

**Dalmia**  
**cement**

**FUTURE TODAY**

*cement! sugar! refractories! power!*

DCBL/ENV/2023-24/01

28<sup>th</sup> June 2023

To,

**Additional Principal Chief Conservator of Forest  
Government of India  
Ministry of Environment, Forests & Climate Change  
North Eastern Regional Office, Law – U –Sib, Lumbatngan  
Shillong – 793021, Meghalaya.**

**Subject:** Half Yearly compliance report for the period **October 2023 to March 2023** condition imposed in environment clearance vide letter J-11011/190/2007-IA.II (I) dated; June 19<sup>th</sup> 2008 for integrated Cement Plant and Captive Power Plant of M/S Dalmia Cement Bharat Limited (Formerly M/s Adhunik Cement Limited) located at Vill - Thangskai, P.O. Lumshnong, Dist - East Jaintia Hills Meghalaya-793200.

**Ref: - Environment Clearance letter no.J-11011/190/2007-IA.II (I) dated; June 19<sup>th</sup> 2008.**

Dear Sir,

With reference to above subject and referred letter no, we are submitting herewith six monthly compliance of integrated Cement Plant and Captive Power Plant belonging to M/S Dalmia Cement Bharat Limited (Formerly M/s. Adhunik Cement Limited) located at Vill - Thangskai, P.O. Lumshnong, Dist - East Jaintia Hills Meghalaya-793200.

We request to kindly acknowledge the receipt of the same.

Thanking you,  
Yours faithfully  
M/s, Dalmia Cement (Bharat) Limited

Authorized Signatory

Enclosure: Compliance report for the period October 2022 to March 2023.

CC to:

- 1) The Member Secretary, Meghalaya State Pollution Control Board, "Arden" Lumpyngad, Shillong-793 014, Meghalaya.
- 2) The Regional Director, Central Pollution Control Board, North Eastern Zonal Office, Lower Motinagar, Shillong -793 014, Meghalaya.



**Dalmia Cement (Bharat) Limited**

1000 Mootang, Vill - Thangskai, PO Luhnishnong, District - East Jaintia Hills - 793210 (Meghalaya) India  
91 9612901824/9612 895 625 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 (BHARAT) LIMITED

Umsoo Mootang, Vill - Thangskai , P.O. Lumshnong , Dist – East Jaintia Hills, Meghalaya - 793 200

### COMPLIANCE STATUS

**Environment Clearance Letter No: - J-11011/190/2007-IA-II (I) dated: JUNE 19<sup>th</sup>, 2008.**

**Period Of Compliance : October 2023 to March 2023**

	<b>Conditions</b>	<b>Compliance Status</b>
<b>A</b>	<b><u>Specific Conditions</u></b>	
(i)	<p>Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided &amp; limit of SPM from cement plant shall be controlled within 50 Mg/Nm<sup>3</sup> by installing adequate Air Pollution control system viz. Electrostatic Precipitator (ESP) to cooler &amp; Captive Power Plant, Gas bag house to Raw Mill /Kiln and cement Mills, and Bag filters to material handling areas. At no time the particulate emission from the cement &amp; captive Power Plant shall exceed 50 mg/Nm<sup>3</sup> &amp; 100 mg/Nm<sup>3</sup> respectively. Interlocking Facility is provided in the pollution control equipment so that in the vent of the pollution control equipment not working, the respective unit is shut down automatically.</p>	<ul style="list-style-type: none"> <li>• Opacity meters are installed at all stacks, i.e. RMBH, Coal mill, Cement mill - 1 Cement Mill - 2, ESP cooler &amp; CPP respectively. Emission levels are within the permissible limit.</li> <li>• ESPs are provided for Clinker cooler &amp; CPP - Boiler and bag house for Cement mill, Raw Mill and Coal mill respectively.</li> <li>• Bag filters are provided at various material transfer points to arrest the fugitive emission.</li> <li>• Compliance status reports is submitted to Ministry including its Regional office at Shillong, MSPCB and CPCB.</li> <li>• Particulate emissions from the Cement Plant is within the prescribed limits i.e. within 30 mg/Nm<sup>3</sup> CPP is close since 22<sup>nd</sup> December 2022, once start, we will do monitoring. Efforts are being made to meet the emission standards as notified by latest Gazette Notification. Latest Stack Emission Monitoring Report enclosed in <b>Annexure - I</b>.</li> <li>• Interlocking facilities are provided.</li> </ul>
(ii)	<p>Secondary fugitive emissions shall be controlled within the prescribed limits &amp; regularly monitored. Guidelines/ Code of Practice issued by CPCB / MSPCB in this regard shall be followed.</p>	<p>Secondary fugitive emissions from all sources are controlled within the permissible limits issued by the Ministry and other monitored regularly. Dedicated one nos water tanker is deployed for water sprinkling in all the haul road, in transportation area, coal storage area and other vulnerable areas of the plant to control fugitive emission. Permanent water sprinkler is also installing to suppress fugitive dust emission. Latest Fugitive Emission Monitoring Report enclosed in</p>

		<b>Annexure - II.</b>
(iii)	The company shall install adequate dust collection & extraction System to control fugitive dust emission at various transfer points. Storage of raw material shall be in closed roof sheds. Water sprinkling arrangement shall be made in the Raw material Stock yard and cement bags loading area.	<ul style="list-style-type: none"> <li>• Installed dust collection systems/bag filters at various material transfer points and conveyor belts are covered to reduce fugitive emission. Raw materials, Coal and Fly ash are stored under closed shed.</li> <li>• Water sprinkling arrangement is provided in raw material stock yard, on haul roads and inside the plant to control the dust emission.</li> </ul>
(iv)	Effort shall be made to reduce impact of transport of the raw material and end product on the surrounding environment including agriculture land.	<ul style="list-style-type: none"> <li>• Raw materials are transported through covered trucks and there is no impact on surrounding environment.</li> </ul>
(v)	Total water requirement from Lunar river shall not exceed 2500 m <sup>3</sup> /day. All the process effluents shall be properly treated and treated waste water shall be recycled and reused for spraying for cooling the mills, dust suppression and green belt development. Domestic effluent water shall be treated and used for the green belt development. No Waste water shall be discharged into any stream /river without proper treatment and shall meet the MSPCB/CPCB/Ministry's norms as mentioned in the E (P) Act.	<ul style="list-style-type: none"> <li>• Water withdrawal from Lunar river is within 2500 m<sup>3</sup>/day.</li> <li>• STP has been installed and is in operation.</li> <li>• Cement manufacturing process is totally dry, there is no waste water generation.</li> <li>• Treated water is used for road dust suppression / green belt development.</li> <li>• There is no waste water discharge outside the plant premises.</li> </ul>
(vi)	Prior permission for the drawl of 2500 m <sup>3</sup> /day from Lunar River shall be obtained from the concern department	<ul style="list-style-type: none"> <li>• Obtained No objection certificate (NOC) from Irrigation Department Jowai, Jaintia hills for 5500 m<sup>3</sup>/day for Cement and Power plant dated 11<sup>th</sup> July 2007.</li> </ul>
(vii)	The dust collected from the pollution control equipment shall be recycled back into the process and reutilized.	<ul style="list-style-type: none"> <li>• The dusts from bag house and bag filters is recycled into the process and re utilized.</li> </ul>
(viii)	Fly ash shall be utilized as per Fly ash notification,1999 subsequently amended in 2003	<ul style="list-style-type: none"> <li>• Total Fly ash generated from the CPP is utilized in existing cement manufacturing.</li> </ul>
(ix)	An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provisions shall be made accordingly.	<p>Complied and being Complied</p> <ul style="list-style-type: none"> <li>• The kiln has been designed to use high calorific hazardous wastes.</li> </ul>
(x)	Green belt shall be developed in 17 ha.(33%)out of total 50 ha. in & around the plant as per the CPCB guidelines in	<ul style="list-style-type: none"> <li>• The plantation has been undertaken in phased manner. The Plantation is done with the consultation of DFO (T), Jowai. . We are planting</li> </ul>

	consultation with the local DFO	sapling in and around plant area, colony & mines area. A dedicated team is deployed for doing the plantation and maintain. Around 1,55,000 sapling is done so far in different area. Out of which sapling of 25,000 in 1 hrs (in Areka Mawaki process) is done in front of CCR is one of the record for us.
(xi)	All the recommendations of the Corporate Responsibility for Environment Protection (CREP) shall be strictly followed.	<p><b>Complied</b></p> <ul style="list-style-type: none"> <li>All CREP conditions for the Cement plants and Power plants are being implemented and strictly followed.</li> </ul>
<b>B</b>	<b>General Conditions</b>	
(i)	The project authority must adhere to the stipulations made by Meghalaya State Pollution Control Board and State Government	<ul style="list-style-type: none"> <li>Yes, We comply with all the stipulation made by the Meghalaya SPCB, CPCB and State Govt.</li> </ul>
(ii)	No further expansion or modification of the plant shall be carried out without prior approval of the ministry	<ul style="list-style-type: none"> <li>Noted. In future, if any expansion or modification is proposed, prior approval will be obtained from the ministry.</li> </ul>
(iii)	At Least 4 Ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of the SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the Meghalaya State Pollution Control Board. Data on Ambient air quality and stack emissions shall be regularly submitted to this ministry including its regional office at Shillong and Meghalaya State Pollution Control Board once in Six Months.	<ul style="list-style-type: none"> <li>We have established four (4) ambient air quality-monitoring stations as suggested by the Meghalaya State Pollution Control Board.</li> <li>Data on ambient air quality and stack emission are submitted to MSPCB on regular basis. Six monthly report to Regional office of MoEF&amp;CC is being submitted. Latest Ambient Air Quality Monitoring &amp; Stack Emission monitoring report enclosed in <b>Annexure -III &amp; I</b> respectively.</li> </ul>
(iv)	Industrial waste water shall be properly collected and treated so as to confirm to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time .The treated waste water shall be utilized for plantation purpose.	<ul style="list-style-type: none"> <li>Our cement manufacturing process is totally dry process; there is no waste water generation.</li> <li>We maintained zero discharge for the entire plant.</li> <li>Waste-water generated from CPP is reused.</li> <li>Waste-water generated from mines workshop is used for dust suppression after removing the oil &amp; grease traces through ETP.</li> </ul>

(v)	The overall Noise level in & around the Plant area shall be kept well within the standard (85 dbA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under environmental ( Protection ) Act, 1986 Rules, 1989 viz. 75dBA (day time) and 70 dbA (Night time).	<ul style="list-style-type: none"> <li>• We maintained over all noise level within prescribed limit in and around the plant area.</li> <li>• The ambient noise levels are well within the standards prescribed under EPA Rules viz., 75 dB (A) (Daytime) and 70 dB (A) (Night time).</li> <li>• The monitoring is carried out regularly and Latest Monitoring report is attached herewith in <b>Annexure - IV.</b></li> </ul>
(vi)	Proper Housekeeping & adequate occupational Health programmes must be taken up. Occupational Health surveillance programme shall be done on a regular basis and records maintained. The programme must include Lung function and sputum analysis tests once in six months.	<ul style="list-style-type: none"> <li>• We maintained good housekeeping in all areas of plant.</li> <li>• Personal protective equipment/devices are provided to all the persons to avoid direct exposure of dust and noise.</li> <li>• Occupational Health surveillance program is also regularly done. Lung Function and sputum analysis is also regular carried out. Test report of Lung function and sputum analysis is enclosed as <b>Annexure - V.</b></li> </ul>
(vii)	The company shall harvest the rainwater from the rooftops and storm water drains to recharge the ground water.	Complied. We harvest Rain water & Storm water through check dam. Further under CSR activity, the roof top structure for rain water harvesting has been constructed in surrounding villages also.
(viii)	The company shall undertake eco-development measures including community welfare measures in the project area.	Complied Undertaking various community welfare measures through CSR activities like. 1. Construction of footbridge cum culvert 2. Promotion of fuel efficient cook stoves and solar study lamps. 3. Medical camps, construction of schools toilets and awareness camps 4. Awareness generation campaign. Livelihood and Skill Training. etc. Some of CSR initiative taken by Dalmia Cement is enclosed as <b>Annexure - VI.</b>
(ix)	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP.	Yes, we are complying with EIA/EMP.
(x)	A separate environmental management cell with full-fledged laboratory facilities to carry out the various management and	A separate Environment Management Cell has been established with qualified person to carry out various environment functions under the chairmanship of

	monitoring functions shall be set up under the control of Senior Executive.	Unit Head.
(xi)	As proposed in the EIA/EMP, Project authorities shall provide Rs. 40.00 Cores towards capital cost for Environmental Pollution control measures for the environmental protection measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State government and submit implementation schedule for all the conditions stipulated herein to the regional office of this Ministry at Shillong/Central Pollution Control Board /Meghalaya State Pollution Control Board. The funds so provided shall not be diverted for any other purpose.	<p>This has been already sent to your office vide our letter dated 06/07/2011.</p> <p>The funds so provided will not be diverted for any other purpose.</p> <p>The details recurring expenditure towards environmental protection during April, 2022 to September 2022 is enclosed as <b>Annexure - VII</b>.</p>
(xii)	The regional office of this ministry at Shillong / Central pollution control board /Meghalaya pollution control board will monitor the stipulated condition. A Six monthly compliance report and monitored data along with the statistical interpretation shall be submitted to them regularly.	Six monthly compliance report is submitting regularly.
(xiii)	The project authorities shall inform the regional office as well as the ministry, the data of financial closer and final approval of the project by the concern authorities and the date of commencing the land development work.	<p>Financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work was submitted on dated 11.12.2008.</p> <p>The date of commissioning of various units is given as below:</p> <p>CEMENT PLANT : August 2010</p> <p>CAPTIVE POWER PLANT(CPP) : February 2010</p>
(xiv)	The project proponent Meghalaya inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the state Pollution control Board/committee and may also be seen at website of the Ministry of Environment & Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely	<p>Complied</p> <p>Public notice had been published &amp; cutting of the local newspaper already submitted to the office (ref. letter dated 01/02/2008).</p>

	circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Shillong.	
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Thanking you,  
Yours faithfully  
M/s, Dalmia Cement (Bharat) Limited

Authorized Signatory

Report No.: ENV/DCBL/22-23/AA-10/01  
Date : 07/11/2022

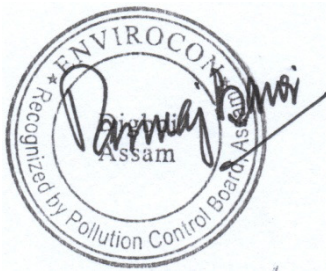
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**AMBIENT AIR QUALITY TEST RESULTS**

Sl. No.	LOCATION(S) ↓	Date of Sampling	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
	LIMIT(S) →	---	60	100	80	80
01	Near Cement Mill	07.10.2022	26.8	53.4	6.9	7.7
02	Near CPP	07.10.2022	23.5	48.9	6.2	6.9
03	Near CCR	07.10.2022	24.2	39.3	<5.0	<6.0
04	Vrindavan Colony	07.10.2022	20.7	32.6	<5.0	<6.0

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

**NOTE:**

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Report No.: ENV/DCBL/22-23/FE-10/01  
Date : 07/11/2022

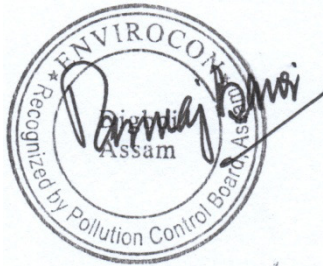
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**PROCESS FUGITIVE EMISSION TEST RESULTS**

Sl. No.	Locations	Date of Sampling	Results for SPM ( $\mu\text{g}/\text{m}^3$ )	Limits ( $\mu\text{g}/\text{m}^3$ )
01	Fly-ash Storage Section	07.10.2022	2061	5000
02	Coal Storage Section	07.10.2022	867	2000
03	Limestone Storage Section	07.10.2022	1053	5000
04	Cement Packing Section	07.10.2022	2412	5000

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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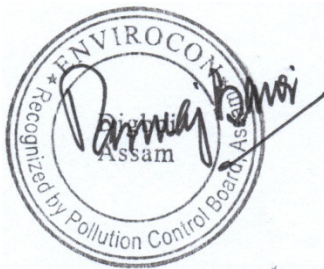
Report No.: ENV/DCBL/22-23/SE-10/01  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/01		
02	Date of Sampling	07.10.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	R. A. B. H.		
05	Stack Diameter (Meter)	3.0		
06	Flue Gas Temperature (°C)	162		
07	Exit Velocity of Gas (m/sec)	21.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	373106		
09	Type of Fuel Used	Kiln Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	23	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	667	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	483	mg/Nm <sup>3</sup>	800



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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**Associate Services:** Certification by Competent Person (CIF), NDT, Hydraulic Testing, Chartered Engineer Services etc.

Report No.: ENV/DCBL/22-23/SE-10/02  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/02		
02	Date of Sampling	07.10.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Coal Mill B.F.		
05	Stack Diameter (Meter)	1.25		
06	Flue Gas Temperature (°C)	52		
07	Exit Velocity of Gas (m/sec)	12.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	50237		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	16	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	462	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	153	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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**Associate Services:** Certification by Competent Person (CIF), NDT, Hydraulic Testing, Chartered Engineer Services etc.

Report No.: ENV/DCBL/22-23/SE-10/03  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/03		
02	Date of Sampling	07.10.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cooler E. S. P.		
05	Stack Diameter (Meter)	4.0		
06	Flue Gas Temperature (°C)	226		
07	Exit Velocity of Gas (m/sec)	8.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	240477		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	21	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-10/04  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

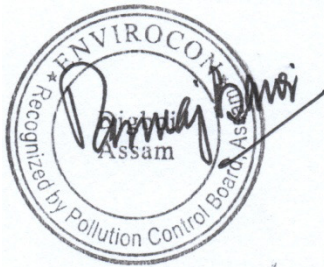
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/04		
02	Date of Sampling	08.10.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 1		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	67		
07	Exit Velocity of Gas (m/sec)	12.6		
08	Flow Rate (Nm <sup>3</sup> /hr)	124916		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	17	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-10/05  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

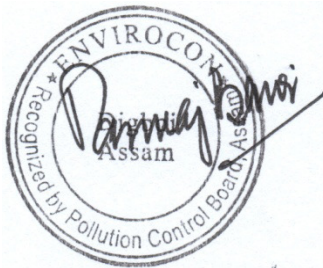
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/05		
02	Date of Sampling	08.10.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 2		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	64		
07	Exit Velocity of Gas (m/sec)	14.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	149033		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	15	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL*	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL*	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-10/07  
Date : 07/11/2022

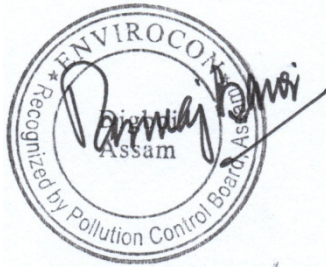
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/07		
02	Date of Sampling	09.10.2022		
03	Material of Construction	Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)		
05	Stack Diameter (Meter)	4.5		
06	Flue Gas Temperature (°C)	102		
07	Exit Velocity of Gas (m/sec)	6.2		
08	Flow Rate (Nm <sup>3</sup> /hr)	282131		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	39	mg/Nm <sup>3</sup>	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	447	mg/Nm <sup>3</sup>	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	239	mg/Nm <sup>3</sup>	300

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-10/06  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-10/06		
02	Date of Sampling	08.10.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Crusher B.F.		
05	Stack Diameter (Meter)	0.7		
06	Flue Gas Temperature (°C)	28		
07	Exit Velocity of Gas (m/sec)	4.2		
08	Flow Rate (Nm <sup>3</sup> /hr)	5762		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	11	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/N-10/01

Date : 07/11/2022

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### NOISE LEVEL MEASUREMENT RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day time		Night Time	
			Leq (dB-A)	Limit (dB-A)	Leq (dB-A)	Limit (dB-A)
1	Near Admin Office	07.10.2022	68.3	75	56.9	70
2	Near Worker Colony	07.10.2022	45.8	55	39.7	45
3	Near Staff Colony	07.10.2022	47.2	55	33.6	45



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Report No.: ENV/DCBL/22-23/DW-10/01  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### DRINKING WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/DW-2210/01  
Collected On : 22-10-2022

Sample Source : Kavery Block  
Received On : 23-10-2022

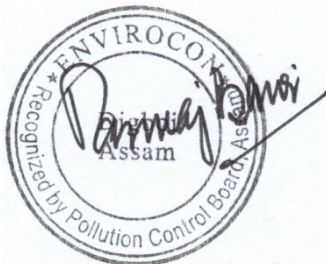
Sample Type : Drinking Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour , Hazen Units, Max	2	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Taste	Acceptable	Agreeable	Agreeable
4.	Turbidity, NTU, Max	0.3	1	5
5.	pH	6.91	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids, mg/l, Max	186	500	2000
7.	Calcium (as Ca), mg/l, Max	21	75	200
8.	Chloride (as Cl), mg/l, Max	13	250	1000
9.	Copper (as Cu), mg/l, Max	<0.001	0.05	1.5
10.	Fluorides (as F), mg/l, Max	<0.1	1.0	1.5
11.	Free Residual Chlorine, mg/l, Min	ND	0.2	1
12.	Iron (as Fe), mg/l, Max	0.017	0.3	No Relaxation
13.	Magnesium (as Mg), mg/l, Max	2	30	100
14.	Manganese (as Mn), mg/l, Max	ND	0.1	0.3
15.	Zinc (as Zn), mg/l, Max	ND	5.0	15
16.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	0.2	45	No Relaxation
17.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	13	200	400
18.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.001	0.002
19.	Total Alkalinity(as CaCO <sub>3</sub> ) , mg/l, Max	47	200	600
20.	Total Hardness, (as CaCO <sub>3</sub> ) , mg/l, Max	29	200	600
21.	Total Arsenic (as As), mg/l, Max	ND	0.01	0.05
22.	Total Chromium, (as Cr), mg/l, Max	ND	0.05	No Relaxation
23.	Faecal Coliforms/ 100 ml	NIL	Absent	Absent
24.	E. Coli / 100 ml	NIL	Absent	Absent

\*Limits as per IS 10500:2012

Analysis Protocol: IS 3025  
ND: Not Detected

**Remarks:** Drinking water from the above source is fit for drinking.



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SW-10/01  
Date : 07/11/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### SURFACE WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/SW-2210/01  
Collected On : 22-10-2022

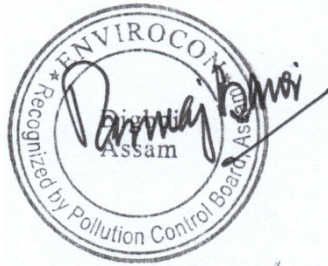
Sample Source : Nala Near Vrindaban Colony  
Received On : 23-10-2022

Sample Type : Surface Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)
1.	Colour, Hazen Units, Max.	12	300
2.	pH Value	6.67	6.5 - 8.5
3.	Dissolved Oxygen, mg/l, Min.	3.1	4.0
4.	Total Dissolved Solids, mg/l, Max.	370	1500
5.	Biochemical Oxygen Demand, mg/l, Max.	1.4	3.0
6.	Oil and Grease, mg/l, Max.	<0.01	0.1
7.	Lead (as Pb), mg/l, Max.	ND	0.1
8.	Copper (as Cu), mg/l, Max.	0.017	1.5
9.	Arsenic (as As), mg/l, Max.	ND	0.2
10.	Iron (as Fe), mg/l, Max.	7.6	50
11.	Zinc (as Zn), mg/l, Max.	0.43	15
12.	Fluorides (as F), mg/l, Max.	0.27	1.5
13.	Chlorides (as Cl), mg/l, Max.	254	600
14.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max.	<0.001	0.05
15.	Cyanides (as CN), mg/l, Max.	ND	0.05
16.	Phenolic Compunds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.005
17.	Sulphates (as SO <sub>4</sub> ), mg/l, Max.	191	400
18.	Nitrates (as NO <sub>3</sub> ), mg/l, Max.	5.4	50
19.	Total Coliform Organisms, MPN/100 ml, Max.	2249	5000
20.	Faecal Coliform, MPN/100 ml, Max.	520	1000

\*Limits as per IS 2296:1982

Analysis Protocol: IS 3025  
ND: Not Detected



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/AA-11/01  
Date : 07/12/2022

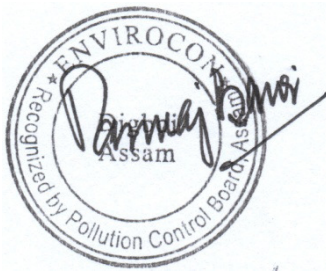
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### AMBIENT AIR QUALITY TEST RESULTS

Sl. No.	LOCATION(S) ↓	Date of Sampling	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
	LIMIT(S) →	---	60	100	80	80
01	Near Cement Mill	17.11.2022	27.6	55.8	7.1	7.9
02	Near CPP	17.11.2022	24.8	51.2	6.9	7.3
03	Near CCR	17.11.2022	26.3	42.5	<5.0	<6.0
04	Vrindavan Colony	17.11.2022	21.9	36.7	<5.0	<6.0

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/FE-11/01  
Date : 07/12/2022

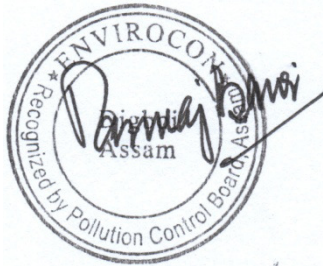
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**PROCESS FUGITIVE EMISSION TEST RESULTS**

Sl. No.	Locations	Date of Sampling	Results for SPM ( $\mu\text{g}/\text{m}^3$ )	Limits ( $\mu\text{g}/\text{m}^3$ )
01	Fly-ash Storage Section	17.11.2022	2066	5000
02	Coal Storage Section	17.11.2022	871	2000
03	Limestone Storage Section	17.11.2022	1049	5000
04	Cement Packing Section	17.11.2022	2419	5000

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-11/06

Date : 07/12/2022

Order No.: 4552001130/311

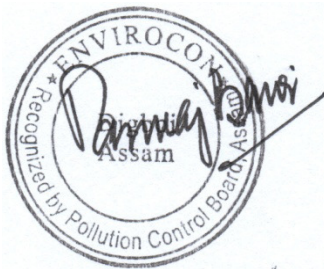
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**

Village: Thangskai, Lumshnong, Meghalaya

### STACK EMISSION TEST RESULTS

01	Test Ref. No.	DCBL/22-23/SE-11/06		
02	Date of Sampling	20.11.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	R. A. B. H.		
05	Stack Diameter (Meter)	3.0		
06	Flue Gas Temperature (°C)	171		
07	Exit Velocity of Gas (m/sec)	23.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	399706		
09	Type of Fuel Used	Kiln Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	19	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	670	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	441	mg/Nm <sup>3</sup>	800



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-11/07  
Date : 07/12/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### STACK EMISSION TEST RESULTS

01	Test Ref. No.	DCBL/22-23/SE-11/07		
02	Date of Sampling	20.11.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Coal Mill B.F.		
05	Stack Diameter (Meter)	1.25		
06	Flue Gas Temperature (°C)	54		
07	Exit Velocity of Gas (m/sec)	12.7		
08	Flow Rate (Nm <sup>3</sup> /hr)	51138		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	21	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	448	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	159	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-11/01  
Date : 07/12/2022

Order No.: 4552001130/311  
Date : 02/05/2022

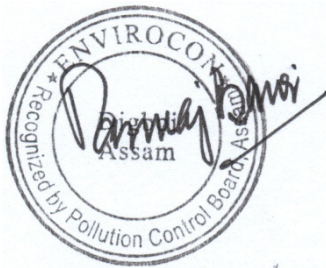
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-11/01		
02	Date of Sampling	18.11.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cooler E. S. P.		
05	Stack Diameter (Meter)	4.0		
06	Flue Gas Temperature (°C)	224		
07	Exit Velocity of Gas (m/sec)	8.3		
08	Flow Rate (Nm <sup>3</sup> /hr)	225168		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	23	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-11/02

Date : 07/12/2022

Order No.: 4552001130/311

Date : 02/05/2022

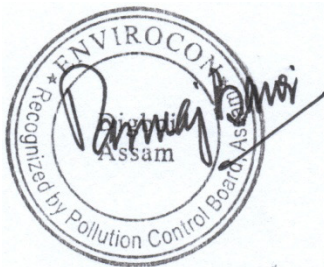
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-11/02		
02	Date of Sampling	18.11.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 1		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	69		
07	Exit Velocity of Gas (m/sec)	13.2		
08	Flow Rate (Nm <sup>3</sup> /hr)	130098		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	15	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-11/03

Date : 07/12/2022

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**

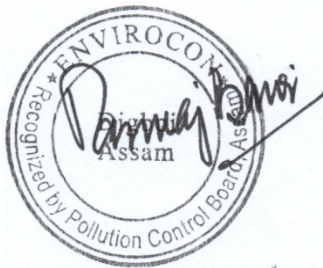
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-11/03		
02	Date of Sampling	18.11.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 2		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	61		
07	Exit Velocity of Gas (m/sec)	12.6		
08	Flow Rate (Nm <sup>3</sup> /hr)	127160		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	17	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL*	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL*	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level

Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-11/04  
Date : 07/12/2022

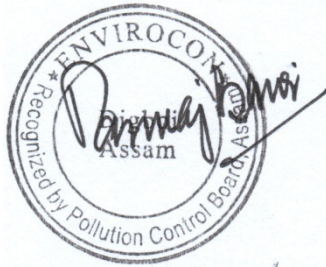
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-11/04		
02	Date of Sampling	19.11.2022		
03	Material of Construction	Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)		
05	Stack Diameter (Meter)	4.5		
06	Flue Gas Temperature (°C)	99		
07	Exit Velocity of Gas (m/sec)	5.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	270644		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	41	mg/Nm <sup>3</sup>	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	454	mg/Nm <sup>3</sup>	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	244	mg/Nm <sup>3</sup>	300

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-11/05  
Date : 07/12/2022

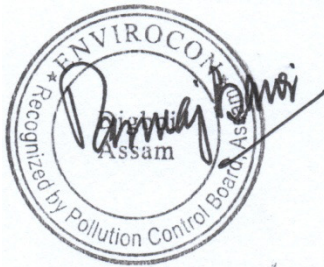
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### STACK EMISSION TEST RESULTS

01	Test Ref. No.	DCBL/22-23/SE-11/05		
02	Date of Sampling	19.11.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Crusher B.F.		
05	Stack Diameter (Meter)	0.7		
06	Flue Gas Temperature (°C)	27		
07	Exit Velocity of Gas (m/sec)	3.8		
08	Flow Rate (Nm <sup>3</sup> /hr)	5230		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	13	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/N-11/01

Date : 07/12/2022

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### NOISE LEVEL MEASUREMENT RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day time		Night Time	
			Leq (dB-A)	Limit (dB-A)	Leq (dB-A)	Limit (dB-A)
1	Near Admin Office	17.11.2022	67.6	75	57.3	70
2	Near Worker Colony	17.11.2022	47.5	55	41.2	45
3	Near Staff Colony	17.11.2022	48.9	55	34.8	45



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Report No.: ENV/DCBL/22-23/DW-11/01  
Date : 07/12/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### DRINKING WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/DW-3011/01  
Collected On : 30-11-2022

Sample Source : Kavery Block  
Received On : 02-10-2022

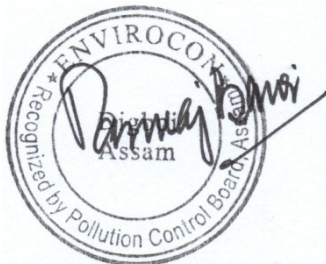
Sample Type : Drinking Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour , Hazen Units, Max	3	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Taste	Acceptable	Agreeable	Agreeable
4.	Turbidity, NTU, Max	0.4	1	5
5.	pH	6.93	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids, mg/l, Max	185	500	2000
7.	Calcium (as Ca), mg/l, Max	23	75	200
8.	Chloride (as Cl), mg/l, Max	14	250	1000
9.	Copper (as Cu), mg/l, Max	<0.001	0.05	1.5
10.	Fluorides (as F), mg/l, Max	<0.1	1.0	1.5
11.	Free Residual Chlorine, mg/l, Min	ND	0.2	1
12.	Iron (as Fe), mg/l, Max	0.016	0.3	No Relaxation
13.	Magnesium (as Mg), mg/l, Max	2	30	100
14.	Manganese (as Mn), mg/l, Max	ND	0.1	0.3
15.	Zinc (as Zn), mg/l, Max	ND	5.0	15
16.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	0.3	45	No Relaxation
17.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	14	200	400
18.	Phenolic Compunds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.001	0.002
19.	Total Alkalinity(as CaCO <sub>3</sub> ) , mg/l, Max	49	200	600
20.	Total Hardness, (as CaCO <sub>3</sub> ) , mg/l, Max	31	200	600
21.	Total Arsenic (as As), mg/l, Max	ND	0.01	0.05
22.	Total Chromium, (as Cr), mg/l, Max	ND	0.05	No Relaxation
23.	Faecal Coliforms/ 100 ml	NIL	Absent	Absent
24.	E. Coli / 100 ml	NIL	Absent	Absent

\*Limits as per IS 10500:2012

Analysis Protocol: IS 3025  
ND: Not Detected

**Remarks:** Drinking water from the above source is fit for drinking.



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SW-11/01  
Date : 07/12/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### SURFACE WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/SW-3011/01  
Collected On : 30-11-2022

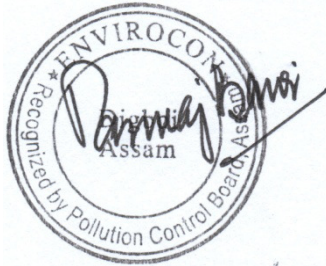
Sample Source : Nala Near Vrindaban Colony  
Received On : 02-12-2022

Sample Type : Surface Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)
1.	Colour, Hazen Units, Max.	14	300
2.	pH Value	6.66	6.5 - 8.5
3.	Dissolved Oxygen, mg/l, Min.	3.6	4.0
4.	Total Dissolved Solids, mg/l, Max.	373	1500
5.	Biochemical Oxygen Demand, mg/l, Max.	1.6	3.0
6.	Oil and Grease, mg/l, Max.	<0.01	0.1
7.	Lead (as Pb), mg/l, Max.	ND	0.1
8.	Copper (as Cu), mg/l, Max.	0.019	1.5
9.	Arsenic (as As), mg/l, Max.	ND	0.2
10.	Iron (as Fe), mg/l, Max.	7.9	50
11.	Zinc (as Zn), mg/l, Max.	0.42	15
12.	Fluorides (as F), mg/l, Max.	0.29	1.5
13.	Chlorides (as Cl), mg/l, Max.	259	600
14.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max.	<0.001	0.05
15.	Cyanides (as CN), mg/l, Max.	ND	0.05
16.	Phenolic Compunds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.005
17.	Sulphates (as SO <sub>4</sub> ), mg/l, Max.	193	400
18.	Nitrates (as NO <sub>3</sub> ), mg/l, Max.	5.9	50
19.	Total Coliform Organisms, MPN/100 ml, Max.	2253	5000
20.	Faecal Coliform, MPN/100 ml, Max.	614	1000

\*Limits as per IS 2296:1982

Analysis Protocol: IS 3025  
ND: Not Detected



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/AA-12/01  
Date : 07/01/2023

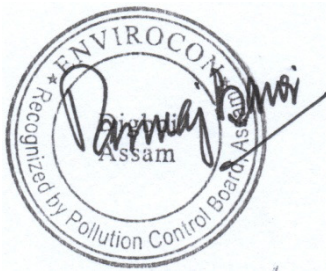
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### AMBIENT AIR QUALITY TEST RESULTS

Sl. No.	LOCATION(S) ↓	Date of Sampling	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
	LIMIT(S) →	---	60	100	80	80
01	Near Cement Mill	13.12.2022	25.8	44.6	6.9	7.8
02	Near CPP	13.12.2022	23.7	42.3	6.6	7.3
03	Near CCR	13.12.2022	21.6	37.4	<5.0	<6.0
04	Vrindavan Colony	13.12.2022	20.3	31.3	<5.0	<6.0

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/FE-12/01  
Date : 07/01/2023

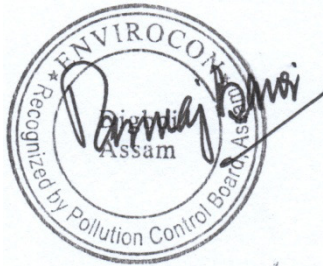
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**PROCESS FUGITIVE EMISSION TEST RESULTS**

Sl. No.	Locations	Date of Sampling	Results for SPM ( $\mu\text{g}/\text{m}^3$ )	Limits ( $\mu\text{g}/\text{m}^3$ )
01	Fly-ash Storage Section	14.12.2022	2041	5000
02	Coal Storage Section	13.12.2022	865	2000
03	Limestone Storage Section	14.12.2022	1012	5000
04	Cement Packing Section	13.12.2022	2408	5000

Analysis Protocol: IS 5182



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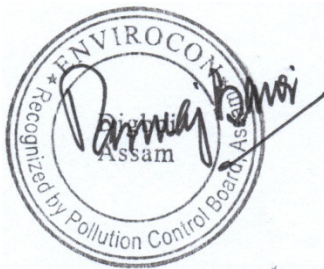
Report No.: ENV/DCBL/22-23/SE-12/01  
Date : 07/01/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-12/01		
02	Date of Sampling	14.12.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	R. A. B. H.		
05	Stack Diameter (Meter)	3.0		
06	Flue Gas Temperature (°C)	167		
07	Exit Velocity of Gas (m/sec)	21.3		
08	Flow Rate (Nm <sup>3</sup> /hr)	367142		
09	Type of Fuel Used	Kiln Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	24	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	641	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	424	mg/Nm <sup>3</sup>	800



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-12/02  
Date : 07/01/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-12/02		
02	Date of Sampling	14.12.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Coal Mill B.F.		
05	Stack Diameter (Meter)	1.25		
06	Flue Gas Temperature (°C)	54		
07	Exit Velocity of Gas (m/sec)	15.6		
08	Flow Rate (Nm <sup>3</sup> /hr)	62815		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	18	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	425	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	151	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Date : 07/01/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-12/03		
02	Date of Sampling	14.12.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cooler E. S. P.		
05	Stack Diameter (Meter)	4.0		
06	Flue Gas Temperature (°C)	223		
07	Exit Velocity of Gas (m/sec)	10.2		
08	Flow Rate (Nm <sup>3</sup> /hr)	277270		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	25	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-12/04

Date : 07/01/2023

Order No.: 4552001130/311

Date : 02/05/2022

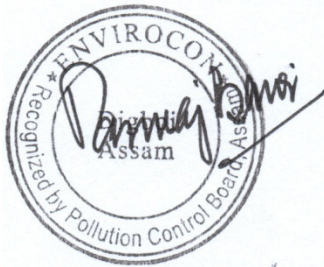
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### STACK EMISSION TEST RESULTS

01	Test Ref. No.	DCBL/22-23/SE-12/04		
02	Date of Sampling	15.12.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 1		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	65		
07	Exit Velocity of Gas (m/sec)	16.2		
08	Flow Rate (Nm <sup>3</sup> /hr)	161556		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	17	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-12/07

Date : 07/01/2023

Order No.: 4552001130/311

Date : 02/05/2022

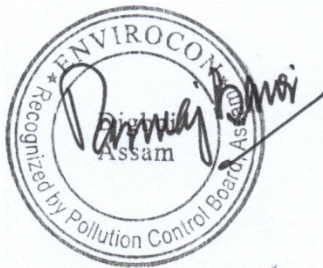
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-12/07		
02	Date of Sampling	16.12.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 2		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	63		
07	Exit Velocity of Gas (m/sec)	18.3		
08	Flow Rate (Nm <sup>3</sup> /hr)	183585		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	15	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL*	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL*	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-12/05  
Date : 07/01/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-12/05		
02	Date of Sampling	15.12.2022		
03	Material of Construction	Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)		
05	Stack Diameter (Meter)	4.5		
06	Flue Gas Temperature (°C)	103		
07	Exit Velocity of Gas (m/sec)	8.6		
08	Flow Rate (Nm <sup>3</sup> /hr)	390302		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	41	mg/Nm <sup>3</sup>	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	463	mg/Nm <sup>3</sup>	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	271	mg/Nm <sup>3</sup>	300

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-12/06  
Date : 07/01/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-12/06		
02	Date of Sampling	15.12.2022		
03	Material of Construction	M. S.		
04	Stack Attached To	Crusher B.F.		
05	Stack Diameter (Meter)	0.7		
06	Flue Gas Temperature (°C)	26		
07	Exit Velocity of Gas (m/sec)	3.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	4695		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	11	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/N-12/01

Date : 07/01/2023

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**NOISE LEVEL MEASUREMENT RESULTS**

Sl. No.	Location(s)	Date Of Measurement	Day time		Night Time	
			Leq (dB-A)	Limit (dB-A)	Leq (dB-A)	Limit (dB-A)
1	Near Admin Office	13.12.2022	63.7	75	57.8	70
2	Near Worker Colony	13.12.2022	49.6	55	39.3	45
3	Near Staff Colony	13.12.2022	46.2	55	37.5	45



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/DW-12/01  
Date : 07/01/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### DRINKING WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/DW-1612/01  
Collected On : 16-12-2022

Sample Source : Kavery Block  
Received On : 18-12-2022

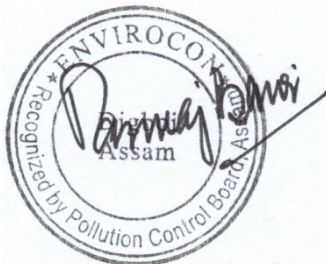
Sample Type : Drinking Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour , Hazen Units, Max	3	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Taste	Acceptable	Agreeable	Agreeable
4.	Turbidity, NTU, Max	0.2	1	5
5.	pH	6.85	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids, mg/l, Max	191	500	2000
7.	Calcium (as Ca), mg/l, Max	25	75	200
8.	Chloride (as Cl), mg/l, Max	12	250	1000
9.	Copper (as Cu), mg/l, Max	<0.001	0.05	1.5
10.	Fluorides (as F), mg/l, Max	<0.1	1.0	1.5
11.	Free Residual Chlorine, mg/l, Min	ND	0.2	1
12.	Iron (as Fe), mg/l, Max	0.022	0.3	No Relaxation
13.	Magnesium (as Mg), mg/l, Max	3	30	100
14.	Manganese (as Mn), mg/l, Max	ND	0.1	0.3
15.	Zinc (as Zn), mg/l, Max	ND	5.0	15
16.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	0.4	45	No Relaxation
17.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	13	200	400
18.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.001	0.002
19.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	55	200	600
20.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	30	200	600
21.	Total Arsenic (as As), mg/l, Max	ND	0.01	0.05
22.	Total Chromium, (as Cr), mg/l, Max	ND	0.05	No Relaxation
23.	Faecal Coliforms/ 100 ml	NIL	Absent	Absent
24.	E. Coli / 100 ml	NIL	Absent	Absent

\*Limits as per IS 10500:2012

Analysis Protocol: IS 3025  
ND: Not Detected

**Remarks:** Drinking water from the above source is fit for drinking.



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SW-12/01  
Date : 07/01/2022

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### SURFACE WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/SW-1612/01  
Collected On : 16-12-2022

Sample Source : Nala Near Vrindaban Colony  
Received On : 18-12-2022

Sample Type : Surface Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)
1.	Colour, Hazen Units, Max.	12	300
2.	pH Value	6.73	6.5 - 8.5
3.	Dissolved Oxygen, mg/l, Min.	3.5	4.0
4.	Total Dissolved Solids, mg/l, Max.	371	1500
5.	Biochemical Oxygen Demand, mg/l, Max.	1.2	3.0
6.	Oil and Grease, mg/l, Max.	<0.01	0.1
7.	Lead (as Pb), mg/l, Max.	ND	0.1
8.	Copper (as Cu), mg/l, Max.	0.015	1.5
9.	Arsenic (as As), mg/l, Max.	ND	0.2
10.	Iron (as Fe), mg/l, Max.	7.4	50
11.	Zinc (as Zn), mg/l, Max.	0.43	15
12.	Fluorides (as F), mg/l, Max.	0.22	1.5
13.	Chlorides (as Cl), mg/l, Max.	245	600
14.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max.	<0.001	0.05
15.	Cyanides (as CN), mg/l, Max.	ND	0.05
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.005
17.	Sulphates (as SO <sub>4</sub> ), mg/l, Max.	195	400
18.	Nitrates (as NO <sub>3</sub> ), mg/l, Max.	5.5	50
19.	Total Coliform Organisms, MPN/100 ml, Max.	2246	5000

\*Limits as per IS 2296:1982

Analysis Protocol: IS 3025  
ND: Not Detected



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/AA-01/01  
Date : 07/02/2023

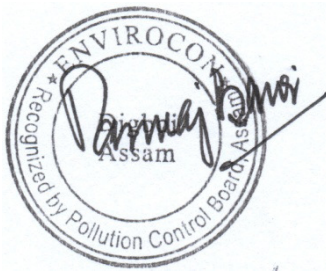
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### AMBIENT AIR QUALITY TEST RESULTS

Sl. No.	LOCATION(S) ↓	Date of Sampling	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
	LIMIT(S) →	---	60	100	80	80
01	Near Cement Mill	16.01.2023	28.9	51.6	6.3	7.2
02	Near CPP	16.01.2023	26.3	49.5	6.8	7.6
03	Near CCR	16.01.2023	25.8	43.6	<5.0	<6.0
04	Vrindavan Colony	16.01.2023	19.7	36.7	<5.0	<6.0

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/FE-01/01  
Date : 07/02/2023

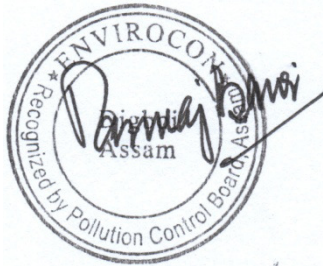
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**PROCESS FUGITIVE EMISSION TEST RESULTS**

Sl. No.	Locations	Date of Sampling	Results for SPM ( $\mu\text{g}/\text{m}^3$ )	Limits ( $\mu\text{g}/\text{m}^3$ )
01	Fly-ash Storage Section	16.01.2023	2053	5000
02	Coal Storage Section	17.01.2023	878	2000
03	Limestone Storage Section	16.01.2023	1021	5000
04	Cement Packing Section	16.01.2023	2416	5000

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-01/01

Date : 07/02/2023

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/01		
02	Date of Sampling	16.01.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	R. A. B. H.		
05	Stack Diameter (Meter)	3.0		
06	Flue Gas Temperature (°C)	169		
07	Exit Velocity of Gas (m/sec)	24.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	427252		
09	Type of Fuel Used	Kiln Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	21	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	704	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	412	mg/Nm <sup>3</sup>	800



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-01/02  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/02		
02	Date of Sampling	16.01.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Coal Mill B.F.		
05	Stack Diameter (Meter)	1.25		
06	Flue Gas Temperature (°C)	53		
07	Exit Velocity of Gas (m/sec)	15.3		
08	Flow Rate (Nm <sup>3</sup> /hr)	61796		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	13	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	452	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	133	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-01/03  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

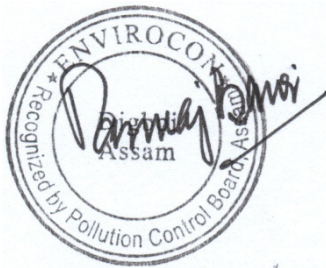
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/03		
02	Date of Sampling	16.01.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cooler E. S. P.		
05	Stack Diameter (Meter)	4.0		
06	Flue Gas Temperature (°C)	221		
07	Exit Velocity of Gas (m/sec)	9.7		
08	Flow Rate (Nm <sup>3</sup> /hr)	264746		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	26	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-01/04  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/04		
02	Date of Sampling	18.01.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 1		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	69		
07	Exit Velocity of Gas (m/sec)	19.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	191206		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	18	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



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Report No.: ENV/DCBL/22-23/SE-01/05  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

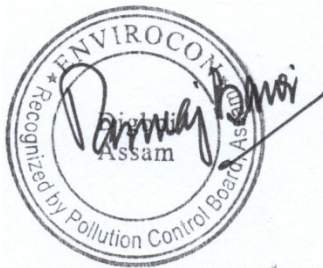
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/05		
02	Date of Sampling	18.01.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 2		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	61		
07	Exit Velocity of Gas (m/sec)	13.8		
08	Flow Rate (Nm <sup>3</sup> /hr)	139270		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	14	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL*	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL*	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-01/07  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/07		
02	Date of Sampling	***		
03	Material of Construction	Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)		
05	Stack Diameter (Meter)	4.5		
06	Flue Gas Temperature (°C)	***		
07	Exit Velocity of Gas (m/sec)	***		
08	Flow Rate (Nm <sup>3</sup> /hr)	***		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	***	mg/Nm <sup>3</sup>	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	***	mg/Nm <sup>3</sup>	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	***	mg/Nm <sup>3</sup>	300

**Note: Stack was under maintenance during monitoring period.**



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-01/06  
Date : 07/02/2023

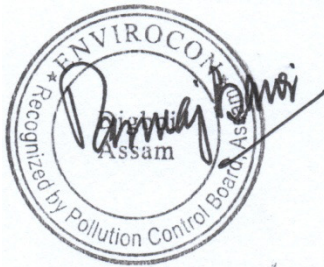
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-01/06		
02	Date of Sampling	19.01.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Crusher B.F.		
05	Stack Diameter (Meter)	0.7		
06	Flue Gas Temperature (°C)	27		
07	Exit Velocity of Gas (m/sec)	3.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	5781		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	12	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/N-01/01

Date : 07/02/2023

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### NOISE LEVEL MEASUREMENT RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day time		Night Time	
			Leq (dB-A)	Limit (dB-A)	Leq (dB-A)	Limit (dB-A)
1	Near Admin Office	16.01.2023	66.2	75	59.6	70
2	Near Worker Colony	16.01.2023	51.4	55	41.6	45
3	Near Staff Colony	16.01.2023	46.7	55	39.3	45



Checked By: Mr. Pankaj Baroi, ENVIROCON

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**Associate Services:** Certification by Competent Person (CIF), NDT, Hydraulic Testing, Chartered Engineer Services etc.

Report No.: ENV/DCBL/22-23/DW-01/01  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### DRINKING WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/DW-3001/01  
Collected On : 30-01-2023

Sample Source : Kavery Block  
Received On : 31-01-2023

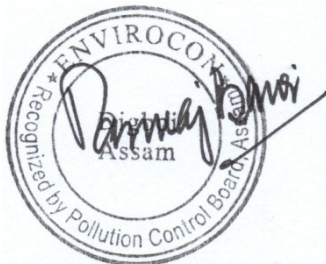
Sample Type : Drinking Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour , Hazen Units, Max	2	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Taste	Acceptable	Agreeable	Agreeable
4.	Turbidity, NTU, Max	0.3	1	5
5.	pH	6.92	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids, mg/l, Max	189	500	2000
7.	Calcium (as Ca), mg/l, Max	23	75	200
8.	Chloride (as Cl), mg/l, Max	14	250	1000
9.	Copper (as Cu), mg/l, Max	<0.001	0.05	1.5
10.	Fluorides (as F), mg/l, Max	<0.1	1.0	1.5
11.	Free Residual Chlorine, mg/l, Min	ND	0.2	1
12.	Iron (as Fe), mg/l, Max	0.019	0.3	No Relaxation
13.	Magnesium (as Mg), mg/l, Max	2	30	100
14.	Manganese (as Mn), mg/l, Max	ND	0.1	0.3
15.	Zinc (as Zn), mg/l, Max	ND	5.0	15
16.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	0.2	45	No Relaxation
17.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	16	200	400
18.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.001	0.002
19.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	57	200	600
20.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	28	200	600
21.	Total Arsenic (as As), mg/l, Max	ND	0.01	0.05
22.	Total Chromium, (as Cr), mg/l, Max	ND	0.05	No Relaxation
23.	Faecal Coliforms/ 100 ml	NIL	Absent	Absent
24.	E. Coli / 100 ml	NIL	Absent	Absent

\*Limits as per IS 10500:2012

Analysis Protocol: IS 3025  
ND: Not Detected

**Remarks:** Drinking water from the above source is fit for drinking.



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SW-01/01  
Date : 07/02/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### SURFACE WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/SW-3001/01  
Collected On : 30-01-2023

Sample Source : Nala Near Vrindaban Colony  
Received On : 31-01-2023

Sample Type : Surface Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)
1.	Colour, Hazen Units, Max.	15	300
2.	pH Value	6.76	6.5 - 8.5
3.	Dissolved Oxygen, mg/l, Min.	3.3	4.0
4.	Total Dissolved Solids, mg/l, Max.	376	1500
5.	Biochemical Oxygen Demand, mg/l, Max.	1.4	3.0
6.	Oil and Grease, mg/l, Max.	<0.01	0.1
7.	Lead (as Pb), mg/l, Max.	ND	0.1
8.	Copper (as Cu), mg/l, Max.	0.013	1.5
9.	Arsenic (as As), mg/l, Max.	ND	0.2
10.	Iron (as Fe), mg/l, Max.	7.9	50
11.	Zinc (as Zn), mg/l, Max.	0.48	15
12.	Fluorides (as F), mg/l, Max.	0.26	1.5
13.	Chlorides (as Cl), mg/l, Max.	251	600
14.	Chromium (as C <sup>6+</sup> ), mg/l, Max.	<0.001	0.05
15.	Cyanides (as CN), mg/l, Max.	ND	0.05
16.	Phenolic Compunds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	ND	0.005
17.	Sulphates (as SO <sub>4</sub> ), mg/l, Max.	199	400
18.	Nitrates (as NO <sub>3</sub> ), mg/l, Max.	5.8	50
19.	Total Coliform Organisms, MPN/100 ml, Max.	2251	5000

\*Limits as per IS 2296:1982

Analysis Protocol: IS 3025  
ND: Not Detected



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/AA-02/01  
Date : 09/03/2023

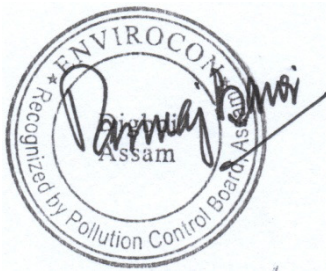
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### AMBIENT AIR QUALITY TEST RESULTS

Sl. No.	LOCATION(S) ↓	Date of Sampling	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
	LIMIT(S) →	---	60	100	80	80
01	Near Cement Mill	21.02.2023	30.7	53.6	6.9	7.5
02	Near CPP	21.02.2023	28.3	48.1	7.1	7.9
03	Near CCR	21.02.2023	27.5	44.9	<5.0	<6.0
04	Vrindavan Colony	21.02.2023	21.3	38.2	<5.0	<6.0

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/FE-02/01  
Date : 09/03/2023

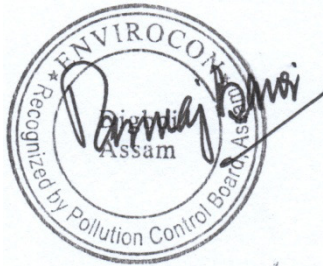
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**PROCESS FUGITIVE EMISSION TEST RESULTS**

Sl. No.	Locations	Date of Sampling	Results for SPM ( $\mu\text{g}/\text{m}^3$ )	Limits ( $\mu\text{g}/\text{m}^3$ )
01	Fly-ash Storage Section	21.02.2023	2062	5000
02	Coal Storage Section	21.02.2023	865	2000
03	Limestone Storage Section	21.02.2023	1033	5000
04	Cement Packing Section	22.02.2023	2423	5000

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-02/01

Date : 09/03/2023

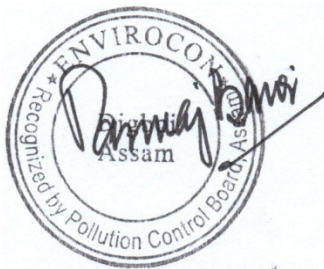
Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-02/01		
02	Date of Sampling	21.02.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	R. A. B. H.		
05	Stack Diameter (Meter)	3.0		
06	Flue Gas Temperature (°C)	164		
07	Exit Velocity of Gas (m/sec)	23.2		
08	Flow Rate (Nm <sup>3</sup> /hr)	402637		
09	Type of Fuel Used	Kiln Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	22	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	694	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	398	mg/Nm <sup>3</sup>	800



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-02/02  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-02/02		
02	Date of Sampling	21.02.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Coal Mill B.F.		
05	Stack Diameter (Meter)	1.25		
06	Flue Gas Temperature (°C)	51		
07	Exit Velocity of Gas (m/sec)	14.7		
08	Flow Rate (Nm <sup>3</sup> /hr)	59739		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	18	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	425	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	141	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable



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Report No.: ENV/DCBL/22-23/SE-02/03  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-02/03		
02	Date of Sampling	21.02.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cooler E. S. P.		
05	Stack Diameter (Meter)	4.0		
06	Flue Gas Temperature (°C)	219		
07	Exit Velocity of Gas (m/sec)	8.6		
08	Flow Rate (Nm <sup>3</sup> /hr)	235678		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	27	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-02/04  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

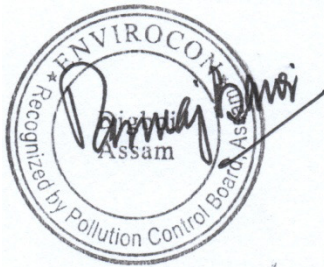
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-02/04		
02	Date of Sampling	22.02.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 1		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	71		
07	Exit Velocity of Gas (m/sec)	20.3		
08	Flow Rate (Nm <sup>3</sup> /hr)	198913		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	16	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-02/05  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

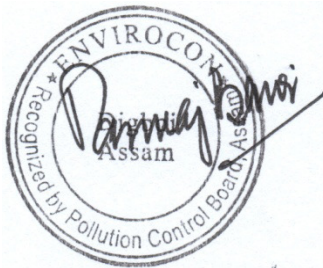
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### STACK EMISSION TEST RESULTS

01	Test Ref. No.	DCBL/22-23/SE-02/05		
02	Date of Sampling	22.02.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 2		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	63		
07	Exit Velocity of Gas (m/sec)	15.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	159508		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	19	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL*	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL*	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-02/07  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-02/07		
02	Date of Sampling	***		
03	Material of Construction	Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)		
05	Stack Diameter (Meter)	4.5		
06	Flue Gas Temperature (°C)	***		
07	Exit Velocity of Gas (m/sec)	***		
08	Flow Rate (Nm <sup>3</sup> /hr)	***		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	***	mg/Nm <sup>3</sup>	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	***	mg/Nm <sup>3</sup>	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	***	mg/Nm <sup>3</sup>	300

\*NA: Not Applicable

Note: CPP stack was under maintenance during the monitoring period.



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-02/06  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-02/06		
02	Date of Sampling	22.02.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Crusher B.F.		
05	Stack Diameter (Meter)	0.7		
06	Flue Gas Temperature (°C)	28		
07	Exit Velocity of Gas (m/sec)	3.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	5350		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	11	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL <sup>#</sup>	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL <sup>#</sup>	mg/Nm <sup>3</sup>	800

**#BDL: Below Detection Level**



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/N-02/01  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### NOISE LEVEL MEASUREMENT RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day time		Night Time	
			Leq (dB-A)	Limit (dB-A)	Leq (dB-A)	Limit (dB-A)
1	Near Admin Office	21.02.2023	67.8	75	57.4	70
2	Near Worker Colony	21.02.2023	53.6	55	43.6	45
3	Near Staff Colony	21.02.2023	49.2	55	41.7	45



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/DW-02/01  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### DRINKING WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/DW-2702/01  
Collected On : 27-02-2023

Sample Source : Kavery Block  
Received On : 01-03-2023

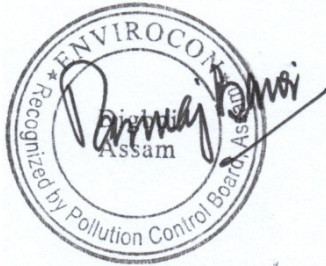
Sample Type : Drinking Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour, Hazen Units, Max	1	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Taste	Acceptable	Agreeable	Agreeable
4.	Turbidity, NTU, Max	0.2	1	5
5.	pH	6.89	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids, mg/l, Max	117	500	2000
7.	Calcium (as Ca), mg/l, Max	16	75	200
8.	Chloride (as Cl), mg/l, Max	6.2	250	1000
9.	Copper (as Cu), mg/l, Max	<0.001	0.05	1.5
10.	Fluorides (as F), mg/l, Max	<0.1	1.0	1.5
11.	Free Residual Chlorine, mg/l, Min	<0.01	0.2	1
12.	Iron (as Fe), mg/l, Max	0.015	0.3	No Relaxation
13.	Magnesium (as Mg), mg/l, Max	2	30	100
14.	Manganese (as Mn), mg/l, Max	<0.001	0.1	0.3
15.	Zinc (as Zn), mg/l, Max	<0.01	5.0	15
16.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	0.8	45	No Relaxation
17.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	7	200	400
18.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	<0.001	0.001	0.002
19.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	48	200	600
20.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	12	200	600
21.	Total Arsenic (as As), mg/l, Max	<0.001	0.01	0.05
22.	Total Chromium, (as Cr), mg/l, Max	<0.001	0.05	No Relaxation
23.	Faecal Coliforms/ 100 ml	Absent	Absent	Absent
24.	E. Coli / 100 ml	Absent	Absent	Absent

\*Limits as per IS 10500:2012

Analysis Protocol: IS 3025

**Remarks:** Drinking water from the above source is fit for drinking.



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SW-02/01  
Date : 09/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### SURFACE WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/SW-2702/01  
Collected On : 27-02-2023

Sample Source : Nala Near Vrindaban Colony  
Received On : 01-03-2023

Sample Type : Surface Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)
1.	Colour, Hazen Units, Max.	17	300
2.	pH Value	6.78	6.5 - 8.5
3.	Dissolved Oxygen, mg/l, Min.	3.5	4.0
4.	Total Dissolved Solids, mg/l, Max.	371	1500
5.	Biochemical Oxygen Demand, mg/l, Max.	1.3	3.0
6.	Oil and Grease, mg/l, Max.	<0.01	0.1
7.	Lead (as Pb), mg/l, Max.	<0.001	0.1
8.	Copper (as Cu), mg/l, Max.	0.013	1.5
9.	Arsenic (as As), mg/l, Max.	<0.001	0.2
10.	Iron (as Fe), mg/l, Max.	8.2	50
11.	Zinc (as Zn), mg/l, Max.	0.46	15
12.	Fluorides (as F), mg/l, Max.	0.28	1.5
13.	Chlorides (as Cl), mg/l, Max.	248	600
14.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max.	<0.001	0.05
15.	Cyanides (as CN), mg/l, Max.	<0.001	0.05
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	<0.001	0.005
17.	Sulphates (as SO <sub>4</sub> ), mg/l, Max.	196	400
18.	Nitrates (as NO <sub>3</sub> ), mg/l, Max.	16	50
19.	Total Coliform Organisms, MPN/100 ml, Max.	2246	5000
20.	Faecal Coliform, MPN/100 ml, Max.	426	1000

\*Limits as per IS 2296:1982

Analysis Protocol: IS 3025



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/AA-03/01  
Date : 24/03/2023

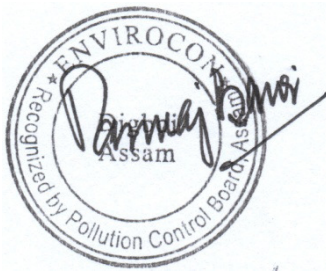
Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**AMBIENT AIR QUALITY TEST RESULTS**

Sl. No.	LOCATION(S) ↓	Date of Sampling	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
	LIMIT(S) →	---	60	100	80	80
01	Near Cement Mill	13.03.2023	29.8	57.8	6.1	7.2
02	Near CPP	13.03.2023	31.6	54.3	5.8	6.2
03	Near CCR	13.03.2023	33.7	43.6	<5.0	<6.0
04	Vrindavan Colony	13.03.2023	18.2	34.9	<5.0	<6.0

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/FE-03/01

Date : 24/03/2023

Order No.: 4552001130/311

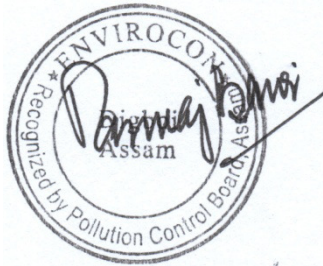
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### PROCESS FUGITIVE EMISSION TEST RESULTS

Sl. No.	Locations	Date of Sampling	Results for SPM ( $\mu\text{g}/\text{m}^3$ )	Limits ( $\mu\text{g}/\text{m}^3$ )
01	Fly-ash Storage Section	13.03.2023	2381	5000
02	Coal Storage Section	13.03.2023	987	2000
03	Limestone Storage Section	13.03.2023	1216	5000
04	Cement Packing Section	22.02.2023	2819	5000

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-03/01  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-03/01		
02	Date of Sampling	13.03.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	R. A. B. H.		
05	Stack Diameter (Meter)	3.0		
06	Flue Gas Temperature (°C)	166		
07	Exit Velocity of Gas (m/sec)	24.8		
08	Flow Rate (Nm <sup>3</sup> /hr)	428445		
09	Type of Fuel Used	Kiln Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	23	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	561	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	483	mg/Nm <sup>3</sup>	800



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/SE-03/02  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-03/02		
02	Date of Sampling	13.03.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Coal Mill B.F.		
05	Stack Diameter (Meter)	1.25		
06	Flue Gas Temperature (°C)	49		
07	Exit Velocity of Gas (m/sec)	13.9		
08	Flow Rate (Nm <sup>3</sup> /hr)	56839		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	13	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	579	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	139	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable



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Report No.: ENV/DCBL/22-23/SE-03/03  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

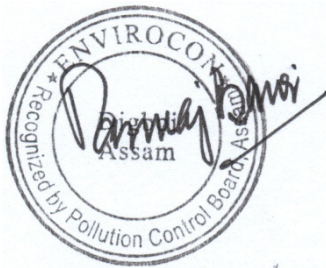
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-03/03		
02	Date of Sampling	13.03.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cooler E. S. P.		
05	Stack Diameter (Meter)	4.0		
06	Flue Gas Temperature (°C)	216		
07	Exit Velocity of Gas (m/sec)	9.3		
08	Flow Rate (Nm <sup>3</sup> /hr)	256424		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	24	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-03/04  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-03/04		
02	Date of Sampling	14.03.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 1		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	63		
07	Exit Velocity of Gas (m/sec)	11.7		
08	Flow Rate (Nm <sup>3</sup> /hr)	117374		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	19	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL#	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL#	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-03/05  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

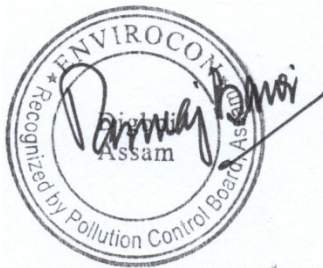
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### STACK EMISSION TEST RESULTS

01	Test Ref. No.	DCBL/22-23/SE-03/05		
02	Date of Sampling	14.03.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Cement Mill No. 2		
05	Stack Diameter (Meter)	2.0		
06	Flue Gas Temperature (°C)	59		
07	Exit Velocity of Gas (m/sec)	16.4		
08	Flow Rate (Nm <sup>3</sup> /hr)	166506		
09	Type of Fuel Used	NA*		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	15	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL*	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL*	mg/Nm <sup>3</sup>	800

\*NA: Not Applicable

#BDL: Below Detection Level



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-03/07

Date : 24/03/2023

Order No.: 4552001130/311

Date : 02/05/2022

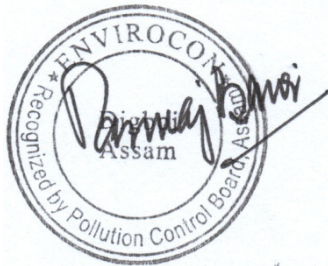
Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-03/07		
02	Date of Sampling	***		
03	Material of Construction	Refractory Brick		
04	Stack Attached To	Captive Power Plant (CPP)		
05	Stack Diameter (Meter)	4.5		
06	Flue Gas Temperature (°C)	***		
07	Exit Velocity of Gas (m/sec)	***		
08	Flow Rate (Nm <sup>3</sup> /hr)	***		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	***	mg/Nm <sup>3</sup>	50
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	***	mg/Nm <sup>3</sup>	600
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	***	mg/Nm <sup>3</sup>	300

\*NA: Not Applicable

Note: CPP stack was under maintenance during the monitoring period.



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/SE-03/06  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

**STACK EMISSION TEST RESULTS**

01	Test Ref. No.	DCBL/22-23/SE-03/06		
02	Date of Sampling	14.03.2023		
03	Material of Construction	M. S.		
04	Stack Attached To	Crusher B.F.		
05	Stack Diameter (Meter)	0.7		
06	Flue Gas Temperature (°C)	27		
07	Exit Velocity of Gas (m/sec)	4.1		
08	Flow Rate (Nm <sup>3</sup> /hr)	5643		
09	Type of Fuel Used	Coal		
<b>Analysis Results of Flue Gas</b>				
Sl. No.	Parameter(s)	Result(s)	Unit(s)	Limit(s)
i.	Particulate Matter	8.6	mg/Nm <sup>3</sup>	30
ii.	Sulphur Dioxide (as SO <sub>2</sub> )	BDL <sup>#</sup>	mg/Nm <sup>3</sup>	1000
iii.	Oxides of Nitrogen (as NO <sub>x</sub> )	BDL <sup>#</sup>	mg/Nm <sup>3</sup>	800

**#BDL: Below Detection Level**



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

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Report No.: ENV/DCBL/22-23/N-03/01

Date : 24/03/2023

Order No.: 4552001130/311

Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### NOISE LEVEL MEASUREMENT RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day time		Night Time	
			Leq (dB-A)	Limit (dB-A)	Leq (dB-A)	Limit (dB-A)
1	Near Admin Office	13.03.2023	69.3	75	53.9	70
2	Near Worker Colony	13.03.2023	47.8	55	34.2	45
3	Near Staff Colony	13.03.2023	51.5	55	35.8	45



Checked By: Mr. Pankaj Baroi, ENVIROCON

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Report No.: ENV/DCBL/22-23/DW-03/01  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### DRINKING WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/DW-1503/01  
Collected On : 15-03-2023

Sample Source : Kavery Block  
Received On : 17-03-2023

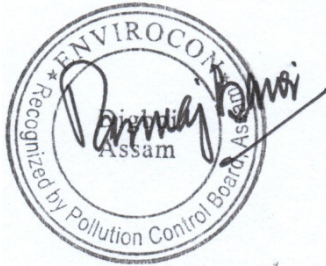
Sample Type : Drinking Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour , Hazen Units, Max	1	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Taste	Acceptable	Agreeable	Agreeable
4.	Turbidity, NTU, Max	0.2	1	5
5.	pH	6.84	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids, mg/l, Max	122	500	2000
7.	Calcium (as Ca), mg/l, Max	19	75	200
8.	Chloride (as Cl), mg/l, Max	5.6	250	1000
9.	Copper (as Cu), mg/l, Max	<0.001	0.05	1.5
10.	Fluorides (as F), mg/l, Max	<0.1	1.0	1.5
11.	Free Residual Chlorine, mg/l, Min	<0.01	0.2	1
12.	Iron (as Fe), mg/l, Max	0.02	0.3	No Relaxation
13.	Magnesium (as Mg), mg/l, Max	1	30	100
14.	Manganese (as Mn), mg/l, Max	<0.001	0.1	0.3
15.	Zinc (as Zn), mg/l, Max	<0.01	5.0	15
16.	Nitrate (as NO <sub>3</sub> ), mg/l, Max	0.6	45	No Relaxation
17.	Sulfate (as SO <sub>4</sub> ), mg/l, Max	<1	200	400
18.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	<0.001	0.001	0.002
19.	Total Alkalinity(as CaCO <sub>3</sub> ), mg/l, Max	45	200	600
20.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	24	200	600
21.	Total Arsenic (as As), mg/l, Max	<0.001	0.01	0.05
22.	Total Chromium, (as Cr), mg/l, Max	<0.001	0.05	No Relaxation
23.	Faecal Coliforms/ 100 ml	Absent	Absent	Absent
24.	E. Coli / 100 ml	Absent	Absent	Absent

\*Limits as per IS 10500:2012

Analysis Protocol: IS 3025

**Remarks:** Drinking water from the above source is fit for drinking.



Checked By: Mr. Pankaj Baroi, **ENVIROCON**

**NOTE:**

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Report No.: ENV/DCBL/22-23/SW-03/01  
Date : 24/03/2023

Order No.: 4552001130/311  
Date : 02/05/2022

Report Issued To : **DALMIA CEMENT (BHARAT) LIMITED**  
Village: Thangskai, Lumshnong, Meghalaya

### SURFACE WATER ANALYSIS RESULTS

Sample Ref. No. : DCBL/22-23/SW-1503/01  
Collected On : 15-03-2023

Sample Source : Nala Near Vrindaban Colony  
Received On : 17-03-2023

Sample Type : Surface Water  
Collected By : Envirocon Representative

Sl. No.	Parameters	Results	Tolerance Limit* (Class - C)
1.	Colour, Hazen Units, Max.	15	300
2.	pH Value	6.69	6.5 - 8.5
3.	Dissolved Oxygen, mg/l, Min.	5.6	4.0
4.	Total Dissolved Solids, mg/l, Max.	324	1500
5.	Biochemical Oxygen Demand, mg/l, Max.	1.6	3.0
6.	Oil and Grease, mg/l, Max.	<0.01	0.1
7.	Lead (as Pb), mg/l, Max.	<0.001	0.1
8.	Copper (as Cu), mg/l, Max.	<0.001	1.5
9.	Arsenic (as As), mg/l, Max.	<0.001	0.2
10.	Iron (as Fe), mg/l, Max.	3.5	50
11.	Zinc (as Zn), mg/l, Max.	<0.01	15
12.	Fluorides (as F), mg/l, Max.	0.4	1.5
13.	Chlorides (as Cl), mg/l, Max.	128	600
14.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max.	<0.001	0.05
15.	Cyanides (as CN), mg/l, Max.	<0.001	0.05
16.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max.	<0.001	0.005
17.	Sulphates (as SO <sub>4</sub> ), mg/l, Max.	200	400
18.	Nitrates (as NO <sub>3</sub> ), mg/l, Max.	6.3	50
19.	Total Coliform Organisms, MPN/100 ml, Max.	1526	5000
20.	Faecal Coliform, MPN/100 ml, Max.	128	1000

\*Limits as per IS 2296:1982

Analysis Protocol: IS 3025



Checked By: Mr. Pankaj Baroi, ENVIROCON

**NOTE:**



1. Results reported are valid at the time of and under the prevailing conditions of measurement.
2. Results refer only to the particular parameters tested.
3. This test report shall not be reproduced except in full, without the written permission of ENVIROCON, I.O.C.L (AOD) New Market, Digboi - 786171, Assam.



MC-3480

DEPARTMENT OF MICROBIOLOGY

Name : Mr. DIPAL MASHI      Age : 37Yr 0Mth 0Days      Gender : Male  
 UHID : AHLG2.0000027991 / APHCAH14063      W/BNo/RefNo : AHC  
 SIN\LRN : 120864481\9365707  
 Specimen :  
 Ref Doctor : Dr. Prabin Kumar Saikia

Collected on : 22-MAR-2023 03:15:13 PM    Received on : 25-MAR-2023 04:22:52 PM    Reported on : 25-MAR-2023 05:43:38 PM

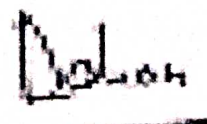
Workmen Medical Health Checkup

TEST NAME	RESULT
AFB STAINING	No AFB seen
AFB Smear	
Report Status: Final	

KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.  
 \* END OF REPORT \*

DOB : 22-MAR-1986  
 PassportNo:

CHECKED BY : 1078435



Printed On : 30-MAR-2023 07:01:54 PM

DR. DEBA JYOTI LAHON  
 CONSULTANT

CONSULTANTS

- DR. I. KALITA, MD
- DR. T. SARMA, DCP
- DR. P. GOSWAMI, MD
- DR. M. SAIKIA, MD(BIOCHEMISTRY)
- DR. A. VERMA, DCP
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- DR. D.J. LAHON, MD (MICRO)
- DR. M. SARMA, MD (MICRO)

\* The results relate to sample tested only. Partial reproduction of reports is prohibited.



25

# Apollo

**PERSONALISED  
HEALTH CHECK CENTRE**


(DEPARTMENT OF LABORATORY MEDICINE)


APOLLO PERSONALISED HEALTH CHECK CENTRE

(A UNIT OF ASSAM HOSPITALS LTD.)



Name	Mr. RAJIB DUTTA	Age	42Yr 0Mth 0Days	Gender	MC-3480 Male
UHID	AHLG2.0000027990 / APHCAH14073	W/BNo/RefNo	AHC		
SIN \LRN	120864506 \ 9365717				
Specimen	Others				
Ref Doctor	Dr. Prabin Kumar Saikia				





Collected on : 22-MAR-2023 03:21:55 PM    Received on : 25-MAR-2023 04:25:56 PM    Reported on : 25-MAR-2023 05:49:16 PM

### Workmen Medical Health Checkup

TEST NAME	RESULT
AFB STAINING	No AFB seen
AFB Smear	
Report Status:Final	

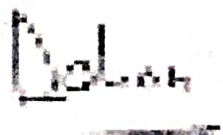
KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

\* END OF REPORT \*

DOB : 22-MAR-1981  
 PassportNo:



CHECKED BY : 1078435



Printed On : 13-APR-2023 12:19:56 PM


DR. DEBA JYOTI LAHON  
CONSULTANT

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| DR. A. VERMA, DCP | DR. M. BARMAN, MD | DR. D.J. LAHON, MD (MICRO) | DR. M. SARMA, MD (MICRO)        |

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Name	Mr. SANKAR DEY	Age	32Yr 0Mth 0Days	Gender	Male	MC-3480
UHID	AHLG2.0000027978 / APHCAH14050	W/BNo/RefNo	AHC			
SIN\LRN	120864185 \ 9365573					
Specimen	Others					
Ref Doctor	Dr. Prabin Kumar Saikia					

Collected on : 22-MAR-2023 04:44:20 PM Received on : 01-APR-2023 11:23:33 AM Reported on : 01-APR-2023 01:38:51 PM

**Workmen Medical Health Checkup**

TEST NAME	RESULT
AFB STAINING	
AFB Smear	No AFB seen
Report Status:Final	

KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

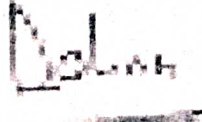
\* END OF REPORT \*

DOB : 22-MAR-1991

PassportNo:

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Printed On : 13-APR-2023 11:56:29 AM

  
DR. DEBA JYOTI LAHON  
CONSULTANT

**CONSULTANTS**

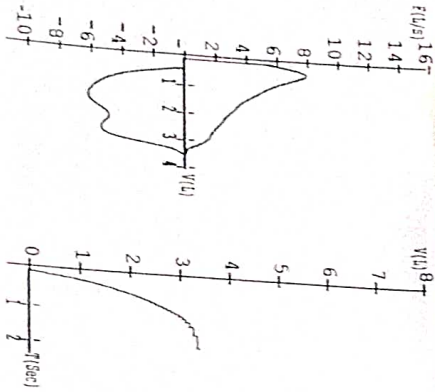
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| DR. A. VERMA, DCP | DR. M. BARMAN, MD | DR. D.J. LAHON, MD (MICRO) | DR. M. SARMA, MD (MICRO)        |

Patient Information  
Name : S  
ID : 20  
Date : 13/10/2013

Age : 32 years  
Sex : Male  
Weight : 55 kg  
Height : 171 cm  
Smoker : No

RMS-HELIOS 702  
Ver 1.3.0

FVC TEST ( PRE )



Parameters	Pred			zPred			Parameters	Pred			zPred		
	Value	Lower	Upper	Value	Lower	Upper		Value	Lower	Upper	Value	Lower	Upper
FVC	3.61	3.40	93	EEF .2-1.2	7.48	5.92	79						
Fev 1	3.04	3.02	99	EEF 25	8.07	5.46	67						
Fev1/FVC(%)	84.07	89.95	105	EEF 50	5.89	3.21	54						
FEF25-75	4.32	3.03	70	EEF 75	3.07	1.82	59						
FEFR	9.20	8.04	87	Fev.5/FVC	---	63.92	---						
ETVC	---	3.14	---	Fev3/FVC	97.01	100.01	103						
Fev .5	---	2.17	---	FVC Time	---	2.38	---						
Fev3	3.51	3.40	96	Exp Time	---	0.04	---						
PIFR	---	6.14	---	Lung Age	32	32	---						
FEF 75-85	---	1.63	---										

Recorders & Medicare Systems Pvt. Ltd. 0172-2650701-05 URL:www.msindia.com

INTERPRETATION

C.O.P.D. Severity  
Test within normal limits

Interpretation Set:  
Indian Pred. Eqns.

Sign : .....  
Dr. DR K R SARMAH



Name	Mr. SANKAR DEY	Age	32Yr 0Mth 0Days	Gender	Male	MC-3480
UHID	AHLG2.0000027978 / APHCAH14050	W/BNo/RefNo	AHC			
SIN ILRN	120864185 \ 9365573					
Specimen	Others					
Ref Doctor	Dr. Prabin Kumar Saikia					

Collected on : 22-MAR-2023 04:44:20 PM Received on : 01-APR-2023 11:23:33 AM Reported on : 01-APR-2023 01:38:51 PM

**Workmen Medical Health Checkup**

TEST NAME	RESULT
AFB STAINING AFB Smear Report Status:Final	No AFB seen

KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

\* END OF REPORT \*

DOB : 22-MAR-1991  
PassportNo:

CHECKED BY : 1078435

Printed On : 13-APR-2023 11:56:29 AM

DR. DEBA JYOTI LAHON  
CONSULTANT

**CONSULTANTS**

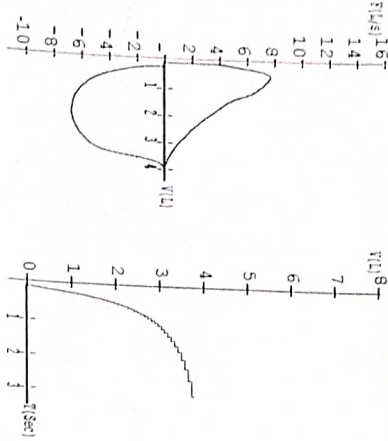
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|-------------------|-------------------|----------------------------|---------------------------------|
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| DR. A. VERMA, DCP | DR. M. BARMAN, MD | DR. D.J. LAHON, MD (MICRO) | DR. M. SARMA, MD (MICRO)        |

\* The results relate to sample tested only. Partial reproduction of reports is prohibited.

RMS-HELIOS 702  
Ver 1.3.10

Patient Information  
 ID : 20  
 Name : RAJIB *Rajib*  
 Age : 42 Years  
 Sex : Male  
 Weight : 59 Kg  
 Height : 173 cm  
 Smoker : No  
 Date : 17/00/91  
 17/6/23

FVC TEST ( PRE )



Parameters	Pred	Pre	%Pred	Parameters	Pred	Pre	%Pred
FVC	3.57	3.74	104	FEF 2-1.2	6.91	6.83	98
Fev 1	2.91	3.00	103	FEF 25	7.94	6.64	83
Fev1/FVC(%)	81.37	80.29	98	FEF 50	5.64	3.22	57
FEF25-75	3.91	2.74	70	FEF 75	2.68	1.20	44
PEFR	8.99	7.85	87	Fev.5/FVC	---	61.56	---
FIVC	---	3.67	---	Fev3/FVC	97.01	98.76	101
Fev .5	---	2.30	---	FVC Time	---	3.39	---
Fev3	3.47	3.69	106	Exp Time	---	0.05	---
PIFR	---	6.68	---	Lung Age	42	40	---
FEF 75-85	---	0.85	---				

Recorders & Medicare Systems Pvt.Ltd. 0172-2656701-05 URL:www.rmsindia.com

INTERPRETATION

Within Normal Limits  
 %FEV1/FVC>95 & %FVC>80  
 ---

C.O.P.D. Severity

Test within normal limit

Interpretation Set:  
 Indian Pred. Eqns.  
 Sign : .....  
 Dr. DR K R SARMAH

25



Name : Mr. RAJIB DUTTA      Age : 42Yr 0Mth 0Days      Gender : Male      MC-3480

UHID : AHLG2.0000027990 / APHCAH14073      W/BNo/RefNo : AHC

SIN \LRN : 120864506 \ 9365717

Specimen : Others

Ref Doctor : Dr. Prabin Kumar Saikia



Collected on : 22-MAR-2023 03:21:55 PM    Received on : 25-MAR-2023 04:25:56 PM    Reported on : 25-MAR-2023 05:49:16 PM

**Workmen Medical Health Checkup**

<u>TEST NAME</u>	<u>RESULT</u>
<b>AFB STAINING</b>	
AFB Smear	No AFB seen
Report Status:Final	

KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

\* END OF REPORT \*

DOB : 22-MAR-1981

PassportNo:



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Printed On : 13-APR-2023 12:19:56 PM

DR. DEBA JYOTI LAHON  
CONSULTANT

**CONSULTANTS**

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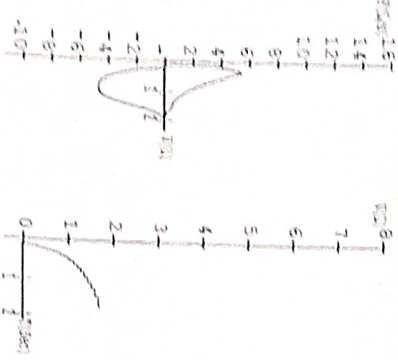
\* The results relate to sample tested only. Partial reproduction of reports is prohibited.

APOLLO HOSPITAL  
 GUWAHATI 7  
 03817134800

*Dipal Majhi*  
 Patient Information  
 ID : 20

Sex: M  
 Age: 37 years  
 Height: 158 cm  
 Weight: 54 Kg  
 Smoker: No  
 Date: 12/09/18  
 Ref: 18/8/18  
 PAB-MEDICOS 702  
 Ver 1.3.0

( PFT ) ( PFT ) ( PFT )



Parameters	Pred	Pre	IPred
FVC	2.69	1.77	61
Fev 1	2.41	1.50	62
Fev1/FVC(%)	83.38	84.79	101
FVC25-75	3.85	1.45	37
FEF25	8.10	5.92	73
FIVC	---	1.71	---
Fev .5	---	1.20	---
Fev3	2.81	1.77	63
FIF	---	4.68	---
FEF 75-85	---	0.57	---

Parameters	Pred	Pre	IPred
FZF .2-1.2	6.48	2.03	31
FZF 25	7.52	4.05	53
FZF 50	5.40	1.75	32
FZF 75	2.68	0.64	23
Fev .5/FVC	---	67.83	---
Fev3/FVC	97.01	100.01	103
FVC Time	---	1.98	---
Exp Time	---	0.04	---
Lung Age	---	37	50

**INTERPRETATION**

Moderate Restriction  
 As Fev1/FVC > 95 & FVC < 64



**C.O.P.D. Severity**

Test is in Restrictive Area  
 As Fev1/FVC > 10% and Fev1 < 80%

Interpretation Set:  
 Indian Pred. Eqns.  
 Dr. DR K R SANKAR



Name : Mr. DIPAL MASHI      Age : 37Yr 0Mth 0Days      Gender : Male  
UHID : AHLG2.0000027991 / APHCAH14063      W/BNo/RefNo : AHC  
SIN \LRN : 120864481 \ 9365707  
Specimen :  
Ref Doctor : Dr. Prabin Kumar Saikia



Collected on : 22-MAR-2023 03:15:13 PM      Received on : 25-MAR-2023 04:22:52 PM      Reported on : 25-MAR-2023 05:43:38 PM

**Workmen Medical Health Checkup**

TEST NAME	RESULT
AFB STAINING	No AFB seen
AFB Smear	
Report Status:Final	

KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

\* END OF REPORT \*

DOB : 22-MAR-1986  
PassportNo:

TOUCHING LIVES

CHECKED BY : 1078435

DR. DEBA JYOTI LAHON  
CONSULTANT

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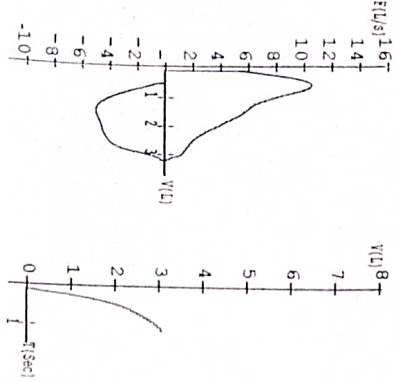
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|-------------------|-------------------|----------------------------|---------------------------------|
| DR. I. KALITA, MD | DR. T. SARMA, DCP | DR. P. GOSWAMI, MD         | DR. M. SAIKIA, MD(BIOCHEMISTRY) |
| DR. A. VERMA, DCP | DR. M. BARMAN, MD | DR. D.J. LAHON, MD (MICRO) | DR. M. SARMA, MD (MICRO)        |

\* The results relate to sample tested only. Partial reproduction of reports is prohibited.



Patient Information  
 ID : 23  
 Name : P  
 Age : 45 years  
 Sex : Male  
 Weight : 54 Kg  
 Height : 166 cm  
 Smoker : No  
 Date : 17/06/25  
 RMS-HELIOS 702  
 Ver 1.3.0

FVC TEST ( PRE )



Parameters	Pred	Pre	%Pred	Parameters	Pred	Pre	%Pred
FVC	3.18	3.12	98	FEF 2-1.2	6.35	8.55	134
FEV1	2.56	3.07	119	FEF 25	7.64	8.76	114
FEV1/FVC(%)	80.61	98.44	122	FEF 50	5.37	5.18	96
FEF25-75	3.64	4.37	120	FEF 75	2.46	2.16	87
FEFR	8.39	10.67	127	Rev.5/FVC	---	79.20	---
PIVC	---	2.72	---	Rev3/FVC	97.01	100.01	103
Rev .5	---	2.47	---	FVC Time	---	1.37	---
Rev3	3.09	3.12	101	Exp Time	---	0.05	---
PIFR	---	4.98	---	Lung Age	45	36	---
FEF 75-85	---	1.75	---				

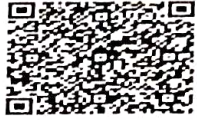

Recorders & Medicare Systems Pvt.Ltd. 0172-2658701-05 URL:www.rmsindia.com

Interpretation Set:  
 Indian Pred. Eqns.  
 Sign :.....  
 Dr. DR K R SARMAH

INTERPRETATION  
 Within Normal Limits  
 %FEV1/FVC>95 & %FVC>80  
 C.O.P.D. Severity  
 Test within normal limits



Name : Mr. PINKU DEY .Age.: 45Yr 0Mth 0Days Gender : Male  
UHID : AHLG.0000859505 / AHLGAH1855 W/BNo/RefNo : AHC  
SIN \LRN : 120862517 \ 9364848  
Specimen : Others  
Ref Doctor : Dr. Apollo HealthCheckup

  
  
Collected on : 22-MAR-2023 07:33:04 PM Received on : 22-MAR-2023 07:37:16 PM Reported on : 28-MAR-2023 04:14:50 PM

**Workmen Medical Health Checkup**

TEST NAME	RESULT
AFB STAINING	
AFB Smear	No AFB seen
Report Status:Final	


KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

\* END OF REPORT \*

DOB : 22-MAR-1978  
PassportNo:

TOUCHING LIVES

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Printed On : 31-MAR-2023 01:00:25 PM  
DR. DEBA JYOTI LAHON  
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Page 1 of 1  
CONSULTANTS

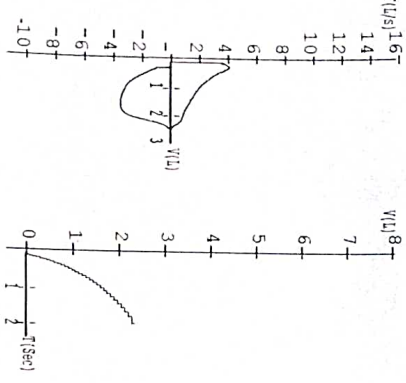
- DR. I. KALITA, MD
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- DR. P. GOSWAMI, MD
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- DR. M. BARMAN, MD
- DR. D.J. LAHON, MD (MICRO)
- DR. M. SARMA, MD (MICRO)

\* The results relate to sample tested only. Partial reproduction of reports is prohibited.

Patient Information  
Name : Rakesh Yadav  
ID : 120

Age : 42 years  
Sex : Male  
Weight : 55 Kg  
Height : 158 cm  
Smoker : No  
Date : 17/10/23  
RMS-HELIOS 702  
Ver 1.3.0

FVC TEST ( PRE )



Parameters	Pred	Pre	%Pred	Parameters	Pred	Pre	%Pred
FVC	2.82	2.39	84	FEF .2-1.2	6.14	2.33	37
Fev 1	2.31	1.85	80	FEF 25	7.42	2.65	35
Fev1/FVC(%)	81.73	77.51	94	FEF 50	5.25	1.63	31
FEF25-75	3.62	1.53	42	FEF 75	2.47	0.96	38
FEFR	7.93	4.25	53	Fev.5/FVC	---	52.37	---
FIVC	---	2.23	---	Fev3/FVC	97.01	100.01	103
Fev .5	---	1.25	---	FVC Time	---	2.34	---
Fev3	2.74	2.39	87	Exp Time	---	0.05	---
FIFR	---	3.49	---	Lung Age	42	50	---
FEF 75-85	---	0.86	---				

Recorders & Medicare Systems Pvt. Ltd. 0172-2558701-05 URL:www.rmsindia.com

INTERPRETATION  
Mild Obstruction  
%FEV1/FVC < 95 & %FVC > 80

C.O.P.D. Severity  
Test within normal limits

Interpretation Set:  
Indian Pred. Eqns.  
Sign : .....  
Dr. DR K R SARMAH



Name : Mr. RAKESH YADAV      Age : 42Yr 0Mth 1Days      Gender : Male  
UHID : AHLG.0000859308 / AHLGAH1737      W/BNo/RefNo : AHC  
SIN/ILRN : 120860297 \ 9363888  
Specimen : Others  
Ref Doctor : Dr. Apollo HealthCheckup



Collected on : 22-MAR-2023 05:15:00 PM    Received on : 22-MAR-2023 05:16:44 PM    Reported on : 03-APR-2023 05:42:23 PM

### Workmen Medical Health Checkup

TEST NAME	RESULT
AFB STAINING	
AFB Smear	No AFB seen
Report Status:Final	

KINDLY CORRELATE RESULTS WITH CLINICAL FINDINGS.

\* END OF REPORT \*

DOB : 21-MAR-1981  
PassportNo:



CHECKED BY : 1078435

Printed On : 17-APR-2023 01:39:19 PM

DR. DEBA JYOTI LAHON  
CONSULTANT

### CONSULTANTS

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- DR. A. VERMA, DCP      DR. M. BARMAN, MD      DR. D.J. LAHON, MD (MICRO)      DR. M. SARMA, MD (MICRO)

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**CSR Initiatives**

Sn	CSR activity	Project location	Block	District	Benefits from project activity	Spending (in lac)
1	40 Solar street lights were installed (SSL-15W)	Thangskai village (37 nos), PHC Lumshnong premises (3 nos)	Wapung C&RD block	East Jaintia Hills	Safe movements during post sunset hours. Safety of assets from theft/damage More economic activities. Less maintenance cost. Regular power supply when load-shedding. <b>No harm to environment.</b>	5.46
2	Refurbishment of Community Buildings/Infrastructures (Community hall, Lower Primary School building, Angwanwadi centre, consutuction of boundary wall)	Thangskai village	Wapung C&RD block	East Jaintia Hills	Increase in attendance in school, Anganwadi centre & help school to improve quality of education, address dropout issues. The community hall can be used for village meetings, awareness programs, training sessions, community engagement events. The boundary wall may will ensure safety of <b>community assets.</b>	1.95
3	Construction of Entrance Gate	Thangskai village	Wapung C&RD block	East Jaintia Hills	Enhance safety to community infrastructures (viz. <b>community halls, school, assets</b> )	1.25
4	Free Health Checkup Camp	Thangskai village	Wapung C&RD block	East Jaintia Hills	Participants received free medicines following free health checkup and consultation Awareness on health issues, precautionary measures, institutional delivery, hygiene and sanitation among general public Goodwill among local population about company	0.16
5	Health awareness, immunization and covid-19 vaccination program in collaboration with PHC Lumshnong	Wahiajer	Wapung C&RD block	East Jaintia Hills	The awareness session was witnessed by above 40 individuals, 9 children from below 5 years, 8 pregnant women were provided necessary assistance/medicines/vaccines under immunization program	0.03
6	Malaria eradication program in collaboration with PHC Lumshnong	Mynkre, Shymplong	Wapung C&RD block	East Jaintia Hills	100 poor households received free insecticide treated mosquito nets, that may help preventing malaria.	0.40
7	Common Service Lab (Digital Literacy program) in collaboration with HP	Lumshnong	Wapung C&RD block	East Jaintia Hills	71 participants completed their certificate course (Apr'22 – Oct'22). In addition to digital literacy training, The Common Service Lab is used for awareness generation sessions, training programs for farmers, SHG members, rural health workers.	2.83
8	Community engagement event – World Environment Day Celebration	Lumshnong, Thangskai	Wapung C&RD block	East Jaintia Hills	Observation of WED helps sensitizing people about taking effective steps to protect environment by way of planting trees, minimizing usage of single use plastics, shifting to clean energy sources for lighting and cooking purposes, proper segregation and disposal of wastes.	0.04
9	Community engagement event – Azadi Ka Amrit Mahotsav Celebration (Har ghar tiranga campaign, distribution of flags, competitions among student/ rural people)	Thangskai, Lumshnong, Umlong	Wapung C&RD block	East Jaintia Hills	Community also contributed in nationwide celebration of Azadi Ka Amrit Mahotsav. Community engagement events help keeping connect with nearby communities and maintaining cordial relationship	0.12
10	Community engagement event – Children Day Celebration (Awareness session among children, Sports/painting/drawing competitions)	Thangskai	Wapung C&RD block	East Jaintia Hills	Children get opportunity to participate in extra curricular activities.Increase participatory motive among children. Community engagement events help keeping connect with nearby communities and maintaining cordial relationship	0.09
11	Promotion of Agri-nutri Garden and Training of Self Help Groups on Agriculture Activities in collaboration with District Agriculture Dept-GoM	Moosianglamare new	Wapung C&RD block	East Jaintia Hills	Farmers to apply scientific approach to do agriculture activities. Farmers to get improved seeds, bio-fertilizers at subsidized rate. Organic agriculture produces. Fulfilling nutritional need of family. Additional income by selling surplus produces. Goodwill about company among community	0.45
12	Financial Literacy Camps with Self Help Groups in Collaboration with Meghalaya State Rural Livelihood Society (Ongoing Activity)	Thangskai Wahiajer Chiehruhpi Umlong	Wapung C&RD block	East Jaintia Hills	Linkage of women participants to financial institutions, social security schemes Women participants get easy access to financial assistance, loans at lowest interest rate. Understanding about savings, budgeting, economic activities. Initiation of income generation activities by women participants.	0.5
<b>Total</b>						<b>13.3</b>