aspire to enhance value in a sustainable way for all its stakeholders. Dalmia Cement is 13.3 times water positive and will be 20 times water positive by 2025. The company's commitment towards environmental protection reflects in its achievements. The company has the lowest carbon footprint in the cement world globally. It has also been ranked No. 1 in the global cement manufacturing sector by the Carbon Disclosure Project (CDP) for business readiness of lowest carbon transition.

**Bokaro Cement Manufacturing Works A Unit of Dalmia Cement Bharat Limited (DCBL)**, situated in Bokaro Industrial Area, Balidih, Bokaro, Jharkhand. The unit has obtained Environment Clearance, CTE & CTO for manufacturing of 3.1 MTPA for the manufacturing of PSC/PCC/PPC cement. The unit is spread over an area of 6.374 Hectare (15.75 Acre) land under Bokaro Industrial Area Development Authority (BIADA).

#### "FORM - V"

(See rule 14)

## ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING WITH 31st MARCH 2023

#### PART - A

(I)	Name & Address of the Owner / Occupier of the Industry operation or Process	Priya Ranjan Unit Head Bokaro Cement Manufacturing Works A Unit of Dalmia Cement (Bharat) Limited Plot No. IV/A-7(P/4) Bokaro Industrial Area, Balidih, Bokaro Steel City (827014), Jharkhand, India.
(II)	Industry Category Primary ( STC CODE ) Secondary ( SIC CODE )	Cement Grinding Unit, Red Category (Primary STC Category)
(III)	Production Capacity	3.1 Million Tons Per Annum
(IV)	Year of Establishment	2023
(V)	Date of last Environmental Statement Submitted	First

#### PART - B

#### Water & Raw Material Consumption

#### A. Water

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

Process & Cooling - 24.28 (Plant Construction Works)

Domestic - 21.47

(ii) Consumption per unit of production: Not Applicable, Plant under construction phase for The year 2022-23

Name of the	Cooling Water Consumption per unit of Product Output		
Product	During the Previous Financial Year (2021-22)	During the Current Financial Year (2022-23)	
	Not Applicable	Not Applicable	

- B. Raw Material Consumption: Nil, plant under construction phase for the year 2022-23
- C. Total Production: Nil, Plant under construction phase for the year 2022-23

# PART - C Pollutant Discharged To Environment / Unit of Output

(Parameters as specified in the consent issued)

No pollutant discharged: Plant under construction phase for the year 2022-23

S. No.	Pollutants	Quantity of Pollutants Discharged (Mass / day)	Concentrations of Pollutants in discharged (Mass / Volume)	Percentage of variation from prescribed standard with reasons
(a)	Water			
(i)	Domestic	Zero Discharge	-	-
(ii)	Industrial	Zero Discharge	-	-
(b)	Air			
	Stack Emission	Tone /Day	mg/Nm <sup>3</sup>	%
	Cement Mill (Bag House Outlet)	Nil	Nil	

#### PART-D

(As specified under Hazardous waste / Management and Handling rules, 1989 as Amended -2008)

#### No Hazardous waste generated: Plant under construction phase for the year 2022-23

Hazardous Waste		Total Quantity (KL)		
		During the Previous Financial Year (2021-22)	During the Current Financial Year (2022-23)	
(a)	From Process (Used Oil-5.1 category)	Nil,	Nil	
(b)	From Pollution Control Facilities	Nil	Nil	

#### PART - E

#### **Solid Wastes**

No solid waste generated- Plant under construction phase for the year 2022-23

	C P L XXV	Total Quantity			
	Solid Waste	During the Previous Financial Year (2021-22)	During the Current Financial Year (2022-23)		
(a)	From Process	Nil	Nil		
(b)	From Pollution Control Equipment's	Nil	Nil		

#### **PART-F**

# PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES

**Hazardous Waste:** Bokaro Cement Manufacturing Works A unit of Dalmia Cement (Bharat) Limited is based on Dry Process Cement Manufacturing process. No Hazardous wastes will be generated during process except used Lubricating and Hydraulic Oil. This Used oil is collected in empty barrels/drums and kept in Hazardous Waste store room for its further disposal to the authorized recycler as per Hazardous Waste (Management, Handling & Transboundary Movement) Rule, 2008.

#### **Solid Waste:**

There is no Solid waste will be generated in our cement manufacturing process.

#### **PART-G**

# IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

Bokaro Cement manufacturing Works Unit of Dalmia Cement Bharat Limited is a Cement Grinding Unit based on cost effective and environmentally clean technology.

• We will conserve natural resources by utilizing solid wastes from other industries in our cement making process. For cement manufacturing, we are utilizing slag as one of the raw

- materials which is one of the solid wastes generate from steel plant by Bokaro Steel Limited (BSL).
- Rain water harvesting system implemented in our plant. We have also renovated wells near surrounding village area for the water conservation.
- 15 KLD STP constructed and maintained for the treatment of domestic waste water. treated water is being used in dust suppression and greenbelt development.
- We have the highly efficient Air Pollution Control Devices to bring down the point source emission as per the prescribed standard below 30 mg/Nm3. All our APCS devices are designed to restrict particulate matter emission level within CPCB norms. They have been installed at circuit of the production line and various material transfer points to clean the process and arrest the fugitive emissions. The particulate matter collected in the pollution control equipment's is recycled in process, reducing the cost of operation of pollution control equipment's.

#### LIST OF MAJOR AIR POLLUTION CONTROL DEVICES

	BOKARO CEMENT MANUFACTURING WORKS,						
	(A unit of DALMIA CEMENT BHARAT LIMITED)						
		LIST OF P	OLLUTION CO	NTROL EQUIPN	IENTS		
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

#### **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)
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
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

#### **BOKARO CEMENT MANUFACTURING WORKS,**

(A unit of DALMIA CEMENT BHARAT LIMITED)

#### LIST OF POLLUTION CONTROL EQUIPMENTS

L								
	S. No.	Location	Description	Application	Design dust Emission (mg/Nm3)	Volume of bag filter (m3/h)	Fan Volume	Outlet dust Emission (mg/Nm3)
	21	232BF2	Air slide venting	Fly ash	10	4000	4600	≤ 30
	22	614BF1	Cement silo cone	Cement	10	4000	4600	≤ 30
	23	613BF1,	Cement silo cone	Cement	10	4000	4600	≤ 30
	24	595BF1	Cement silo top	Cement	10	7500	8625	≤ 30
	25	594BF3	Cement silo top	Cement	10	7500	8625	≤ 30
	26	613BF2	Airslide venting	Cement	10	5000	5750	≤ 30
	27	613BF3	Airslide venting	Cement	10	6000	6900	≤ 30
	28	646BF1	Packing Plant	Cement	10	15000	17250	≤ 30
	29	647BF1	Packing Plant	Cement	10	15000	17250	≤ 30
	30	646BF2	Packing Plant	Cement	10	35000	40250	≤ 30
	31	647BF2	Packing Plant	Cement	10	35000	40250	≤ 30

#### **PART-H**

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

#### 1. Extensive plantation in and around the plant

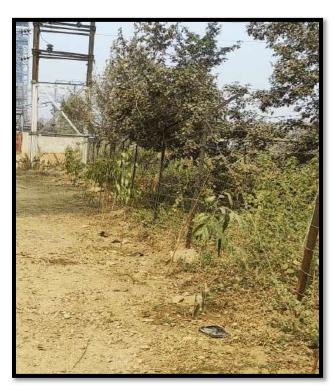
We have accrued total 15.75 Acre lands. In which, we have been developed 33 % of green belt area of total land i.e. 5.2 Acres. Tree plantation is an integral part to the environment management plan at DCBL. The plantation drive is being carried out throughout the year.

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

SL. No	Year	Number of plants	Area (in Acres)
1	1st (2022-2023)	600	0.5
	Total	600	0.5

S.N	Year	Name of Species tree planted
1	2022-2023	Neem, Mihigini, shisham, Ashoka, Teak,

# Bokaro Cement Manufacturing works Unit of Dalmia Cement (Bharat) Limited Tree plantation pics year of 2022-23













600 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	Years	Area (Acres)	No. of Trees
<b>Belt Development</b>			
Plan Sl. No.			
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
Shorea robusta	Sal
Pongamia pinnata	Karanj
Madhuca longifolia	Mahua
Butea monosperma	Palash
Azadirachta indica	Neem
Acacia catechu	Katha
Boswellia serrata	Lobaw
Cassea fistula	Amaltas
Production and the state of the	

#### 2. Control of Fugitive dust emission

Following measures will be taken for the control fugitive dust emission of Dalmia Cement (Bharat) Limited: -

#### a. Raw material storage

**Clinker:** Clinker is being stored in a closed RCC silo for which closed transportation system to take clinker into the silo has been made.

Gypsum: Stored in covered shed

Coal: Stored in covered shed Slag: Stored in covered shed

**Covered Hood on Belt conveyor system** 

The Belt conveyor system has been arranged for transportation of Slag (Raw material) directly from Bokaro Steel Plant to our Plant. It is covered throughout the length with GI hood. Similarly, all the belt conveyors within the plant are also covered with local hoods.

#### b. Regular Water sprinkling

Regular sprinkling of water is being carried out at all places where raw materials are handled inside the plant with the help of water tankers. water spray tanker sprinklers are installed in vacant non-concreted areas.

#### c. Scheduled maintenance and monitoring of Pollution Control Devices

All Pollution Control Devices will be maintained as per scheduled maintenance by dedicated environmental management team which comprises of mechanical, electrical and environment engineers. Monitoring of all these devices are done regularly as per JSPCB Norms.

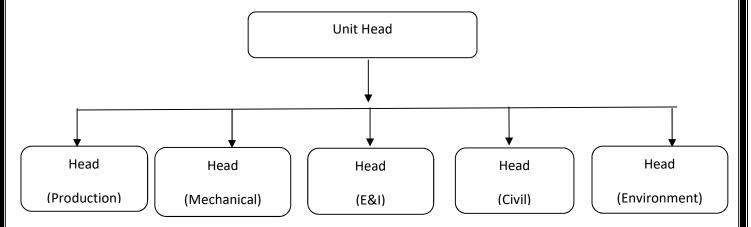
**Note:** We have the system available for manufacturing PPC. For that we shall use fly-ash. Fly-ash is another type of solid waste generated by thermal power plants. The participation of Fly-ash will be up to 35% of the total raw materials required for manufacturing of cement. We have already obtained our Environment Clearance from MoEF, New Delhi for production of PPC on need basis.

#### **PART-I**

### ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

Bokaro Cement Manufacturing Works A Unit of Dalmia Cement (Bharat) Limited, Bokaro having Environmental Management Cell which is controlled by Unit Head by adequate team of technically qualified personnel apart from the operative staff of skilled, semi-skilled, unskilled and other categories for fulfil the following objectives:

#### **ENVIRONMENT MANAGMENT CELL ORGANIZATION CHART**



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

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

**DCBL Environment Monitoring Equipment's Details** 

S. N.	Name of Equipment's	No. of Equipments
A.	Ambient Air Quality Monitoring	
1.	Respirable Dust Sampler (RDS) PM-10	04
2.	Respirable Dust Sampler PM10-2.5	04
3	Portable DG Sets	01
4.	Continuous Ambient Air Monitoring System (CAAQMS)	02
B.	Stack Monitoring	
5.	Stack Monitoring Kit	01
6	Continuous Stack Emission System (CEMS)	01
C.	Workplace Monitoring	

8.	Sound Level Meter	01
9.	Personal Sampler APM 800	01
D.	Water Quality Monitoring	
10.	Spectrophotometer-Model DR/2700 (Hach-USA)	01
11.	Turbidity Meter	01
E.	Others	
12.	Hot Air Oven	01

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

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

#### Significant energy saving & other measures implemented

- (i) LED light installed to save energy
- (ii) Installation of LED Lamps in street light fitting by replacing with CFL lamps.
- (iii) Top soils conservation during excavation and utilized the soil for nursery development and tree plantation.
- (iv) Regular maintenance of vehicles to control of vehicles emission & noise.
- (v) Acoustic enclosures are provided at noise generating area to control of noise pollution
- (vi) Use of personal protective Equipment: All employees are provided with personal protective Equipment's (PPEs), as per the requirement, such as workers working in plant area are provided with dust masks and in noise pollution areas with Ear plugs/Ear muff, safety boots gloves welding goggles, Goggles and safety helmet are also being provided as per the requirement.

#### **ENVIRONMENT MONITORING REPORTS FOR THE YEAR 2022-2023** AMBIENT AIR QUALITY MONITORING REPORT

#### **Ambient Air Quality Monitoring report**



#### Institute for Environmental Management



Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Accredited by 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: Ch	emical				G	roup: Atn	nospher	ic Poll	ution		S	ub-Gr	oup: A	mbie	nt Air		-
Report Issue	Date: 25	-03-20	23				Te	est Re	port N	lo.: RI	1-230	30800	1A05				
Sample ID: 23	0321AP	11005					Sa	ample	Descr	iption	: Aml	bient	Air				
Challan No./	.O. No.:	45480	23834	1/237			CI	hallan	No./	P.No.	Date:	17-09	9-2022	2			
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#### ----Test Results----

SI. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1_	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m³	100	64.45
2.	Particulate Matter (PM25)	IS 5182 Part 24:2019	µg/m³	60	28.26
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m³	80	10.79
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m³	80	21.38
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m³	400	18.35
6.	OZONE (O <sub>3</sub> )	IS 5182 Part 09	µg/m³	100	28.54
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m³		BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m³	1.0	0.04
9.	NICKEL (NI)	IS 5182 Part 26	ng/m³		BDL (MDL-4)

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

ISO 9001 2015 ISO 45001:2018

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 lability of institute for Environmental Management will be limited to involced amount only.

6. In case of feedback/ complaints, please send an email at gm.iemec@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.

Authorized Signatory

(Shreya Sona) S. C. Jain)

Dy. Quality Manager

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

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



Certified By

Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515





#### Test Report

ULR No.:	T	C	1	1	5	1 5		2 3	0	0	0	0	0	0	0	1	4
Discipline: Ch	emical				G	roup: Atr	nosp	neric Po	lution		Si	ub-Gr	oup: A	mbie	nt Air		
Report Issue	Date: 25	-03-20	23					Test R	eport I	No.: RI	N-230	30800	1A06				
Sample ID: 23	0321AP	11006						Sampl	Desc	riptio	n: Am	bient	Air				
Challan No./I	.O. No.:	45480	023834	/237				Challa	No./	P.No.	Date:	17-09	9-2022	2			
Plo	No IVIA	4-7(P)	4, Bok	aro li	idus	Vorks, Un trial Area	Bali	dih	Ceme	nt (Bh	arat) l	Limite	d				
Plo Bol	No IV/A	A-7(P) el City	4, Bok	aro li	idus	Vorks, Un trial Area 4 Jharkh	Bali	dih Idia						Verm	a		
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Plo Boi Type of Indus Sample Drav	t No IVIA caro Stee try: Cem n by: IE	A-7(P) el City ent M Tea	4, Bok , Boka am	aro li aro-8:	1dus 2701	trial Area 4 Jharkh	Bali and l	dih ndia Custo Sampl	mer R	epres	entati	ve: Sa	njeev				
Plo Boi Type of Indus	t No IV/A caro Stee try: Cem n by: IE B Guide	A-7(P) el City ent M Tea ine(N	4, Bok r, Boka am AAQM:	aro li aro-8: S/36/	2701	trial Area 4 Jharkh	Bali and l	dih ndia Custo Sampl	mer R	epres	entati	ve: Sa	njeev				
Plo Bol Type of Indus Sample Drav Protocol: CPC	t No IVIA caro Stee try: Cem in by: IE B Guidel ation: P	A-7(P)- el City ent M Tea ine(Na akhari	4, Bok , Boka am AAQM: ya Tan	aro li aro-8: S/36/ d Vill	2701 2012 age	trial Area 4 Jharkh	Bali and I	dih ndia Custo Sampl od 5182	mer R ng Da Serie	epres	entati -03-20	ve: Sa 123 to	njeev 19-03	-2023		) SE	

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

SI. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m³	100	67.37
2.	Particulate Matter (PM25)	IS 5182 Part 24:2019	µg/m³	60	26.96
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m³	80	17.54
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m³	80	25.27
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m³	400	15.48
6.	OZONE (O <sub>3</sub> )	IS 5182 Part 09	µg/m³	100	17.03
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m³		BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m³	1.0	0.05
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>		BDL (MDL-4)

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

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

Authorized Signatory

(Shreya So

Quality Checked

Dr. S. C. Jain)

Dy. Quality Manage

Director

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

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

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







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	5
Discipline: Ch	emical				G	roup: Atn	nospher	ic Pollu	ition		St	ıb-Gr	oup: A	Ambie	nt Air		
Report Issue	Date: 25	-03-202	23				T	est Rep	ort N	lo.: RI	V-230	30800	1A07				
Sample ID: 23	0321AP	11007					S	ample	Descr	iption	: Aml	oient	Air				
Challan No./I	O. No.:	454802	23834	/237			C	hallan	No./	P.No.	Date:	17-09	9-2022	2			
Plo	No IVIA	4-7(P)4	, Bok	aro li	ndus	/orks, Un trial Area	Balidih	1	emen	t (Bh	arat) l	_imite	ed				
Plo Bol	t No IV/A	A-7(P)4 el City,	, Bok	aro li	ndus	/orks, Un trial Area 4 Jharkha	Balidih nd Indi	a						Verm	ıa.		
Plo	t No IV/A aro Stee try: Cem	A-7(P)4 el City, ent	, Bok Boka	aro li	ndus	trial Area	Balidih Ind Indi	1	er Re	prese	entativ	/e: Sa	njeev				
Plo Bol Type of Indus Sample Drav	t No IV/A caro Stee try: Cem n by: IE	A-7(P)4 el City, ent M Tear	, Bok Boka	aro li aro-8	ndus 2701	trial Årea 4 Jharkha	Balidih Ind Indi	i a ustom amplin	er Re g Dat	prese	entativ	/e: Sa	njeev				
Plo Bol Type of Indus Sample Drav Protocol: CPC	t No IV/A caro Stee try: Cem n by: IE B Guidel	A-7(P)4 el City, ent M Tear line(NA	Boka Boka m AQM:	aro la aro-8: S/36/	ndus 2701	trial Årea 4 Jharkha	Balidih Ind Indi	i a ustom amplin	er Re g Dat	prese	entativ	/e: Sa	njeev				
Plo Bol Type of Indus	t No IV/A caro Stee try: Cem in by: IE B Guidel ation: No	A-7(P)4 el City, nent M Tear line(NA ear Proj	m AQM: ject O	aro la aro-8 S/36/ office	27014 27012	trial Årea 4 Jharkha	Balidih Ind Indi C Si Method	a ustom amplin 5182 S	er Re g Dat series	prese e: 18-	entativ	ve: Sa 23 to	njeev 19-03			o SE	

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

SI. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23 2006	μg/m³	100	68.51
2.	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m³	60	34.08
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m³	80	14.14
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m <sup>3</sup>	80	28.24
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m³	400	19.20
6.	OZONE (O <sub>3</sub> )	IS 5182 Part 09	µg/m³	100	25.18
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m <sup>3</sup>		BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m³	1.0	0.03
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>	2000	BDL (MDL-4)

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -

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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 morime Authorized Signatory

A 1515

(Shreya Sona) Sr S. C. Jain

Dy Quality Manager Randi Director

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

Certified By



#### Test Report

ULR No.:	T	C	1	1	5	1	5	2	3	0	0	0	0	0	0	0	1	5
Discipline: Ch	emical				G	roup: At	mo	spheri	ic Poll	ution		St	ıb-Gro	oup: A	mbier	nt Air		
Report Issue	Date: 25	-03-20	23					Te	st Re	port N	lo.: RI	V-230	30800	1A07				
Sample ID: 2	30321AP	11007						Sa	mple	Descr	iptior	: Aml	oient /	Air				
Challan No./	P.O. No.:	45480	023834	/237				Ch	allan	No./	P.No.	Date:	17-09	-2022	2			
Plo	t No IVIA	4-7(P)	4, Bok	aro Ir	ndust		а В	alidih		emen	it (Bn	arat) I	_imite	d				
Plo Bo	t No IV/A	A-7(P)- el City	4, Bok	aro Ir	ndust	trial Are	а В	alidih d India	a						Verm	a		
Plo	t No IV/A karo Stee stry: Cem	A-7(P)- el City nent	4, Bok , Boka	aro Ir	ndust	trial Are	а В	alidih d India Cu	a uston	ner Re	prese	entativ	ve: Sa	njeev				
Plo Boi Type of Indu Sample Drav	t No IV/A karo Stee stry: Cem vn by: IE	A-7(P) el City ent M Tea	4, Bok , Boka am	aro Ir aro-82	27014	trial Are 4 Jharkh	a B	alidih d India Cu Sa	a uston implir	ner Re	prese	entativ	ve: Sa	njeev				
Plo Bol Type of Indus Sample Drav Protocol: CPC	t No IV/A karo Stee stry: Cem vn by: IE CB Guide	A-7(P)- el City ent M Tea line(N	4, Bok r, Boka am AAQM:	aro Ir aro-82	27014	trial Are 4 Jharkh	a B	alidih d India Cu Sa	a uston implir	ner Re	prese	entativ	ve: Sa	njeev				
Plo Boi Type of Indu Sample Drav	karo Stee stry: Cem vn by: IE CB Guidel ation: kh	A-7(P)- el City nent M Tea line(Na nutri V	4, Bok r, Boka am AAQM: illage	aro Ir aro-82 S/36/	27014 27014	trial Are 4 Jharkh	a B nand	alidih d India Cu Sa	a uston implir 5182	ner Re ng Dat Series	prese	entativ 03-20	<b>/e:</b> Sa 23 to	njeev 19-03			o SE	

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

SI. No.	Parameters	Test Method No.	Unit	Norms as per NAAQS - 2009	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m³	100	62.61
2.	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m³	60	31.08
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m³	80	12.14
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	μg/m³	80	26.24
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m³	400	17.20
6.	OZONE (O <sub>3</sub> )	IS 5182 Part 09	µg/m³	100	21.18
7.	ARSENIC (as As)	USEPA I.O. 3.2	ng/m <sup>3</sup>		BDL (MDL-02)
8.	LEAD (as Pb)	IS 5182 Part 22	µg/m³	1.0	0.05
9.	NICKEL (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>		BDL (MDL-4)

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
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<ol><li>In case of feedback/ complaints, please send an email at qm.lemeco@gmail.com</li></ol>	(Shleya Sonal) (Shleya Sonal)
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 * Sach * Director
	18 KO

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

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#### **Noise Level report**



#### Institute for Environmental Management





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: Ch	nemical		Grou	p: At	mospl	heric Pollution Sub-Group					: Amb	Ambient Noise Levels (Excluding Vibration)							
Report Issue	Date: 26	5-03-202	23					1	Test F	epor	t No.	: RN-2	30308	8001N	12				
Sample ID: 2	30321AP	13002							Samp	le De	script	ion: A	mbie	nt No	ise				
Challan No./	P.O. No.:	454802	23834	/237				-	Challa	n No	./ P.N	lo. Da	te: 17	-09-2	022				
Plo	t No IVIA	4-7(P)4,	, Bok	aro l	ndust	rial Are	a Bali	dih l	Boka	ro St	eel C	ity, Bo	karo-	-8270	14 JI	narkt	and I	India	
351153			, Bok	aro I	ndust	rial Are	a Bali											India	
Type of Indu	stry: Cen	nent		aro I	ndust	rial Are	a Bali	-	Custo	mer	Repr	esent	ative:	Sanje	eev V	erma		India	
351153	stry: Cem vn by: IE	ent M Tean	n				a Bali	-	Custo	mer	Repr		ative:	Sanje	eev V	erma		India	
Type of Indus Sample Dray	stry: Cem vn by: IE CB Guide	nent M Tean line & IS	n 5 Met	hod 9			a Bali	-	Custo	mer	Repr	esent	ative:	Sanje	eev V	erma		India	
Type of Indus Sample Draw Protocol: CPC	stry: Cem vn by: IE CB Guide ation: N	nent M Tean line & IS ear Proj	n 5 Met <b>ject O</b>	hod s	9989::			9	Custo	mer ling C	Repr Date:	esent	ative: 2023	Sanje to 18	eev V -03-2	erma		India	
Type of Indus Sample Draw Protocol: CPC Sampling Loc	stry: Cem wn by: IE CB Guide cation: No cological	nent M Tean line & IS ear Proj Informa	n 5 Met ject O	hod 9	989:: <b>Tem</b> ;	1981	R	.H. (*	Custo Samp %): 55	omer ling C	Repr Date:	esent 17-03-	ative: 2023	Sanje to 18	ev V -03-2 W.D.	erma 2023 : NW	- SE	India	

SI. 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) Led 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) Led, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha& Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
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<ol><li>In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com</li></ol>	(Shreya Sohal) (Shreya Sohal)
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 Manage Director

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

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

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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: Che	mical	G	roup: A	tmosph	eric Pollu	ition	Sub-Gr	oup:	Ambi	ent No	ise Le	vels (	Exclud	ding V	ibrat	ion)
Report Issue D	ate: 26-0	3-2023					Test Re	port	No.:	RN-23	03080	01N5	6			
Sample ID: 230	321AP13	005					Sample	Des	criptio	n: An	nbient	Nois	e			
Challan No./P.	O. No.: 4	548023	834/23	7			Challar	No.	P.No	. Date	: 17-0	9-202	22			
Plot	No IV/A-	7(P)4, E	okaro	Indust	orks, Uni	Balidi	1	ment	(Bha	rat) L	imited	i				
Boka Plot Boka	No IV/A- ro Steel	7(P)4, E City, B	okaro	Indust		Balidi	ia						v Verr	ma		
Boka Plot Boka Type of Indust	No IV/A- ro Steel ry: Ceme	7(P)4, E City, B nt	okaro	Indust	rial Area	Balidi	ia Custor	ner R	epre	sentat	tive: S	anjee	-			
Boka Plot Boka	No IV/A- ro Steel ry: Ceme by: IEM	7(P)4, E City, B nt Team	okaro okaro-	Indust 827014	rial Área Jharkha	Balidi	ia	ner R	epre	sentat	tive: S	anjee	-			
Boka Plot Boka Type of Indust Sample Drawr	No IV/A- iro Steel ry: Ceme by: IEM Guidelin	7(P)4, E City, B nt Team e & IS N	okaro- okaro- //ethod	9989:1	rial Área Jharkha	Balidi	ia Custor	ner R	epre	sentat	tive: S	anjee	-			
Boka Plot Boka Type of Indust Sample Drawr Protocol: CPCB	No IV/A- ro Steel ry: Ceme by: IEM Guidelin tion: Nea	7(P)4, E City, B nt Team e & IS N r Gorav	okaro- okaro- nethod	9989:1	rial Área Jharkha	Balidii nd Ind	ia Custor	ner R ng Da	epre	sental 7-03-2	tive: S	anjee	-	3	E	

SI. 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-

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha& Team

#### Specific Contractual Notes: -

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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

S. C. Jain)

Dy. Quality Manager

Director

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ISO 9001:2015 ISO 45001:2018

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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	1
Discipline: Ch	emical	G	iroup	: Atm	osph	eric Pol	ution		Sub-G	oup:	Ambie	ent No	oise Le	evels (	Exclu	ding \	Vibra	tion)
Report Issue I	Date: 26-	03-202	3					1	Test R	eport	No.: F	RN-23	03080	001N6				
Sample ID: 23	0321AP1	3006						1	Sampl	e Des	criptio	n: An	nbien	t Nois	e			
Challan No./P	.O. No.: 4	548023	3834/	237					Challa	n No.	P.No	. Date	e: 17-	09-20	22			
	aro Ceme														14			
Bok Plot	IV/A-7(P	4,Bok						dih	, Dist:	- Bol	karo,	Jhark	hand	8270		ma		
Bok	IV/A-7(P	<b>4,Bok</b> nt	aro li					idih		- Bol mer F	karo, k Repres	Jhark senta	hand tive: S	<b>8270</b> ′ Sanjee	v Ver	-		
Bok Plot Type of Indus	IV/A-7(P try: Ceme n by: IEM	4,Bok nt 1 Team	aro li	ndus	trial A	Area, P		idih	, Dist: Custo	- Bol mer F	karo, k Repres	Jhark senta	hand tive: S	<b>8270</b> ′ Sanjee	v Ver	-		
Bok Plot Type of Indus Sample Draw	IV/A-7(P try: Ceme n by: IEM 3 Guidelir	<b>4,Bok</b> nt 1 Team ne & IS	aro li Meth	ndus	trial A	Area, P		idih	, Dist: Custo	- Bol mer F	karo, k Repres	Jhark senta	hand tive: S	<b>8270</b> ′ Sanjee	v Ver	-		
Bok Plot Type of Indus Sample Draw Protocol: CPC	IV/A-7(P try: Ceme n by: IEM 3 Guidelir ation: Tha	ht Team e & IS kurtan	Meth	od 99	989:19	Area, P	O-Bal	idih	, Dist: Custo	- Bol mer F ing Da	karo, k Repres	Jhark senta 7-03-2	hand tive: S	82701 Sanjee o 18-0	v Ver	23	SE	

----Test Result----

SI. 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: -

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

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

Tested By: Akanksha Sourabh

Sample Drawn By: Amit Sinha& Team

#### Specific Contractual Notes -

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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.

(Shreya Sonal)

rized Signatory

Dy. Quality Manager Director

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

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

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

ISO 9001:2015 ISO 45001:2018



Accredited by Certified By

Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515

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



#### **Test Report**

ULR No.:	T	C 1	1	5	1	5	2	3	0	0	0	0	0	0	0	2	2
Discipline: Ch	emical	Gr	oup: At	mosph	eric Poll	ution Sub-Group: Ambient Noise Levels (Excluding Vibra									tion)		
Report Issue	Date: 26-0	3-2023					Test Report No.: RN-230308001N7										
Sample ID: 23	0321AP13	007				Sample Description: Ambient Noise											
Challan No./F	illan No./P.O. No.: 4548023834/237						Ch	nallar	No.	P.No	. Dat	e: 17-	09-20	22			
	aro Ceme													014			
Plo	IV/A-7(P)	4, Bok					lidih,	Dist:	- Bo	karo,	Jharl	khand	827	2000000			
Plo Type of Indus	IV/A-7(P) try: Cemer	4, Boka nt					lidih, Cı	Dist: ustor	- Bo ner F	karo, lepre	Jharl senta	khand tive: S	<b>827</b> Sanje	ev Ve			
Type of Indus Sample Draw	try: Cemer n by: IEM	4, Boka nt Team	iro Ind	ustrial	Area, P		lidih, Cı	Dist: ustor	- Bo ner F	karo, lepre	Jharl	khand tive: S	<b>827</b> Sanje	ev Ve			
Plo Type of Indus	try: Cemer n by: IEM	4, Boka nt Team	iro Ind	ustrial	Area, P		lidih, Cı	Dist: ustor	- Bo ner F	karo, lepre	Jharl senta	khand tive: S	<b>827</b> Sanje	ev Ve			
Type of Indus Sample Draw	try: Cemer n by: IEM B Guideline	4, Boka nt Team e & IS M	ethod	ustrial	Area, P		lidih, Cı	Dist: ustor	- Bo ner F	karo, lepre	Jharl senta	khand tive: S	<b>827</b> Sanje	ev Ve			
Type of Indus Sample Draw Protocol: CPC	try: Cemer n by: IEM B Guidelination: Khut	4, Boka nt Team e & IS M tri villag	ethod	<b>ustrial</b> 9989:1	Area, P	O-Bai	lidih, Cı	Dist: ustor impli	- Bo mer F ng Da	karo, lepre	Jharl senta 7-03-2	khand tive: S	827 Sanje o 18-	ev Ve 03-2		SE	

----Test Result----

SI. 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: -

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

Quality Checked by Authorized Signatory

Dr. S. C. Jain)

Dy. Quality M Director

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

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

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

ISO 9001:2015 ISO 45001:2018

### **Ground Water level report for the year 2022-23**

			DAL	MIA CE	MENT E	BHARAT	LIMITE	D, BOK	ARO				
		G	iround W	/ater lev	el moni	toring re	port for	the yea	r 2022-2	3			
Sr.no	Village Location	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
	Unit					Deptl	n of grou	ınd wate	r level i	n feet			
1	Pakhriatand (Near Anganwadi)	23.8	24.5	24.9	26.3	23.4	11.5	13.9	14.5	19.8	21.7	21.4	20.1
2	Tupkadih (Near Electric pole)	19.9	20.7	21.0	22.6	20.9	11.7	12.0	12.7	16.9	19.6	17.2	15.7
3	Godawali (Near Temple)	10.5	11.2	11.9	12.4	9.7	3.7	3.6	3.9	6.3	8.3	7.8	6.3
4	Bhutkuru (Near Primary school)	20.1	20.7	20.8	20.3	19.8	11.5	13.1	14.3	17.1	18.1	19.5	17.8

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



#### Institute for Environmental Management





#### Test Report

ULR No.:	T	C	1 1	. 5	1 5	2	3	0	0	0	0	0	0	0	0	5		
Discipline: C	hemical				Group:	Water	Sub-Group: Ground Water								r			
Report Issue	Date: 2	7-03-2	2023				Test Report No.: RN-230308001GW1											
Sample ID: 2	Sa	mple	Descr	iption	ı: Gro	und V	Vater	(Dug v	vell)									
Challan No./	P.O. No	: 4548	8023834	237			Ch	allan	No./	P.No.	Date:	17-09	9-2022	2				
	and the same of th	(120,020,030,030		to distantanta	dih, Dist:			2000	100000000000000000000000000000000000000	All the Control	entati	ve: Sa	njeev	Verm	a	_		
Type of Industry: Cement								Customer Representative: Sanjeev Verma Sampling Date: 19-03-2023										
Sample Dra	Sample Drawn by: IEM Team  Protocol: CPCB Guideline& IS Method 3025 Part-01									Sumpling Date: 13 03 2023								
	CB Guide	eline&	IS Meth	od 3025	Part-01													
				od 3025	Part-01													
Protocol: CP	cation: E	hutku	ıru		Part-01	R.H.	(%): 6:	1 1	W.C.:	Cloud	у	V	V.D.: 1	North 1	o Sou	th		

----Test Result----

			Lest Vesuit-			
SI.				Li	mit	Results
No.	Tested Parameter	Unit	Method No.	Acceptable	Permissible	Results
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 <sup>-</sup> )	mg/l	IS 3025 (Part-32)	250	1000	89.33
10.	Free Residual Chlorine	mg/l	IS 3025 (Part-26)	0.2	1.0	BDL(MDL-2.0)
11.	Sulphate (as SO <sub>4</sub> -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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Quality Checked

Dy. Quality Manager

(Shreya Sona

ized Signatory

Director

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#### **Test Report**

Discipline: Chemical	Group: V	Vater	Sub-Gro	up: Ground Water					
Report Issue Date: 27-03-2023	-70.	Test	Report No.: RN-230	308001GW1					
Sample ID: 230321WA01001	100	Sam	Sample Description: Ground Water (Dug well)						
Challan No./P.O. No.: 4548023834/237	10 m	Chal	an No./ P.No. Date:	: 17-09-2022					
Bokaro Industrial Area, PO- Type of Industry: Cement	Zanani, Dioti		omer Representati	ve: Sanjeev Verma					
Sample Drawn by: IEM Team	-100		oling Date: 19-03-20						
Protocol: CPCB Guideline& IS Method 3	3025 Part-01	Jaiii	Jillig Date. 13-03-20	23					
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	Torting Ct	rted: 21-03-20	72 T	nded: 24-03-2023					

#### --- Test Result--

SI.	Tooled Donomator	11mia	Method No.	Li	Deculto		
No.	Tested Parameter	Unit	Wethod No.	Acceptable	Permissible	Results	
1.	Taste		IS 3025 (Part-07)	Agreeable	Agreeable	Agreeable	
2.	Nitrate (as NO3)	mg/l	IS 3025 (Part-34)	45	No Relaxation	8.30	
3.	Fluoride (as F-)	ma/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 b orized Signatory

Dy. Quality Manag Director

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ISO 9001:2015

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

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#### **Test Report**

ULR No.:	T	C	1	1	5	1	5	2	3	0	0	0	0	0	0	0	0	7
Discipline: C	hemical		Gro	up: Re	sidue	s and	Conta	mina	nts in	Water		Sub-G	roup:	Trace	Meta	s elen	nents	
Report Issue	ort Issue Date: 27-03-2023							Test Report No.: RN-230308001GW1										
Sample ID: 2	ample ID: 230321RC01001							Sampl	e Desc	riptio	on: Gr	ound '	Water	(Dug	well)			
Challan No./	illan No./P.O. No.: 4548023834/237								Challa	n No./	P.No	. Date	e: 17-0	9-202	22			
Во	lmia Cer karo Ind	dustri						Bokar	o, Jha	arkhar	nd 82	7014						
Type of Indu									Custo	mer R	epre	sentat	tive: S	anjee	v Verr	na		
Sample Drav	wn by: Il	EM Te	eam					. !	Sampl	ing Da	te: 1	9-03-2	023					
Protocol: IS	nple Drawn by: IEM Team							100										

Protocol: IS Method & CPCB Guideline

Sampling Location: Bhutkuru

W.C.: Cloudy W.D.: North to South Field Meteorological Information A. Temp. (°C): 27 R.H. (%): 61

Testing Ended: 24-03-2023 Sample Receiving date: 21-03-2023 Testing Started: 21-03-2023

#### ----Test Result----

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

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

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes -

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Quality Checked by

Authorized Signatory

C. Jain)

(Shreya Sona

Dy. Quality Manag irector

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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#### Institute for Environmental Management Jharkhand State Pollution Control Board, JSPCB

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



#### **Test Report**

Discipline: Chemical	Group: Residues and	Contaminants in Water	Sub-Group: Trace Metals elements			
Report Issue Date: 27-0	3-2023	Test Report No	:: RN-230308001GW1			
Sample ID: 230321RC01	001	Sample Descrip	otion: Ground Water (Dug well)			
Challan No./P.O. No.: 45	548023834/237	Challan No./ P.No. Date: 17-09-2022				
leaved 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	D'A

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: 2	1-03-2023	Testing Ended	1: 24-03-2023

----Test Result--

			Test nesult		
SI. 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----

Elia 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	15 10500 :2022						
Remark	Sample Comply with prescribed specification.						

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:

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Quality Checked orized Signatory

(Shreya Son S. C. Jain)

Dy. Quality Manage

Director

ISO 9001:2015

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Jharkhand State Pollution Control Board, JSPCB

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



Discipline: Biological	Group: Wate	r	Sub-Group: Ground Water			
Report Issue Date: 27-03-2023	190	Test Repo	ort No.: RN-230308001GW01			
Sample ID: 230321MB01001	255	Sample Description: Ground Water (Dug well)				
Challan No./P.O. No.: 4548023834	/237	Challan No./ P.No. Date: 17-09-2022				
Inches distant						

Dalmia Cement (Bharat) Ltd. (Jharkhand Cement Works) Plot IV/A-7(P), Bokaro Industrial Area, PO-Balidih, Dist: - Bokaro, Jharkhand 827014

Customer Representative: Sanjeev Verma Type of Industry: Cement Sampling Date: 19-03-2023 Sample Drawn by: IEM Team Protocol: CPCB Guideline & IS Method 3025 Part-01

Certified by

Sampling Location: Bhutkuru

W.D.: North to South Field Meteorological Information A. Temp. (°C): 27 R.H. (%): 61 W.C.: Cloudy

Testing Ended: 24-03-2023 Sample Receiving date: 21-03-2023 Testing Started: 21-03-2023

----Test Result----

SI. 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± 20C 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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(Shreya Son

Dy. Quality Mana

Director

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

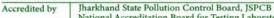
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

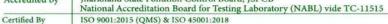
Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

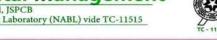


ISO 9001:2015











#### **Test Report**

ULR No.:	T	C	1	1	5	1	5	2	3	0	0	0	0	0	0	0	0	6
Discipline: Chemical						Grou	Group: Water						Sub-Group: Ground Water					
Report Issue Date: 27-03-2023								Tes	st Re	port N	lo.: RI	N-230	30800	1GW2	2			
Sample ID: 2	30321W	A010	02		10	7 11		BFA	Sar	mple	Descr	iption	: Gro	und V	/ater	(Dug v	well)	Ö
Challan No./	P.O. No.	: 4548	80238	34/23	7	LAY OF	300	100	Ch	allan	No./	P.No.	Date:	17-09	9-2022	2		
						narkhan dih, Dis												
Во	karo Ind	dustri							o, Jha	rkha	nd 82	7014		<b>10.</b> 52	nieev	Verm	2	
Bo Type of Indu	karo Ind stry: Cer	dustri: ment	al Are						o, Jha	stom	nd 82 ner Re	7014 prese	entativ	-	njeev	Verm	а	
Bo Type of Indu Sample Drav	karo Ind stry: Cer vn by: I	dustria ment EM Te	al Are	a, PC	)-Bali	dih, Dis	st: -		o, Jha	stom	nd 82 ner Re	7014	entativ	-	njeev	Verm	a	
Type of Indus Sample Draw Protocol: CPC	karo Inc stry: Cer vn by: II CB Guide	ment EM Te eline&	al Are	a, PC	)-Bali	dih, Dis	st: -		o, Jha	stom	nd 82 ner Re	7014 prese	entativ	-	njeev	Verm	a	927
	karo Inc stry: Cer vn by: II CB Guide ration: P	ment EM Te eline&	eam IS Me	ethod	3025	dih, Dis	st: -	Bokar	o, Jha	stom mplin	nd 82 ner Re ng Dat	7014 prese	entativ 03-20	23	<u> </u>		a to Sou	th

 -		2000	_
 est	D-	1	

SI.	Total Boundary	11-14	Mark and Mark	Li	D		
No.	Tested Parameter	Unit	Method No.	Acceptable	Permissible	Results	
1.	pH value at 25°C		IS 3025 (Part-11)	6.5 - 8.5	No Relaxation	6.81	
2.	Turbidity	NTU	IS 3025 (Part-10)	1	5	1.2	
3.	Colour	Hazen	IS 3025 (Part-04)	5	15	5.0	
4.	Odour		IS 3025 (Part-05)	Agreeable	Agreeable	Agreeable	
5.	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part-16)	500	2000	363.0	
6.	Calcium (as Ca+2)	mg/l	IS 3025 (Part-40)	75	200	38.48	
7.	Total Alkalinity (as CaCO3)	mg/l	IS 3025 (Part-23)	200	600	170.0	
8.	Total Hardness (as CaCO3)	mg/l	IS 3025 (Part-21)	200	600	164.0	
9.	Chloride (as Cl <sup>-</sup> )	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 <sub>4</sub> -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

ISO 9001:2015 ISO 45001:2018

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Quality Checked by

(Shreya Sonal Dy. Quality Manager

ed Signatory

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

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

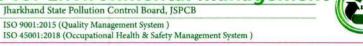
Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

ENVIRONMENT STATEMENT REPORT (FORM-V), BCMW-DCBL, BOKARO (2022-2023)



Jharkhand State Pollution Control Board, JSPCB

Certified by



#### **Test Report**

Discipline: Chemical	Group: Water		Sub-Group: Ground Water	
Report Issue Date: 27-03-2023	200	Test Report I	No.: RN-230308001GW2	
Sample ID: 230321WA01002	11. 10.	Sample Desc	ription: Ground Water (Dug well)	
Challan No./P.O. No.: 4548023834/237	STEPIS	Challan No./ P.No. Date: 17-09-2022		
Issued to: Dalmia Cement (Bharat) Ltd. Bokaro Industrial Area, PO-				

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

W.D.: North to South Field Meteorological Information A. Temp. (°C): 27 R.H. (%): 61 W.C.: Cloudy Sample Receiving date: 21-03-2023 Testing Started: 21-03-2023 Testing Ended: 24-03-2023

-- Test Result---

SI.	V9	11-14		Li	Danulta		
No.	Tested Parameter	Unit	Method No.	Acceptable	Permissible	Results	
1.	Taste		IS 3025 (Part-07)	Agreeable	Agreeable	Agreeable	
2.	Nitrate (as NO3)	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

ISO 9001:2015

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uthorized Signatory

C. Jain)

Director

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

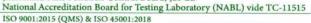
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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









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#### Test Report

ULR No.:	T	С	1	1	5	1	5	2	3	0	0	0	Ü	0	0	0	0	0	8						
Discipline: Chemical Group: Residues and Contami							minan	ts in \	Vater		Sub-	Gro	up: 1	race	Metal	s elem	ents								
Report Issue	Date: 27	7-03-20	23			121	W.	T	est Re	port	No.:	RN-2	230	3080	01GW	2	400								
Sample ID: 23	0321RC	01002				-6.4		S	ample	Desc	ript	ion:	Gro	und \	Nater	(Dug	well)								
Challan No./F	.O. No.	: 45480	023834	/237	6	1 11	86	C	hallar	No./	P.N	lo. Da	ate:	17-0	9-202	2		Ö	Sample Description: Ground Water (Dug well) Challan No./ P.No. Date: 17-09-2022						
	mia Cer caro Ind																								
Dal Bol	caro Ind	lustria						okard	, Jha	rkhan	d 8	2701	4	(a) S	nion	Vorn	22	Gill III							
Dal Bol Type of Indus	caro Ind try: Cen	lustria nent	Area,					okard	o, Jha ustor	rkhan ner R	d 8	2701 esent	4 tativ	-	anjeev	/ Vern	na	ja) "							
Dal Bol Type of Indus Sample Draw	try: Cen	lustria nent M Tea	Area,	PO-				okard	, Jha	rkhan ner R	d 8	2701 esent	4 tativ	-	anjeev	/ Vern	na								
Dal Bol Type of Indus	try: Cen n by: IE lethod 8	nent M Tea & CPCB	Marea,	PO-				okard	o, Jha ustor	rkhan ner R	d 8	2701 esent	4 tativ	-	anjeev	/ Verm	na		-						
Dali Bol Type of Indus Sample Draw Protocol: IS M	try: Cen rn by: IE lethod & ation: Po	nent EM Tea & CPCB	m Guide	PO-	-Balic		it: - B	okard C S	o, Jha ustor	rkhan ner R ng Da	eprete: 1	2701 esent	tativ	23		2000	na North to	Sout	h						

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

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

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

Tested By: Anshu Gupta

Sample Drawn By: Rajiv Kumar Singh & Team

Specific Contractual Notes:

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Director

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

ISO 9001:2015 ISO 45001:2018



Jharkhand State Pollution Control Board, JSPCB Certified by

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



#### **Test Report**

Discipline: Chemical	Group: Residues and	Contaminants in Water	Sub-Group: Trace Metals elements		
Report Issue Date: 27-03	3-2023	Test Report No.: RN-230308001GW2			
Sample ID: 230321RC01	002	Sample Descrip	otion: Ground Water (Dug well)		
Challan No./P.O. No.: 45	548023834/237	Challan No./ P.	No. Date: 17-09-2022		
		nd Cement Works) Plot I st: - Bokaro, Jharkhand			
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 W.C.: Cloudy W.D.: North to South R.H. (%): 61 Sample Receiving date: 21-03-2023 Testing Started: 21-03-2023 **Testing Ended: 24-03-2023** 

#### ----Test Result----

SI. 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----

	Life 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	15 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



(Shreya Sonal)

Director

Dy. Quality Manager



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





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#### Test Report

		The state of the s		
Discipline: Biological Group: W		Water Sub-Group: Ground Water		
Report Issue Date: 27-03-2023	207	Test Repo	rt 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		
Indiana di Anni	The state of the s			

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.: 0	Cloudy	W.D.: North to South
Sample Receiving date: 21-03-2023	Testing Star	ted: 21-03-202	3	Testing E	nded: 24-03-2023

	TOST NESURE							
SI. 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----

	Laboratory is maintaining Temperature 27± 20C and Relative Humidity 65±5 % in all testing
Env. Condition of Lab.	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

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