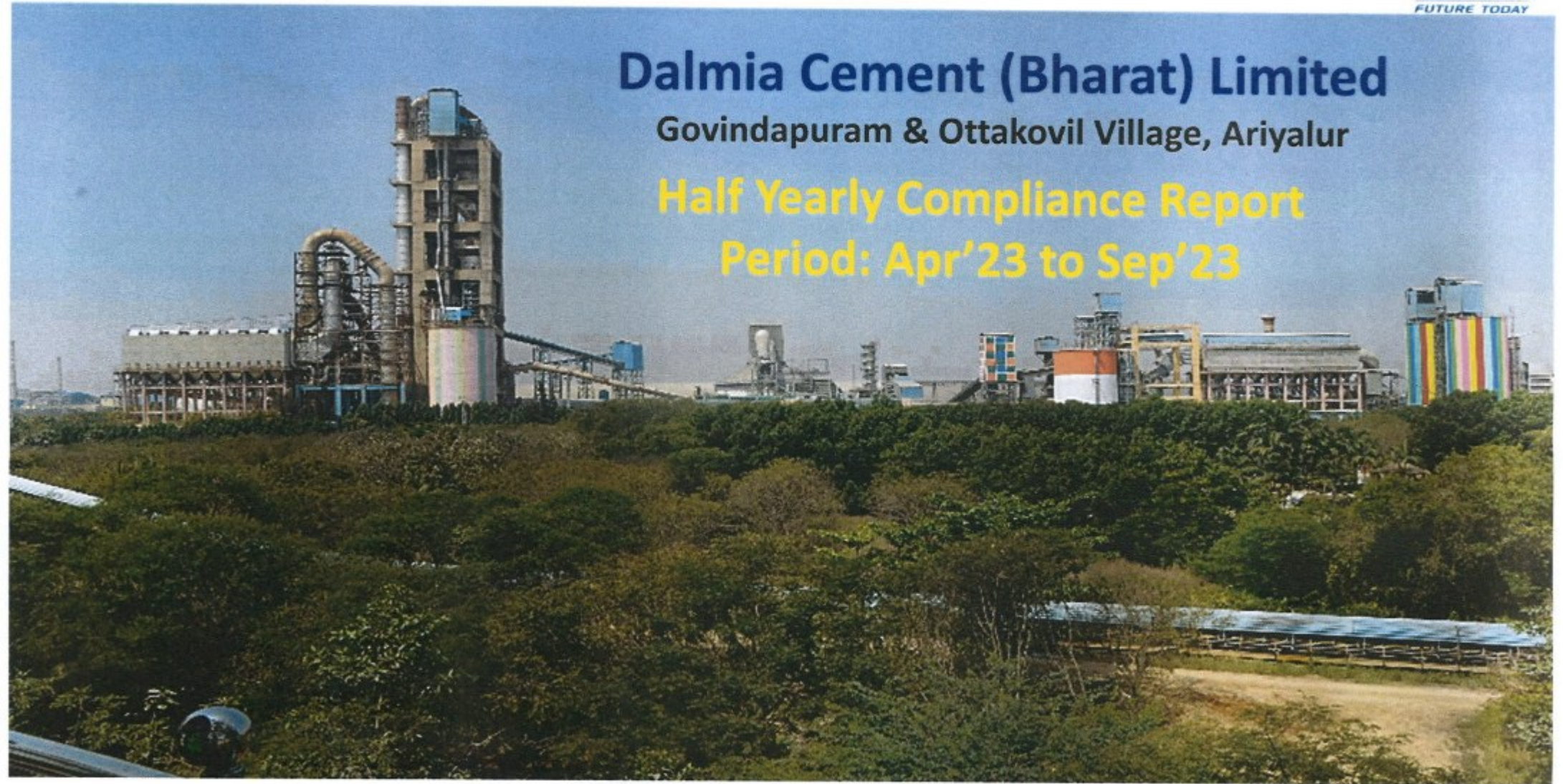


# Dalmia Cement (Bharat) Limited

Govindapuram & Ottakovil Village, Ariyalur

Half Yearly Compliance Report

Period: Apr'23 to Sep'23



To  
**The Director**  
Ministry of Environment, Forest and Climate Change  
Integrated Regional Office,  
1<sup>st</sup> Floor, Additional Office Block for GPOA,  
Shastri Bhawan, Haddows Road, Nungambakkam,  
Chennai – 600 006.

Respected Sir,

**Sub:** Half Yearly Environmental Clearance Compliance Report – Apr'23 to Sep'23 of Dalmia Cement (Bharat) Limited, Govindapuram and Ottakovil Village, Ariyalur.

**Ref:** F.No J-11011/751/2007-IA II(I), dated 19.06.2008.

We hereby submit the Half yearly environmental clearance compliance report for “**Cement & Captive Power Plant**” along with the following annexures for the period from April 2023 to September 2023.


- a) Summary report of Stack emission & Noise monitoring – Annexure: 1
- b) Summary of Ambient air quality – Annexure: 2
- c) Ambient Air quality survey report from NABL accredited lab – Annexure:3
- d) Green belt development & Solar Plant – Annexure: 4
- e) Ground water clearances from State Ground and Surface Water Resources Data Centre – Annexure: 5
- f) CSR activities – Annexure: 6
- g) Environmental Clearance published in Newspapers – Annexure: 7
- h) Stack emission real time data display in entry gate – Annexure: 8
- i) Awards & Accolades – Annexure: 9

Kindly acknowledge the receipt of the same.

Thanking you

Yours faithfully

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

  
**T Robert**  
Unit Head

**Encl:** As stated above.

**CC:** 1. The Joint Chief Environmental Engineer, TNPCCB, Trichy – 620 015.  
2. The District Environmental Engineer, TNPCCB, Ariyalur – 621 707.

## Dalmia Cement (Bharat) Limited, Ariyalur

Status of compliance stipulated in Environmental Clearances  
(For the period of April 2023 to September 2023)

Ref: MoEF Letter No J-11011/751/2007-IA II (I) dated 19<sup>th</sup> June, 2008

Sl. No	Conditions	Compliance
<b>A</b>	<b>Specific Conditions</b>	
i	Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided and limit of SPM shall be controlled by installing adequate air pollution control system Viz. Electrostatic precipitator (ESP) to cooler and captive power plant and bag house /bag filters etc. to other plants within 50 mg/Nm <sup>3</sup> from the cement plant and 100 mg/Nm <sup>3</sup> from captive Power Plant and data submitted to the Ministry's regional office at Bangalore, TNPCB and CPCB regularly. Raw meal, Clinker and fly ash shall be stored in silos.	Complied with. Installed Online Continuous Emission Monitoring Systems in all stacks (Cement mill, Coal mill, Cooler, Raw mill/kiln & Boiler of power plant), Gaseous monitoring system in Raw mill/Kiln stack & Power Plant and following air pollution control systems were installed & maintained to control the emission levels well within the limits of 30 & 50 mg/Nm <sup>3</sup> ; 1. Cement mill - Bag house, 2. Kiln/Preheater - Bag house, 3. Coal mill - Bag house 4. Cooler - ESP & 5. CPP- ESP. Stack monitoring is being carried manually every month and Quarterly through NABL accredited labs and half yearly by TNPCB. The Monitoring report is being submitted regularly to MoEF on half yearly basis & to TNPCB on monthly basis. Raw meal, clinker and dry fly ash were stored in concrete silos. Refer Annexure: 1 for Ambient Air Quality, Fugitive Emission & Stack emission report from NABL accredited lab.
ii	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/code of practice issued by the CPCB in this regard should be followed. The Company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw material handling (unloading, conveying, transporting, stacking), Vehicular movement, bagging and packing areas etc. Asphaltting/concreting of roads and water spray all	Complied with. Secondary fugitive emissions are controlled by providing closed conveyors and storage sheds. Quarterly fugitive emission monitored through accredited labs. Fugitive emission guidelines issued by CPCB is been complied with. Dust extraction system provided at transfer points, raw material handling (Unloading, conveying, transporting, stacking) and Cement packing areas to control fugitive dust. Water sprinkling carried out around stockyard, loading & unloading area, haul roads and other predominant places to control fugitive dust. Road sweeping carried out through sweeping machines daily. Also vacuum sweeping machines is being used for sweeping spilled cement on shop floor and recycled back. Covered sheds provided for raw materials like

	around the stockyard and loading /unloading areas shall be carried out to control fugitive emissions. Covered sheds for storage of raw materials and fully covered conveyors for transportation of materials shall be provided.	crushed limestone, Coal, petcoke, Alternative fuels, Fire clay, gypsum and wet Fly ash. Raw meal, Clinker, Cement & dry Fly ash are stored in silos with bag filters. All belt conveyors were fully closed.
iii	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land.	Complied with. We are getting limestone from Perianagalur, Kallakudi, Kavandukuruchi and Periyathirukonam mines and the transportation enroute has some agricultural lands and settlements. However, so far no complaints have been received from villages. Also, all the raw materials vehicles are covered with tarpaulin cover during transportation.
iv	Total ground water requirement shall not exceed 2,500 m <sup>3</sup> /day. No surface water shall be used. All the treated wastewater treated in a neutralized plant shall be recycled and reused in the cement Plant for cooling purpose and/or for dust suppression, green belt development and other plant related activities etc. No process Waste water shall be discharged outside the factory premises and zero discharge shall be adopted. Domestic treated effluent shall be used for greenbelt development within the plant and colony area.	Complied with. The total ground water requirements not exceed 2500 m <sup>3</sup> /day and the present water consumption is 1600 m <sup>3</sup> /day. No surface water is used for the plant operations. Treated waste water from the neutralization plant is recycled back into cement process and also in dust suppression. Domestic waste water generated is treated in the STP and treated water is used for gardening purpose. No process water is discharged outside and Zero discharge condition is maintained.
v	Permission for the drawl of 2,500 m <sup>3</sup> /day ground water shall be obtained from the state Ground Water Board/Central Ground Water Authority (SGWB/CGWA) and all the recommendations of the SGWB/ CGWA shall be followed	Complied with. Permission for Ground water withdrawal for 1620 m <sup>3</sup> obtained from State Ground and Surface water resources data center, valid still 21.02.2024.
vi	All the cement dust collected from pollution control devices like ESPs, bag house, bag filters etc. shall be recycled and reused in the process and used for cement manufacturing Fly Ash from Captive power plant shall be used for manufacturing Pozzolana Portland Cement (PPC). Bottom ash shall be used as boiler bed material. Refractory bricks shall	Complied with Cement dust collected from pollution control devices is recycled back in the process. Fly ash from Captive Power Plant is used for making PPC. The bottom ash is collected in form of dry ash and the same is completely used in cement manufacturing. Some portion of refractory bricks is used for garden decoration, developing internal roads and also sold to recyclers.

	be disposed off in environment-friendly manner. ETP Sludge shall be disposed off at landfill site. STP Sludge shall be used as manure for green belt development. Waste oil and grease and scrapped automobiles batteries shall be sold to authorized recyclers/re-processors only.	No ETP sludge is generated as neutralization method is adopted and sludge generated from STP is used as manure for green belt development. Used oil & grease generated from the process is collected and disposed to the authorized recyclers and used lead acid batteries is been send back to the manufacturers.	
vii	The Project authorities shall adhere to the provisions stipulated in the fly ash Notification, 1999 as amended in 2003.	Complied with. All the fly ash generated from Captive Power Plant is completely used in the cement manufacturing process.	
viii	Efforts shall be made to use fly ash maximum in making Pozzolana Portland cement (PPC)	Complied with. The entire fly ash generated is used in the cement manufacturing process. Percentage of fly ash used in PPC for FY 23-24 is 34.2%.	
ix	An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly	Complied with. Installed Full fledged alternative fuel feeding system for Co-Processing Hazardous/Non-hazardous waste in Kiln with Trommel screen, Shredders, Magnetic separators, Screen, Extractor and closed belt feeding systems. Presently, co-processing Non-Hazardous waste like Plastics, Refuse Derived Fuel, Dry municipal waste, foot ware waste, Biomass, Rubber waste etc and Hazardous waste like Textile ETP Sludge, Oil rags & Solid waste mix from Pre-processing vendors in Cement kiln by getting necessary authorization from TNPCB.	
x	Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.	Complied with. Low grade Limestone is blended with High grade limestone and used for Cement manufacturing. Also, co-processing Textile ETP sludge as an alternative raw material for replacement of limestone. Maximum quantity of fly ash is used for manufacturing Pozzolana Portland cement. Further, high calorific value hazardous & non-Hazardous wastes co-processed in the cement kiln.	
xi	As proposed, green belt shall be developed in 33% area in and around the project site as per as the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO	Complied with. More than 34% of the total area is covered with Green belt. As of Sep'23, 68,936 nos of trees were maintained inside the plant premises in consultation with local DFO initially and with 96% survival rate.	
xii	All recommendations made in the Corporate Responsibility for Environment Protection (CREP)	Complied with.	
		S.No	Conditions
		1	Cement Plants, Air Pollution Control

	<p>for cement plants shall be implemented.</p>	<p>which are not complying with notified standards, will do the following to meet the standards:</p> <ul style="list-style-type: none"> <li>• Augmentation of existing Air Pollution Control Devices-by July 2003</li> <li>• Replacement of existing Air Pollution Control Devices-by July 2004</li> </ul>	<p>Devices installed &amp; maintained in order to meet the emission norms of &lt;30 mg/Nm<sup>3</sup>. Regular checking of Bags is carried out based on the DP value and if any damage is observed, it is replaced immediately. Also, during every shutdown/stoppage, Bag house chambers is inspected and maintained.</p> <p>In FY 23-24, replaced all the chamber bags, Thimbles and tube sheets in Raw mill/Kiln &amp; Coal mill Bag houses. All Emitting &amp; Collecting Electrode replaced in cooler first ESP field and additional ESP field installed in Cooler. Four Chambers Bags replaced in Cement mill.</p>
	<p>2</p>	<p>Cement Plants located in critically polluted or urban areas (including 5km distance outside urban boundary) will meet 100 mg/Nm<sup>3</sup> limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm<sup>3</sup></p>	<p>The particulate emissions from pollution control equipment's designed to meet the emission norms of &lt;30 mg/Nm<sup>3</sup>. Regular checking of Bags is being carried out based on the DP value and if any damage is observed, it is replaced immediately. Also, during every shutdown/stoppage, Bag house chambers is inspected and</p>

			maintained.
3	The new cement kilns to be accorded NOC/Environmental Clearance w.e.f 01.04.2003 will meet the limit of 50 mg/Nm <sup>3</sup> for particulate matter emissions	The particulate emissions from pollution control equipment's is within the emission norms of <30 mg/Nm <sup>3</sup> .	
4	CPCB will evolve load based standards by December 2003.	The Load based emission for Particulate matter from Raw mill, kiln and pre-calciner system put together is less than 0.125 kg/ton of clinker.	
5	CPCB and NCBM will evolve SO <sub>2</sub> and NO <sub>x</sub> emission standards by June 2004	The emissions levels of NO <sub>x</sub> and SO <sub>2</sub> are well within the standards proposed by CPCB. We also installed Duoplex burner (low NO <sub>x</sub> ) in kiln main stack	
6	The Cement industries will control fugitive emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF will submit its recommendations within three months.	The fugitive emission is controlled by following initiatives, 1. Most of the area including raw material handling area covered with RCC pavement and road sweeping carried out using sweeping machines. 2. All transfer points are fully closed and fugitives controlled by water spraying or extraction to Bag filters. 3. Covered sheds provided for Raw materials like crushed limestone, Imported Coal, petcoke, Alternative fuels, Lignite, Wet Fly ash	

		<p>and Gypsum</p> <p>4. Raw meal, Clinker, Cement and dry fly ash stored in Silos with bag filters.</p> <p>5. Cement packing rotors/machines equipped with dust extraction system with adequate ventilation.</p> <p>Also, we complied with respect to the CPCB guidelines on fugitive emission control vide PROBES/118/2007. dated 06.07.2007.</p>
7	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in cement kiln by July 2003.	We are using imported/domestic pet coke in the manufacturing process by obtaining necessary permission apart from imported coal and Lignite as a fuel in cement kiln.
8	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring systems (CMS) by December 2003	The Continuous Emission and Effluent monitoring systems has been installed and readings are connected to TNPCB CAREAIR Centre, Chennai & also to CPCB Server through online. Further, the analyzers are calibrated regularly with respect to their functioning, drift, linearity as per the CPCB guidelines. Last Performance calibration of CEMS carried out in Sep'23.
9	Tripping in Kiln	Tripping of ESP is

RP



		ESP to be minimized by July 2003 as per the recommendations of NTF	minimized by taking all the necessary precautions like water spraying on flue gas and interlocking system with fan main drive.
		10 Industries will submit the target date to enhance the utilization of waste material by April 2003.	Every monthly the quantity co-processed in kiln is being intimated to TNPCB and yearly to CPCB. Installed Alternative fuel feeding system consisting of Trommel Screen, Shredders, Magnetic separator, Extractor, hopper, Closed belt conveyor with all safety system. Co-processing emission monitoring carried out with NABL accredited labs half yearly & reports are submitted to TNPCB.
		11 NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003	High Calorific Hazardous and non-hazardous waste is co-processed/co-incinerated in the cement kiln.
		12 Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	Entire cooler hot gas is being used to dry raw materials in vertical raw mill as well as in the vertical cement mill.
xiii	Recommendation of the state forest department regarding impact of proposed plant on surrounding reserve forests Viz. Vannankurichchi RF (9.5Km, E), Sedalaradi RF (14Km, NE), Manager RF(13Km, ESE), Vilangudi RF (14Km, SE) shall	Complied with.	District forest officer had given NOC stating that there is no rare, endangered or threatened species of the plant and animals in or near the reserved forest. As per discussion with Forest department, the following plants viz Neem, Gulmohar, Casualina, Pungamia Glubra, Cassia, Bouhiania, etc were planted in our plant premises.

	be obtained and implemented	
xiv	No operation of the cement plant shall be carried out till the environmental clearance for the mining project is obtained from the ministry of environment and forests and a copy submitted to the ministry's regional office at Bangalore.	Complied with. The Cement plant is commissioned only after obtaining the environmental clearance for Limestone mines. The required limestone is sourced from own mines located at various locations and there is no single captive mine for this project.
<b>B</b>	<b>General Conditions</b>	
i	The Project authority shall adhere to the stipulations made by T.N. Pollution control Board (TNPCB) and State Government.	Complied with. All the stipulations made by Tamil Nadu Pollution Control Board and State Government is complied.
ii	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry	Noted and complied with. As per MoEF&CC S.O 980(E) dated 21.03.2021, uploaded the information on PARIVESH Portal on 25.06.2021 & 05.02.2023 for 'No increase in Pollution Load' towards modernization and upgradation of Cement plant for production of Clinker from 2.0 to 2.5 MTPA and Cement from 3.0 to 4.0 MTPA and obtained acknowledgement with Single Window No. SW/1545/2021 & SW/2407/2023 respectively. Further, No Increase in Pollution Load Certificate obtained from TNPCB Pollution Load Assessment Committee vide Lr. No T4/TNPCB/F.0038/ARY/2021, dated 11.03.2022 and amendment Lr.No: T1/TNPCB/F.005599/ARY/Dalmia/2023, dated: 25.07.2023. Accordingly, Consent to Establishment obtained from TNPCB under Air and Water act and modernization & upgradation work is being carried out.
iii	The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the T.N. Pollution control Board. At no time, the particulate emissions from the cement plant shall exceed TNPCB limit. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.	Complied with. Online Emission Monitoring system is installed in all stacks and the monitored data is directly transmitted to Care Air Centre, TNPCB & CPCB. The Gaseous and particulate emissions from all the stacks are well within the prescribed norms. All necessary precautions like maintenance of Bag filters have been taken to ensure that the particulate emissions are within the prescribed limits. Interlock facilities provided. If the emission level of Raw mill/kiln, Cooler, Coal mill, Cement mill, CPP boiler goes above the prescribed norms, the ID fans gets tripped automatically and the unit will be tripped.
iv	One ambient air quality monitoring station shall be	Complied with. Continuous Ambient Air Quality Monitoring

	<p>installed in downward direction. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the state authorities. Monitoring of ambient air quality and stack emissions shall be carried out regularly in consultation with TNPCB and report submitted to the TNPCB quarterly and to the Ministry's Regional office at Bangalore - Half yearly</p>	<p>Stations have been installed in downwind, leeward and Cross wind direction. Necessary precautions like water spraying, regular cleaning of roads through sweeping machines carried out to control dust levels. Acoustic enclosures provided to control noise levels. Ambient noise, ambient air and stack emission monitoring is being monitored Quarterly through accredited labs. The Monitoring report is being submitted regularly to MoEF on half yearly basis &amp; to TNPCB on monthly basis.</p>
v	<p>The company must harvest the rain water from the rooftops and storm water drains to recharge the ground water and use the same water for the various activities project to conserve fresh water.</p>	<p>Complied with. Roof top rain water harvesting structures provided as well as storm water drainage facilities to recharge ground water. The storm water is routed to two rain water harvesting pond (Logistic pond: 44000 m<sup>3</sup> and Enviro park 9000 m<sup>3</sup>) of total capacity 53000 m<sup>3</sup>. In addition to this, two recharge shafts bore well were constructed near logistic Rain water harvesting pond and Raw mill bore well area. The harvested rain water is used for Green belt development and dust suppression activities.</p>
vi	<p>The company shall undertake eco-development measures including community welfare measures in the project area.</p>	<p>Complied with. Eco development measures like de-silting of village ponds, check dams, Provision of Drinking water facility, Sanitation, Community cleaning and Rain water harvesting structures in schools carried out in nearby community. For community welfare measures, medical camps, fuel efficient stoves, solar lanterns, Livelihood development through skill trainings and awareness in schools &amp; Villages carried out regularly.</p>
vii	<p>The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all source of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (protection) Act, 1986 Rules, 1989 viz 75 dBA (day time) and 70 dBA (night time).</p>	<p>Complied with. Overall noise levels in and around the plant area are well within the TNPCB norms. Acoustic hoods and silencers provided in the noise generating equipment's. Ambient noise levels are being monitored internally every month and Quarterly once through external laboratory during day &amp; night time and the levels are within the prescribed limits. Refer Annexure: 1 for the Noise monitoring report.</p>
viii	<p>Adequate rainwater harvesting measures shall be adopted to</p>	<p>Complied with. Roof top rain water harvesting structures provided</p>

	recharge the ground water.	as well as storm water drainage facilities to recharge ground water. The storm water is routed to two rain water harvesting pond (Logistic pond: 44000 m <sup>3</sup> and Enviro park 9000 m <sup>3</sup> ) of total capacity 53000 m <sup>3</sup> . In addition to this, two recharge shafts bore well were constructed near logistic Rain water harvesting pond and Raw mill bore well area.
ix	Proper housekeeping and adequate occupational health programmes shall be taken up	Complied with. Good housekeeping practice followed and the same is monitored through daily checklist, monthly audits by zone members and top management and quarterly SHE audits. Various Occupational health programmes and awareness campaign like yoga, personal and industrial hygiene, food habits, hand washing, health tips, first aid training, medical camp, fitness etc carried out and records are maintained.
x	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	Complied with. A full fledge separate environmental cell is in place with two qualified environments professional and a Horticulturist under the direct supervision of Unit Head. Also, formed department wise SPOC's persons to monitor the Environmental aspects/impacts for taking effective corrective measures through Environment Management programme (EMP).
xi	As proposed, Rs.17.45 Cores and Rs.4.85 Crores/annum shall be earmarked towards the capital cost and recurring cost/annum earmarked for environment pollution control measures and judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the state Government. The funds so provided shall not be diverted for any other purposes.	Complied with. Capital cost invested for the pollution control measures is 45 crores. Every year, for environmental protection budget is allotted and wisely spent. In FY 23-24, around 146.58 lakhs utilized as recurring cost for general activities and around 184.4 Crores towards environment & Energy improvement capex projects. Also, additional funds are being allocated separately for implementing the conditions stipulated by MoEF & PCB from time to time. The funds provided for environmental pollution control measures is not be diverted for other purpose
xii	The regional Office of this Ministry at Bangalore / CPCB / TNPCC shall monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Complied with. Half yearly compliance report is being submitted to MoEF Regional office & TNPCC. The last compliance report was submitted vide our letter no ARY/MoEF/Cement & CPP/EC/23-24/27, dated 25.05.2023.

xiii	The project authorities shall inform the Regional Office as well as Ministry, the date of Financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied with. Term loan sanctioned on 25.08.2008 & ECA sanctioned on 06.11.2008. For Cement plant, Date of commencement: 28.07.2008 & commissioning: Feb 2009. For Captive Power plant, Date of commencement: 10.09.2008 & commissioning: Aug 2010
ivx	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the T.N. Pollution control Board / Committee and may also be seen at website of the Ministry of Environment and 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 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 Bangalore.	Complied with. Environmental clearance had been submitted to TNPCB office and also available in the website of the Ministry of Environment and Forests.  Advertisement regarding obtaining of Environment clearance had been published in The Hindu paper and Local Tamil newspaper (Dinamani) on 01/07/08 and same has been submitted to MoEF regional office.
<b>Additional conditions issued by MoEF on 06.04.2011, Ref.No: J-11013/41/2006-IA. II(I)</b>		
i	Continuous monitoring of stack emissions as well as ambient air quality (as per notified standards) shall be carried out and continuous records maintained. Based on the monitored data, necessary corrective measures as may be required from time to time shall be taken to ensure that the levels are within permissible limits. The results of monitoring shall also be submitted to the respective Regional office of MoEF regularly. Besides, the results of monitoring will also be put on the website of the company in the public domain.	Installed Continuous Emission Monitoring System in all stacks for monitoring particulate emission and three nos of Continuous Ambient Air Quality Monitoring System. The online monitoring data is connected to the CARE AIR, TNPCB and to CPCB server. The data are being monitored daily and the emission levels are well within the limits. Also, manual monitoring report is being submitted half yearly to MoEF regional office & the compliance report along with monitoring results are uploaded in our website. The real time data is displayed at the main gate.
ii	The six-monthly monitoring reports as well as the monitored data on various parameters as stipulated in the environment	We are updating the compliance condition stipulated in Environment clearance regularly in the website. Website address: <a href="http://www.dalmiacement.com">www.dalmiacement.com</a> (under

	clearance conditions shall be put on the website of the company and also regularly updated. The monitored data shall also be submitted to respective state pollution control board/UTPCCs and the regional office of MoEF.	Sustainability tab click Environmental Clearances and compliances for plant). Also, the monitoring data is submitted to TNPCB on monthly basis & MoEF on half yearly regularly.
iii	The ambient air quality data as well as the stack emission data will also be displayed in public domain at some prominent place near the main gate of the company and updated in real time.	Real time Online monitoring data's is displayed in Public domain at the Main gate of the plant.

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# Annexure - 1

# ANNEXURE - 1

## Dalmia Cement (Bharat) Limited



### Ariyalur Plant

Department : Environment

Plant - Cement & CPP

#### SUMMARY REPORT OF STACK EMISSION (PM)

PERIOD: Apr 2023 - Sep 2023

UNIT - mg/Nm<sup>3</sup>

Month	Kiln/Raw mill		Clinker cooler		Coal mill		Cement mill		Boiler ID fan	
	Observed Level	Norms	Observed Level	Norms	Observed Level	Norms	Observed Level	Norms	Observed Level	Norms
Max	27.4	30	26.2	30	19.3	30	27.3	30	35.6	50
Min	9.7		20.4		7.8		18.6		10.8	
Avg	19.3		23.2		12.4		24.6		21.7	
St. Deviation	6.8		2.4		4.3		3.1		12.7	

#### SUMMARY REPORT OF STACK EMISSION (SO<sub>2</sub> & NO<sub>x</sub>)

PERIOD: Apr 2023 - Sep 2023

UNIT - mg/Nm<sup>3</sup>

Month	SO <sub>2</sub> Emission				NO <sub>x</sub> Emission			
	Kiln/Raw mill		Boiler ID fan		Kiln/Raw mill		Boiler ID fan	
	Observed Level	Norms	Observed Level	Norms	Observed Level	Norms	Observed Level	Norms
Max	12.0	100	90.2	600	568.0	800	190.6	300
Min	1.0		22.6		298.0		154.6	
Avg	4.7		66.4		416.2		175.2	
St. Deviation	4.3		38.0		126.1		18.6	

#### SUMMARY OF NOISE MONITORING REPORT

PERIOD: Apr 2023 - Sep 2023

UNIT - dB (A)

DAY & NIGHT TIME

Month	Northeast Boundary (Near CPP)		Southeast Boundary (Near crusher Transport system)		Southeast Boundary (Near Limestone stacker)		Northwest Boundary (Near substation)		Permissible Limit	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Max	52.4	43.2	52.6	42.5	52.8	42.1	53.4	43.4	55	45
Min	50.1	40.6	50.1	40.3	50.1	40.1	50.2	40.3		
Avg	51.3	42.6	51.5	41.3	51.4	41.1	51.5	42.2		
St. Deviation	0.9	1.0	1.0	0.8	1.1	0.7	1.3	1.1		

**B.R. Prasannakumar**  
 Senior Manager - Environment



Month	Kiln/Raw mill	Clinker cooler	Coal mill	Cement mill	Boiler ID fan	Norms for Cement / CPP
Apr-23	21.1	23.8	11.5	18.6	Not in Operational	30/50
May-23	27.4	21.3	19.3	24.5	Not in Operational	30/50
Jun-23	Not in Operational	Not in Operational	Not in Operational	25.6	Not in Operational	30/50
Jul-23	15.8	24.5	7.8	26.1	10.8	30/50
Aug-23	9.7	20.4	12.5	27.3	35.6	30/50
Sep-23	22.6	26.2	10.8	25.6	18.8	30/50
Max	27.4	26.2	19.3	27.3	35.6	30/50
Min	9.7	20.4	7.8	18.6	10.8	
Avg	19.3	23.2	12.4	24.6	21.7	
St. Deviation	6.8	2.4	4.3	3.1	12.7	

Month	Kiln/Raw mill	Clinker cooler	Coal mill	Cement mill	Boiler ID fan	Norms for Cement / CPP
Apr-23	1.0	BDL	5.8	BDL	Not in Operational	100/600
May-23	1.8	BDL	8.2	BDL	Not in Operational	100/600
Jun-23	Not in Operational	Not in Operational	Not in Operational	BDL	Not in Operational	100/600
Jul-23	4.5	BDL	10.4	BDL	22.6	100/600
Aug-23	12.0	BDL	16.4	BDL	86.5	100/600
Sep-23	4.2	BDL	14.6	BDL	90.2	100/600
Max	12.0	0.0	16.4	0.0	90.2	100/600
Min	1.0	0.0	5.8	0.0	22.6	
Avg	4.7	BDL	11.1	BDL	66.4	
St. Deviation	4.3	0.0	4.4	0.0	38.0	

Month	Kiln/Raw mill	Clinker cooler	Coal mill	Cement mill	Boiler ID fan	Norms for Cement / CPP
Apr-23	380.0	BDL	30.6	BDL	Not in Operational	800/300
May-23	305.0	BDL	24.4	BDL	Not in Operational	800/300
Jun-23	Not in Operational	Not in Operational	Not in Operational	BDL	Not in Operational	800/300
Jul-23	530.0	BDL	20.6	BDL	154.6	800/300
Aug-23	568.0	BDL	18.4	BDL	190.6	800/300
Sep-23	298.0	BDL	10.4	BDL	180.4	800/300
Max	568.0	0.0	30.6	0.0	190.6	800/300
Min	298.0	0.0	10.4	0.0	154.6	
Avg	416.2	BDL	20.9	BDL	175.2	
St. Deviation	126.1	0.0	7.5	0.0	18.6	

## Dalmia Cement (Bharat) Limited

### Ariyalur Plant

Month	ANQS dB (A) Locations for Apr 2023 - Sep 2023												Permissible Day/Night
	Northeast Boundary (Near CPP)		Southeast Boundary (Near crusher Transport system)		SouthWest Boundary (Near Limestone stacker)		Northwest Boundary (Near substation)						
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
Apr-23	51.2	40.6	52.6	41.9	52.8	41.2	53.4	42.4					55/45
May-23	52.4	43.1	51.3	40.5	50.6	40.1	50.2	43.4					55/45
Jun-23	51.6	42.8	50.8	41.1	50.1	40.6	52.1	42.5					55/45
Jul-23	52.1	43.2	51.6	40.3	50.6	41.3	50.4	41.8					55/45
Aug-23	50.6	42.6	50.1	41.2	52.4	41.5	52.3	42.8					55/45
Sep-23	50.1	43.1	52.4	42.5	52	42.1	50.8	40.3					55/45
Max	52.4	43.2	52.6	42.5	52.8	42.1	53.4	43.4					
Min	50.1	40.6	50.1	40.3	50.1	40.1	50.2	40.3					55/45
Avg	51.3	42.6	51.5	41.3	51.4	41.1	51.5	42.2					
St. deviation	0.9	1.0	1.0	0.8	1.1	0.7	1.3	1.1					

# Annexure - 2

**ANNEXURE - 2**

**Dalmia Cement (Bharat) Limited  
Ariyalur Plant**



Department : Environment

Plant - Cement & CPP

SUMMARY REPORT OF AMBIENT AIR QUALITY  
PARTICULATE MATTER (PM<sub>10</sub>)  
PERIOD: Apr 2023 - Sep 2023  
UNIT - µg/m<sup>3</sup>

Month	Eastern Boundary near HR building	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stacker	Western boundary near 110KVA substation	NW - Boundary compound wall	NE - Boundary near CPP	Permissible Limit
Max	84.6	80.2	80.1	83.1	85.8	78.4	100
Min	76.2	74.3	75.2	79.5	80.8	73.2	
Avg	79.9	77.3	77.4	80.9	83.4	76.6	
St. Deviation	3.1	2.5	2.1	1.4	2.0	2.0	

SUMMARY REPORT OF AMBIENT AIR QUALITY  
PARTICULATE MATTER (PM<sub>2.5</sub>)  
PERIOD: Apr 2023 - Sep 2023  
UNIT - µg/m<sup>3</sup>

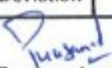
Month	Eastern Boundary (Weigh bridge)	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stacker	Western boundary near substation	NW - Boundary compound wall	NE - Boundary near CPP	Permissible Limit
Max	38.5	34.4	33.1	38.4	39.3	31.5	60
Min	31.2	29.2	29.6	30.2	32.1	27.4	
Avg	34.0	31.9	31.7	33.8	35.5	29.7	
St. Deviation	2.5	1.7	1.4	2.9	2.9	1.5	

SUMMARY REPORT OF AMBIENT AIR QUALITY  
SULPHUR DIOXIDE (SO<sub>2</sub>)  
PERIOD: Apr 2023 - Sep 2023  
UNIT - µg/m<sup>3</sup>

Month	Eastern Boundary near HR building	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stacker	Western boundary near 110KVA substation	NW - Boundary compound wall	NE - Boundary near CPP	Permissible Limit
Max	28.2	29.1	28.0	27.6	27.8	30.2	80
Min	20.2	21.1	21.5	22.4	22.6	21.6	
Avg	23.1	23.3	23.3	24.1	25.3	24.3	
St. Deviation	3.1	3.0	2.4	1.8	2.3	3.1	

SUMMARY REPORT OF AMBIENT AIR QUALITY  
NITROGEN DIOXIDE (NO<sub>x</sub>)  
PERIOD: Apr 2023 - Sep 2023  
UNIT - µg/m<sup>3</sup>

Month	Eastern Boundary (Weigh bridge)	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stacker	Western boundary near substation	NW - Boundary compound wall	NE - Boundary near CPP	Permissible Limit
Max	24.3	22.6	26.1	22.5	23.3	21.9	80
Min	18.6	20.4	21.1	18.8	21.0	20.3	
Avg	21.5	21.7	23.5	21.0	22.0	21.2	
St. Deviation	1.9	0.8	1.7	1.2	0.9	0.6	

  
B.R. Prasannakumar  
Senior Manager - Environment

Dalmia Cement (Bharat) Limited							
Ariyalur Plant							
AAQS Locations (PM <sub>10</sub> - µg/m <sup>3</sup> ) for Apr 2023 - Sep 2023						DOC. No: SP-3;AM-7	
Month	Eastern Boundary (HR Building)	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stack	Western boundary near substation	NW - Boundary near crusher transfer tower	NE - Boundary near CPP WTP	Permissible Limit
Apr-23	82.5	78.5	80.1	83.1	82.8	78.4	100
May-23	78.5	74.3	76.8	80.3	81.6	75.1	100
Jun-23	78.8	75.1	77.6	79.5	80.8	77.7	100
Jul-23	76.2	75.8	75.3	80.4	84.3	76.1	100
Aug-23	84.6	80.2	79.6	82.1	84.9	78.2	100
Sep-23	78.5	79.8	75.2	80.2	85.8	73.2	100
Max	84.6	80.2	80.1	83.1	85.8	78.4	100
Min	76.2	74.3	75.2	79.5	80.8	73.2	
Avg	79.9	77.3	77.4	80.9	83.4	76.6	
SD	3.1	2.5	2.1	1.4	2.0	2.0	
AAQS Locations (PM <sub>2.5</sub> - µg/m <sup>3</sup> ) for Apr 2023 - Sep 2023						DOC. No: SP-3;AM-7	
Month	Eastern Boundary (HR Building)	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stack	Western boundary near substation	NW - Boundary near crusher transfer tower	NE - Boundary near CPP	Permissible Limit
Apr-23	34.5	29.2	32.8	31.0	32.1	27.4	60
May-23	32.8	31.1	30.5	34.3	33.7	28.4	60
Jun-23	31.2	32.5	31.3	32.8	33.5	30.4	60
Jul-23	32.5	31.6	29.8	30.2	36.1	30.1	60
Aug-23	38.5	34.4	32.7	35.3	38.5	31.5	60
Sep-23	34.6	32.4	33.1	38.4	39.3	30.1	60
Max	38.5	34.4	33.1	38.4	39.3	31.5	60
Min	31.2	29.2	29.6	30.2	32.1	27.4	
Avg	34.0	31.9	31.7	33.8	35.5	29.7	
SD	2.5	1.7	1.4	2.9	2.9	1.5	
AAQS Locations (SO <sub>2</sub> - µg/m <sup>3</sup> ) for Apr 2023 - Sep 2023						DOC. No: SP-3;AM-7	
Month	Eastern Boundary (HR Building)	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stack	Western boundary near substation	NW - Boundary near crusher transfer tower	NE - Boundary near CPP	Permissible Limit
Apr-23	28.2	29.1	28.0	27.6	27.8	30.2	80
May-23	20.2	21.1	22.6	23.2	22.6	22.1	80
Jun-23	21.3	22.8	21.5	22.4	23.1	21.6	80
Jul-23	23.5	21.6	22.1	23.4	24.2	23.4	80
Aug-23	24.2	23.5	23.8	24.1	26.4	25.3	80
Sep-23	22.4	21.5	22.1	23.8	27.5	23.4	80
Max	28.2	29.1	28.0	27.6	27.8	30.2	80
Min	20.2	21.1	21.5	22.4	22.6	21.6	
Avg	23.1	23.3	23.3	24.1	25.3	24.3	
SD	3.1	3.0	2.4	1.8	2.3	3.1	
AAQS Locations (NO <sub>x</sub> - µg/m <sup>3</sup> ) for Apr 2023 - Sep 2023						DOC. No: SP-3;AM-7	
Month	Eastern Boundary (HR Building)	SE - Boundary near Crusher Transport system	SW - Boundary near Limestone Stack	Western boundary near substation	NW - Boundary near crusher transfer tower	NE - Boundary near CPP	Permissible Limit
Apr-23	24.3	22.0	26.1	21.4	21.1	21.6	80
May-23	22.0	21.9	24.3	20.8	21	20.3	80
Jun-23	21.4	21.0	23.2	21.5	22.4	21.0	80
Jul-23	21.8	22.4	23.6	22.5	23.3	21.9	80
Aug-23	20.5	21.5	22.7	20.9	22.3	20.7	80
Sep-23	18.8	20.4	21.1	18.8	21.8	21.1	80
Max	24.3	22.6	26.1	22.5	23.3	21.9	80
Min	18.6	20.4	21.1	18.8	21.0	20.3	
Avg	21.5	21.7	23.5	21.0	22.0	21.2	
SD	1.9	0.8	1.7	1.2	0.9	0.6	

# Annexure - 3



# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027741F  
Report No : QEN23080356-01

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarakulam Village, Ariyatur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 09.00 am to 09.00 am  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near HR Building  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH <sub>3</sub>	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m <sup>3</sup>	02 Max
3	Nitrogen dioxide as NO <sub>2</sub>	IS 5182 (Part 06)	23.3	µg/m <sup>3</sup>	80 Max
4	Ozone as O <sub>3</sub>	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	64.4	µg/m <sup>3</sup>	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	27.3	µg/m <sup>3</sup>	60 Max
7	Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 02)	10.4	µg/m <sup>3</sup>	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m <sup>3</sup>	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m <sup>3</sup>	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m <sup>3</sup>	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
 R.PRABHU  
 Senior Chemist

Laboratory Address: 39%, Thiruvallur High Road, Podachatram Post, Thirumuzhisai Via, Poonamallee Taluk, Chennai - 600124.

Note: Test results relate only to the items tested. Test Report shall not be reproduced in full or part without the approval of SMS Labs. Non-Perishable remnant samples will be disposed 15 days from the date of receipt unless otherwise agreed with the customer except in case of regulatory samples, which will be retained for a specific period as per regulatory requirements; while perishable and environmental remnant samples will be disposed consequently upon completion of testing. Samples are not drawn by laboratory unless or otherwise stated. A satisfactory test report in no way implies that a product so tested is approved by NABL. The laboratory's responsibility under this report is limited to proven willful negligence and will in no case be more than the invoiced amount. The Laboratory accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.



TEST REPORT



TC-6118

ULR - TC611823000027742F  
Report No : QEN23080356-02

Page 1 of 1  
Report Date : 31 Aug 2023

**Customer Name** : M/s. DALMIA CEMENT (BHARAT) LIMITED  
**Customer Address** : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
**Sample Name** : Ambient Air Quality Monitoring  
**Sampling Date & Time** : 16 to 17 Aug 2023  
09.10 am to 09.10 am  
**Sample Description** : Ambient Air Quality Monitoring  
**Sample Received on** : 21 Aug 2023  
**Reference** : Test Request Form Dated 19.08.2023  
**Test Started on** : 21 Aug 2023  
**Sample Drawn By** : Laboratory  
**Test Completed on** : 31 Aug 2023  
**Sample Location** : Near CPP WTP  
**Sample Procedure** : IS 5182  
**Relative Humidity** : 53%  
**Ambient Temperature** : 34°C

TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH <sub>3</sub>	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m <sup>3</sup>	02 Max
3	Nitrogen dioxide as NO <sub>2</sub>	IS 5182 (Part 06)	20.6	µg/m <sup>3</sup>	80 Max
4	Ozone as O <sub>3</sub>	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	180 Max
5	Particulate Matter (PM <sub>10</sub> )	IS 5182 (Part 23)	77.0	µg/m <sup>3</sup>	100 Max
6	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (Part 24)	28.3	µg/m <sup>3</sup>	60 Max
7	Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 02)	9.1	µg/m <sup>3</sup>	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m <sup>3</sup>	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m <sup>3</sup>	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m <sup>3</sup>	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

*R. Prabhu*  
R.PRABHU  
Senior Chemist

Laboratory Address: 39/6, Thirusvullur High Road, Paduchattaram Post, Thirusaszhisai Via, Poonamallee Taluk, Chennai - 600124.

Note: Test results relate only to the items tested. Test Report shall not be reproduced in full or part without the approval of SMS Labs. Non-Perishable remnant samples will be disposed 15 days from the date of receipt unless otherwise agreed with the customer except in case of regulatory samples, which will be retained for a specific period as per regulatory requirements; while perishable and environmental remnant samples will be disposed consequently upon completion of testing. Samples are not drawn by laboratory unless or otherwise stated. A satisfactory test report in no way implies that a product so tested is approved by NABL. The laboratory's responsibility under this report is limited to proven willful negligence and will in no case be more than the invoiced amount. The Laboratory accepts no liability with regard to the origin or source from which the sample(s) is/ are said to be extracted.





# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027743F  
Report No : QEN23080356-03

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarakulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near CPP Boiler  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH3	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m <sup>3</sup>	02 Max
3	Nitrogen dioxide as NO2	IS 5182 (Part 06)	22.0	µg/m <sup>3</sup>	80 Max
4	Ozone as O3	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	79.6	µg/m <sup>3</sup>	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	31.4	µg/m <sup>3</sup>	60 Max
7	Sulphur Dioxide as SO2	IS 5182 (Part 02)	12.6	µg/m <sup>3</sup>	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m <sup>3</sup>	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m <sup>3</sup>	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m <sup>3</sup>	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

**R.PRABHU**  
 Senior Chemist

Laboratory Address: 39/5, Thiruvallur High Road, Paduchatram Post, Thiruvazhsari Via, Poonamallee Taluk, Chennai - 600124.

Note: Test results relate only to the items tested. Test Report shall not be reproduced in full or part without the approval of SMS Labs. Non-Perishable remnant samples will be disposed 15 days from the date of receipt unless otherwise agreed with the customer except in case of regulatory samples, which will be retained for a specific period as per regulatory requirements; while perishable and environmental remnant samples will be disposed consequently upon completion of testing. Samples are not drawn by laboratory unless or otherwise stated. A satisfactory test report in no way implies that a product so tested is approved by NABL. The laboratory's responsibility under this report is limited to proven willful negligence and will in no case be more than the invoiced amount. The Laboratory accepts no liability with regard to the origin or source from which the sample(s) is/ are said to be extracted.



# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027744F  
Report No : QEN23080356-04

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarakulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 09.30 am to 09.30 am  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near CPP Coal Crusher  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Amononia as NH3	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m³	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m³	02 Max
3	Nitrogen dioxide as NO2	IS 5182 (Part 06)	19.3	µg/m³	80 Max
4	Ozone as O3	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m³	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	76.4	µg/m³	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	29.4	µg/m³	60 Max
7	Sulphur Dioxide as SO2	IS 5182 (Part 02)	8.7	µg/m³	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m³	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m³	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m³	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m³	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m³	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
**R.PRABHU**  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Poduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027745F  
Report No : QEN23080356-05

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamuraikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 09.40 am to 09.40 am  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near 110 KVA Substation  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH <sub>3</sub>	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m <sup>3</sup>	02 Max
3	Nitrogen dioxide as NO <sub>2</sub>	IS 5182 (Part 06)	23.4	µg/m <sup>3</sup>	80 Max
4	Ozone as O <sub>3</sub>	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	69.8	µg/m <sup>3</sup>	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	27.7	µg/m <sup>3</sup>	60 Max
7	Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 02)	10.0	µg/m <sup>3</sup>	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m <sup>3</sup>	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m <sup>3</sup>	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m <sup>3</sup>	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

\*\*\*\*\* End of the Report \*\*\*\*\*

  
**R.PRABHU**  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Puduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

U.I.R - TC611823000027746F  
Report No : QEN23080356-06

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarakulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 09.50 am to 09.50 am  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near O & M Colony  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C


### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH <sub>3</sub>	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m <sup>3</sup>	02 Max
3	Nitrogen dioxide as NO <sub>2</sub>	IS 5182 (Part 06)	19.1	µg/m <sup>3</sup>	80 Max
4	Ozone as O <sub>3</sub>	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	66.2	µg/m <sup>3</sup>	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	28.8	µg/m <sup>3</sup>	60 Max
7	Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 02)	12.6	µg/m <sup>3</sup>	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m <sup>3</sup>	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m <sup>3</sup>	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m <sup>3</sup>	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
**R.PRABHU**  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Paduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027747F  
Report No : QEN23080356-07

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 10.00 am to 10.00 am  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near Scrap Yard  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH3	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m³	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m³	02 Max
3	Nitrogen dioxide as NO2	IS 5182 (Part 06)	22.3	µg/m³	80 Max
4	Ozone as O3	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m³	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	74.9	µg/m³	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	32.0	µg/m³	60 Max
7	Sulphur Dioxide as SO2	IS 5182 (Part 02)	8.8	µg/m³	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GS/SOP/06	BLQ(LOQ:0.05)	ng/m³	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m³	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m³	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m³	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m³	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

\*\*\*\*\* End of the Report \*\*\*\*\*

  
 R. PRABHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Puduchattaram Post, Thirumazhisai Vin, Ponnamalloor Taluk, Chennai - 600124

Note: Test results relate only to the items tested. Test Report shall not be reproduced in full or part without the approval of SMS Labs. Non-Perishable remnant samples will be disposed 15 days from the date of receipt unless otherwise agreed with the customer except in case of regulatory samples, which will be retained for a specific period as per regulatory requirements; while perishable and environmental remnant samples will be disposed consequently upon completion of testing. Samples are not drawn by laboratory unless or otherwise stated. A satisfactory test report in no way implies that a product so tested is approved by NABL. The laboratory's responsibility under this report is limited to proven willful negligence and will in no case be more than the invoiced amount. The Laboratory accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.



# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027748F  
Report No : QEN23080356-08

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Ambient Air Quality Monitoring Sampling Date & Time : 16 to 17 Aug 2023  
 10.10 am to 10.10 am  
 Sample Description : Ambient Air Quality Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 31 Aug 2023  
 Sample Location : Near Circular Stacker  
 Sample Procedure : IS 5182  
 Relative Humidity : 53% Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Results	Unit	Limit as per NAAQS Specification
<b>Chemical</b>					
1	Ammonia as NH <sub>3</sub>	IS 5182 (Part 25)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	400 Max
2	Carbon Monoxide as CO (8hrs)	IS 5182 (Part 10)	BLQ(LOQ:1.14)	mg/m <sup>3</sup>	02 Max
3	Nitrogen dioxide as NO <sub>2</sub>	IS 5182 (Part 06)	19.4	µg/m <sup>3</sup>	80 Max
4	Ozone as O <sub>3</sub>	IS 5182 (Part 09)	BLQ(LOQ:20.0)	µg/m <sup>3</sup>	180 Max
5	Particulate Matter (PM10)	IS 5182 (Part 23)	80.3	µg/m <sup>3</sup>	100 Max
6	Particulate Matter (PM2.5)	IS 5182 (Part 24)	36.4	µg/m <sup>3</sup>	60 Max
7	Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 02)	11.0	µg/m <sup>3</sup>	80 Max
<b>Polycyclic Aromatic Hydrocarbons</b>					
8	Benzo(a)Pyrene (Particulate Phase)	SMSLA/GIS/SOP/06	BLQ(LOQ:0.05)	ng/m <sup>3</sup>	01 Max
<b>Trace Metal Elements</b>					
9	Arsenic	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	06 Max
10	Lead	Compendium Method IO-3.4	BLQ(LOQ:0.001)	µg/m <sup>3</sup>	1.0 Max
11	Nickel	Compendium Method IO-3.4	BLQ(LOQ:0.1)	ng/m <sup>3</sup>	20 Max
<b>Volatile Organic Compounds</b>					
12	Benzene	SMSLA/GM/SOP/31	BLQ(LOQ:1.0)	µg/m <sup>3</sup>	05 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification

Conclusion : The above tested Sample Conforms to the NAAQ Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
 R.PRABHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Podochurram Post, Thirumazhisai Via, Ponnansalbee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

U.I.R - TC611823000027520F  
Report No : QEN23080356-09 to 16

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Name : Fugitive Emission Monitoring Sampling Date : 17 Aug 2023  
 Sample Description : Fugitive Emission Monitoring Sample Received on : 21 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Test Started on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Completed on : 30 Aug 2023

### TEST RESULTS

S. No	Parameters	Test Method	Unit	Locations							
				Crusher	Coal Stackler	APR Location	Parking Plant	Cooler	Cement Mill	CPP Boiler	CPP Coal Crusher
1.	Respirable Suspended Particulate Matter	NIOSH 600	mg/m <sup>3</sup>	0.084	0.081	0.085	0.073	0.078	0.073	0.076	0.061

/\*\*\*\*\* End of the Report \*\*\*\*\*/

*R.P.*  
 R.PRABHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Paduchatram Post, Thirumazhisai Via, Peonansallic Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT

ULR - TC611823000027532F  
Report No : QEN23080356-18

Page 1 of 1  
Report Date: 31 Aug 2023

**Customer Name** : M/s. DALMIA CEMENT (BIHARAT) LIMITED  
**Customer Address** : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
**Sample Description** : Stack Emission Monitoring **Sampling Date** : 16 Aug 2023  
**Reference** : Test Request Form Dated 19.08.2023 **Sample Received on** : 21 Aug 2023  
**Sample Drawn By** : Laboratory **Test Started on** : 21 Aug 2023  
**Sample Location** : Coal Mill Stack (Pet Coke) **Test Completed on** : 30 Aug 2023  
**Sample Procedure** : IS 11255 & SMSLA/EN/SOP/017  
**Diameter of Stack (m)** : 2.5 m **Ambient Temperature** : 34°C


### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	4.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	99	--
3	Moisture Content	EPA 1-3	%	5.1	--
4	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	329	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	13.8	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	18.8	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	332	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(LOQ:3.0)	--
9	Velocity	EPA 1-3	m/s	10.2	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /Hr	157712	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion: The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
R.PRABHU  
Senior Chemist

Laboratory Address: 3996, Thiruvallur High Road, Puduchotram Post, Thirunnavasuram Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT

ULR - TC61182300027534F  
Report No : QEN23080356-20

Page 1 of 1  
Report Date : 31 Aug 2023

**Customer Name** : M/s. DALMIA CEMENT (BHARAT) LIMITED  
**Customer Address** : SF No: 630, Thamarakulam Village, Ariyalur, Tamil Nadu - 621705.  
**Sample Description** : Stack Emission Monitoring  
**Reference** : Test Request Form Dated 19.08.2023  
**Sample Drawn By** : Laboratory  
**Sample Location** : Cement Mill Stack  
**Sample Procedure** : IS 11255 & SMSLA/EN/SOP/017  
**Diameter of Stack (m)** : 2.8 m  
**Sampling Date** : 16 Aug 2023  
**Sample Received on** : 21 Aug 2023  
**Test Started on** : 21 Aug 2023  
**Test Completed on** : 30 Aug 2023  
**Ambient Temperature** : 35°C


### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	8.0	--
3	Moisture Content	EPA 1-3	%	5.3	--
4	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BL.Q(LOQ:2.0)	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.8	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	28.5	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	355	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BL.Q(LOQ:30.0)	--
9	Velocity	EPA 1-3	m/s	13.5	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /hr	246434	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
R.PRABHU  
Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Paduchatram Post, Thirumadhurai Vin, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027535F  
Report No : QEN23080356-21

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Description : Stack Emission Monitoring Sampling Date : 17 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
 Sample Location : Packing Plant - 1 Test Completed on : 30 Aug 2023  
 Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
 Diameter of Stack (m) : 0.8 m Ambient Temperature : 37°C


### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:1.14)	--
3	Moisture Content	EPA 1-3	%	Less than 1.0	--
4	Nitrogen Oxides as NO <sub>x</sub>	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:2.0)	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.9	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	26.9	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	314	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(LOQ:3.0)	--
9	Velocity	EPA 1-3	m/s	18.0	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /hr	30226	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

\*\*\*\*\* End of the Report \*\*\*\*\*

  
 R.PRABHU  
 Senior Chemist

Laboratory Address: 39/8, Thiruvallur High Road, Puduchatram Post, Thirunavazhisi Via, Poonamallee Taluk, Chennai - 600124.

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ULR - TC611823000027536F  
Report No : QEN23080356-22

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705,  
 Sample Description : Stack Emission Monitoring Sampling Date : 17 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
 Sample Location : Packing Plant - 2 Test Completed on : 30 Aug 2023  
 Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
 Diameter of Stack (m) : 0.8 m Ambient Temperature : 37°C


TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
Chemical					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(L.OQ:1.14)	--
3	Moisture Content	EPA 1-3	%	Less than 1.0	--
4	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(L.OQ:2.0)	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.8	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	25.4	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	311	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(L.OQ:3.0)	--
9	Velocity	EPA 1-3	m/s	18.0	--
10	Volume of Gas Discharged	IS 11255 (Part 05)	Nm <sup>3</sup> /hr	30517	--

Note : BLQ: Below Limit of Quantification L.OQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

\*\*\*\*\* End of the Report \*\*\*\*\*

  
 R.PRABHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Poduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027537F  
Report No : QEN23080356-23

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
Customer Address : SF No: 630, Thamuraikulam Village, Ariyalur, Tamil Nadu - 621705.  
Sample Description : Stack Emission Monitoring Sampling Date : 17 Aug 2023  
Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
Sample Location : Packing Plant - 3 Test Completed on : 30 Aug 2023  
Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
Diameter of Stack (m) : 0.8 m Ambient Temperature : 36°C

### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:1.14)	--
3	Moisture Content	EPA 1-3	%	Less than 1.0	--
4	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:2.0)	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.7	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	21.8	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	310	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(LOQ:3.0)	--
9	Velocity	EPA 1-3	m/s	17.4	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /Hr	29595	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

R. PRABHU  
Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Puduclatram Post, Thirumazhisai Vin, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027538F  
Report No : QEN23080356-24

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Description : Stack Emission Monitoring Sampling Date : 18 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
 Sample Location : ESP Cooler Stack Test Completed on : 30 Aug 2023  
 Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
 Diameter of Stack (m) : 3.5 m Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	5.0	--
3	Moisture Content	EPA 1-3	%	Less than 1.0	--
4	Nitrogen Oxides as NO <sub>x</sub>	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	3.0	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.8	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	20.4	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	569	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(LOQ:3.0)	--
9	Velocity	EPA 1-3	m/s	14.5	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /hr	257792	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

\*\*\*\*\* End of the Report \*\*\*\*\*

  
 R.PRABHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Pudukhattram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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## TEST REPORT



TC-6118

ULR - TC611823000027749F  
Report No : QEN23080356-26

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Description : Stack Emission Monitoring Sampling Date : 18 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
 Sample Location : CPP Boiler (Power Plant) Test Completed on : 31 Aug 2023  
 Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
 Diameter of Stack (m) : 2.7 m Ambient Temperature : 38°C

### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	(*Values are Corrected in 6% O2 level)	Limit as per CPCB
<b>Anions</b>						
1	HCL	EPA 26A	mg/m <sup>3</sup>	BLQ(LOQ:0.02)	--	10 Max
2	HF	EPA 26A	mg/m <sup>3</sup>	BLQ(LOQ:0.02)	--	1 Max
<b>Chemical</b>						
3	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	6.1	--	--
4	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	90	--	--
5	Moisture Content	EPA 1-3	%	1.5	--	--
6	Nitrogen Oxides as NOx	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	32	46*	450 Max
7	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	10.4	--	--
8	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	33.6	48*	50 Max
9	Stack temperature	IS 11255 (Part 03)	K	391	--	--
10	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	18	26*	600 Max
11	TOC	SMSLA/EN/SOP/018	mg/m <sup>3</sup>	BLQ(LOQ:0.1)	--	--
12	Velocity	EPA 1-3	m/s	10.5	--	--
13	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /hr	161073	--	--
<b>Trace Metal Elements</b>						
14	Cd+Pb+ their Compounds	EPA - 29	mg/m <sup>3</sup>	BLQ(LOQ:0.00002)	--	--
15	Mercury	EPA - 29	mg/Nm <sup>3</sup>	BLQ(LOQ:0.00002)	--	0.05 Max
16	Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V+	EPA - 29	mg/m <sup>3</sup>	BLQ(LOQ:0.00002)	--	0.5 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification  
 Conclusion: The above tested sample conforms the CPCB standards for the above tested parameters.

\*\*\*\*\* End of the Report \*\*\*\*\*

**R.PRABHU**  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Paduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.  
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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027540F  
Report No : QEN23080356-27

Page 1 of 1  
Report Date: 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamarakulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Description : Stack Emission Monitoring Sampling Date : 18 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
 Sample Location : CPP Primary Crusher Test Completed on : 30 Aug 2023  
 Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
 Diameter of Stack (m) : 0.37 m Ambient Temperature : 36°C


### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:1.14)	--
3	Moisture Content	EPA 1-3	%	Less than 1.0	--
4	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:2.0)	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.9	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	14.3	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	310	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(LOQ:3.0)	--
9	Velocity	EPA 1-3	m/s	10.3	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /Hr	3756	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
 R. PRABHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Podochatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT

ULR - TC611823000027541F  
Report No : QEN23080356-28

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BIHARAT) LIMITED  
Customer Address : SF No: 630, Thamarakulam Village, Ariyalur, Tamil Nadu - 621705.  
Sample Description : Stack Emission Monitoring Sampling Date : 18 Aug 2023  
Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
Sample Location : CPP Secondary Crusher Test Completed on : 30 Aug 2023  
Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
Diameter of Stack (m) : 0.33 m Ambient Temperature : 34°C


### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	Limit as per CPCB
<b>Chemical</b>					
1	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	Less than 0.1	--
2	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:1.14)	--
3	Moisture Content	EPA 1-3	%	Less than 1.0	--
4	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	BLQ(LOQ:2.0)	--
5	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	20.8	--
6	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	8.6	30 Max
7	Stack temperature	IS 11255 (Part 03)	K	308	--
8	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	BLQ(LOQ:3.0)	--
9	Velocity	EPA 1-3	m/s	10.8	--
10	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /hr	3153	--

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
R.PRABHU  
Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Poduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT



TC-6118

ULR - TC611823000027750F  
Report No : QEN23080356-29

Page 1 of 1  
Report Date : 31 Aug 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
 Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
 Sample Description : Stack Emission Monitoring Sampling Date : 19 Aug 2023  
 Reference : Test Request Form Dated 19.08.2023 Sample Received on : 21 Aug 2023  
 Sample Drawn By : Laboratory Test Started on : 21 Aug 2023  
 Sample Location : Kiln Raw Mill Test Completed on : 31 Aug 2023  
 Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
 Diameter of Stack (m) : 4.5 m Ambient Temperature : 34°C

### TEST RESULTS

S.NO	Parameter	Test Method	Unit	Results	(*Values are Corrected in 10% O2 level)	Limit as per CPCB
<b>Anions</b>						
1	HCL	EPA 26A	mg/m <sup>3</sup>	BLQ(LOQ:0.02)	--	10 Max
2	HF	EPA 26A	mg/m <sup>3</sup>	BLQ(LOQ:0.02)	--	1 Max
<b>Chemical</b>						
3	Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/017	%	5.6	--	--
4	Carbon Monoxide as CO	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	62	--	--
5	Moisture Content	EPA 1-3	%	1.4	--	--
6	Nitrogen Oxides as Nox	SMSLA/EN/SOP/017	mg/Nm <sup>3</sup>	339	420*	800 Max
7	Oxygen as O <sub>2</sub>	SMSLA/EN/SOP/017	%	12.1	--	--
8	Particulate Matter	IS 11255 (Part 01)	mg/Nm <sup>3</sup>	9.7	--	30 Max
9	Stack temperature	IS 11255 (Part 03)	K	354	--	--
10	Sulphur Dioxide as SO <sub>2</sub>	IS 11255 (Part 02)	mg/Nm <sup>3</sup>	9.0	11*	100 Max
11	TOC	SMSLA/EN/SOP/018	mg/m <sup>3</sup>	6.7	--	10 Max
12	Velocity	EPA 1-3	m/s	11.1	--	--
13	Volume of Gas Discharged	IS 11255 (Part 03)	Nm <sup>3</sup> /hr	517863	--	--
<b>Trace Metal Elements</b>						
14	Cd+Ti + their Compounds	EPA - 29	mg/m <sup>3</sup>	BLQ(LOQ:0.00002)	--	--
15	Mercury	EPA - 29	mg/Nm <sup>3</sup>	BLQ(LOQ:0.00002)	-	0.05 Max
16	Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V+	EPA - 29	mg/m <sup>3</sup>	BLQ(LOQ:0.00002)	--	0.5 Max

Note : BLQ: Below Limit of Quantification LOQ: Limit of Quantification.

Conclusion: The above tested sample conforms the CPCB standards for the above tested parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

R. PRAHHU  
 Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Paduchatram Post, Thirumazhisai Via, Poonamallee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT

Page 1 of 2

Report No: QEN23080356-29


Report Date: 27 Sep 2023

Customer Name : M/s. DALMIA CEMENT (BHARAT) LIMITED  
Customer Address : SF No: 630, Thamaraikulam Village, Ariyalur, Tamil Nadu - 621705.  
Sample Description : Stack Emission Monitoring  
Reference : Test Request Form Dated 19.08.2023  
Sample Drawn By : Laboratory  
Sample Location : Kiln Raw Mill  
Sample Procedure : IS 11255 & SMSLA/EN/SOP/017  
Diameter of Stack (m) : 4.5 m  
Sampling Date : 16 Aug 2023  
Sample Received on : 21 Aug 2023  
Test Started on : 21 Aug 2023  
Test Completed on : 27 Sep 2023  
Ambient Temperature : 34°C

### TEST RESULTS

Parameter	Protocol	Results	Limit as per CPCB
Dioxin & Furan at Effective Oxygen Level	USEPA 23A/QA.16.4.73	< 0.01 ng TEQ/Nm <sup>3</sup>	NA
Dioxin & Furan at 10% Oxygen		< 0.01 ng TEQ/Nm <sup>3</sup>	0.1 ng TEQ/Nm <sup>3</sup>

Note 1 : Dioxin Analysis was subcontracted to INSTITUTE FOR APPLIED CHROMATOGRAPHY, EFRAC Kolkata.  
Levels of 17 congeners are enclosed as Annexure - 1

  
R. PRADEEP  
Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Poduchattam Post, Thirumazhisai Via, Ponnamballee Taluk, Chennai - 600124.

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# SMS LABS SERVICES PRIVATE LIMITED

## TEST REPORT

Report No : QEN23080356-29

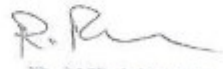
Page 2 of 2  
Report Date : 27 Sep 2023

Parameter	Uom	Method	Results
1,2,3,4,6,7,8- Heptachlorodibenzo-p- dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.00024
1,2,3,4,7,8- Hexachlorodibenzo-p-dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
1,2,3,7,8- Pentachlorodibenzo-p-dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.024
2,3,7,8-Tetrachlorodibenzo- p-dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.005
1,2,3,6,7,8- Hexachlorodibenzo-p-dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
Octachlorodibenzo-p-dioxin	ng.TEQ	USEPA 23A/QA.16.4.73	<0.000015
2,3,4,7,8- Pentachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0072
1,2,3,4,6,7,8- Heptachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.00024
1,2,3,4,7,8,9- Heptachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.00024
1,2,3,4,7,8- Hexachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
1,2,3,6,7,8- Hexachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
1,2,3,7,8,9- Hexachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
1,2,3,7,8- Pentachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.00072
2,3,4,6,7,8- Hexachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0024
2,3,7,8- Tetrachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.0005
Octachlorodibenzofuran	ng.TEQ	USEPA 23A/QA.16.4.73	<0.000015

Note : UOM:Unit of Measurement TEQ:Toxicity Equivalent.

Conclusion : The above tested Sample Conforms to the CPCB Standards for the above tested Parameters.

/\*\*\*\*\* End of the Report \*\*\*\*\*/

  
R.PRABHU  
Senior Chemist

Laboratory Address: 39/6, Thiruvallur High Road, Puduchattam Post, Thiruvazhisai Vin, Poonamallee Taluk, Chennai - 600124.

Note: Test results relate only to the items tested. Test Report shall not be reproduced in full or part without the approval of SMS Labs. Non-Perishable remnant samples will be disposed 15 days from the date of receipt unless otherwise agreed with the customer except in case of regulatory samples, which will be retained for a specific period as per regulatory requirements; while perishable and environmental remnant samples will be disposed consequently upon completion of testing. Samples are not drawn by laboratory unless otherwise stated. A satisfactory test report in no way implies that a product so tested is approved by NABL. The laboratory's responsibility under this report is limited to proven willful negligence and will in no case be more than the invoiced amount. The Laboratory accepts no liability with regard to the origin or source from which the sample(s) is/ are said to be extracted.

# Annexure - 4

## Green Belt



**Plantation: 68,936 Nos (34% Plant area)**

**96% Sustenance Rate**

**Individual Zone Owner Responsibility**

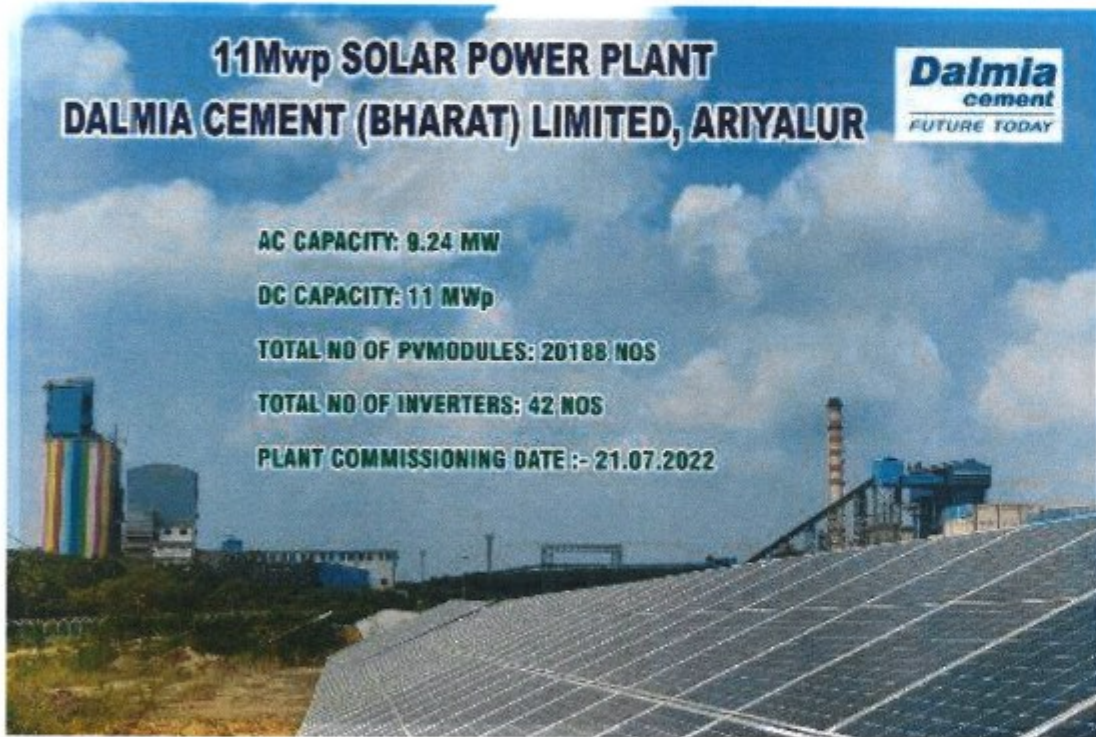
**Plant in the Garden & not Garden in the  
plant**

**Good Biodiversity, 94 Acre**

## Biodiversity Park – 2500 Varieties



# Renewable Energy – Solar Power Plant



**Generation: 9.0 Lakhs Units**



# CO<sub>2</sub> emission reduction

## Battery Operated Vehicles



## Solar Panels for Security Vigilance room





# Annexure - 5



**GOVERNMENT OF TAMIL NADU**  
**WATER RESOURCES DEPARTMENT**

**From:**  
Er. S.Prabakaran, B.E.,  
Chief Engineer, WRD,  
State Ground & Surface Water  
Resources Data Centre  
Tharamani, Chennai 600 113.  
Phone : 91-44-22542223 (Direct)  
91-44-22541526/27(Board)  
Email: [cegwchennai@gmail.com](mailto:cegwchennai@gmail.com)  
Web site: [www.groundwatertnpwd.org](http://www.groundwatertnpwd.org)

**To:**  
**M/s. Dalmia Cement (Bharat) Ltd.,**  
SF.NO.630,Tmaraikulam Village,  
Ariyalur Block & Taluk,  
Ariyalur-621 705.

**Lr.No.OT 8/AG-2/197/Renewal of NOC /Trichy/ 2023 dated: 11.03.2023.**

Sir,

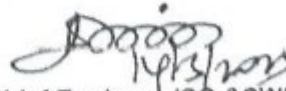
**Sub:** "Renewal of No Objection Certificate" for drawal of ground water to M/s. Dalmia Cement (Bharat) Ltd., Govindapuram and Ottakovil Village , Ariyalur Firka, Ariyalur Block , Ariyalur Taluk, Ariyalur District – 8<sup>th</sup> Renewal of NOC - Reg.

**Ref:** 1.This Office Lr.No. OT8/AG-2/273/renewal of NOC/Trichy/2022 dt:25.04.2022  
2.The firm Renewal of NOC application date:16.02.2023  
3.This Office Lr.No:71DD(G)/AG-VI/Renewal of NOC/2023Dt:16.02.2023  
4.SE,GWC,ThanjavurLr.No:65<sup>th</sup>/AG/T.F44C(TRY)/NOC/GWC/TNJ/2022 Dt:27.02.2023

Please find the enclosed "Renewal of No Objection Certificate", for drawal of ground water to M/s. Dalmia Cement (Bharat) Ltd., Govindapuram and Ottakovil Village , Ariyalur Block , Ariyalur Taluk, Ariyalur District. As per the G.O.(Ms).No 142 PW(R2)Department dt:23.07.2014, NOC should be renewed every year for the water based industries. You are requested to strictly adhere to the quantity permitted and conditions mentioned in the certificate and apply for renewal of NOC before two months from the date of expiry i.e., 21.02.2024 without fail. If you fail to apply for renewal of NOC, it will be treated as "illegal" and informed to District Monitoring Committee to seal the bore well in your unit as per Madras High Court Order, dt:20.03.2020 in WP.No.16299/2018.

**Enclosure:**

1. Renewal of No Objection Certificate & Conditions

  
Chief Engineer (SG & SWRDC),  
WRD, Tharamani, Chennai-113



Certificate No.197/2023 (R-8)

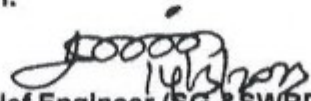
Dated: 14.03.2023

**GOVERNMENT OF TAMIL NADU**  
**WATER RESOURCES DEPARTMENT**  
**STATE GROUND & SURFACE WATER RESOURCES DATA**  
**CENTRE CHENNAI – 113**  
**Renewal of No Objection Certificate**

This is to certify that "M/s. Dalmia Cement (Bharat) Ltd", Govindapuram and Ottakovil Village, Ariyalur Firka, Ariyalur Block, Ariyalur Taluk, Ariyalur District is hereby given the "Renewal of No Objection Certificate" for the drawal of total quantity of **16,20,000 LPD** (Sixteen Lakh and Twenty Thousand Litres per day) of groundwater for the purpose of "Industry (Cement Industry)" from the Groundwater structure listed below with strict adherence of stipulated conditions.

Sl. No	Referred Well / Bore Well & SF. No	Village/Firka	Co-ordinates		Quantity Permitted for pumping in LPD
			Latitude	Longitude	
1.	TW1/630/1 2B	Govindapuram/Ariyalur	11° 10'85" N	79° 06'01" E	2,43,000
2.	TW2/640/0 5	Govindapuram/Ariyalur	11° 11'05" N	79° 06'08" E	2,43,000
3.	TW3/614/0 8B	Govindapuram/Ariyalur	11° 10'59" N	79° 05'96" E	3,73,500
4.	TW4/158/0 5	Ottakovil/Ariyalur	11° 11'17" N	79° 06'01" E	3,73,500
5.	TW5/162/1 1	Ottakovil /Ariyalur	11° 10'23" N	79° 05'19" E	3,87,000
<b>Total</b>					<b>16,20,000</b>

This renewal certificate is valid from 22.02.2023 to 21.02.2024 and the Renewal of NOC is issued under the conditions laid down.

  
Chief Engineer (SG & SWRDC),  
WRD, Tharamani, Chennai-113

**Renewal of NOC Conditions pertaining to M/s. Dalmia Cement (Bharat) Limited,  
Ariyalur District**

- 1 This No Objection certificate issued for ground water extraction applies to the referred ground water abstraction structure only.
- 2 All the **other ground water abstraction structures** (dug wells/bore wells/dug-cum bore wells) other than the permitted one inside the plant area **should not be considered** for this permission.
- 3 Such structures as said in Condition No.2 should be closed or used only for **Rain water harvesting** purposes.
- 4 This Certificate is applicable for drawal of permitted Quantity of ground water only and **not for transportation**.
- 5 The Company should install necessary "flow meters" to the referred well /bore well and monitor the quantity which should not exceed the permitted level. **Proper Records** should be maintained continuously from the date of drawal. Monthly statement of daily drawal of water should be sent to the Executive Engineer, Groundwater Division, Trichy as per format enclosed.
- 6 As and when the officials of Ground Water Wing of WRD inspect the site/premises, perusal of drawal records and water quality observations should be allowed.
- 7 **Rain water harvesting structure** is to be established as per the direction of this department. Rain water harvesting structures already exist inside the plant premises, it should be maintained properly.
- 8 **Violation of the above stipulations in any form may lead to cancellation of the permission accorded by the Government.**
- 9 The Company should be ready to pay the **levy/charges for drawal of ground water** for commercial purposes, if Government / Ground Water Authority imposes any such orders in future.
- 10 As per the G.O.(Ms).No 142 PW(R2)Department dt:23.07.2014, NOC should be renewed every year for the water based industries.
- 11 It is also informed that during the renewal of the NOC, depending upon the hydrogeological condition the category of the area and the site conditions, the quantity will be vary from permitted quantity.
- 12 The handed over Bore Well to this Department for Water Level monitoring purpose should be maintained properly
- 13 This No Objection Certificate is applicable **only for the purpose of "Cement Industry"**, if any deviation in the usage of ground water is found, the NOC accorded is automatically deemed to be cancelled.
- 14 The **Executive Engineer, Ground Water Division** of the respective District **would inspect** either the rain water harvesting structures established in the premises of the firm or the records maintained or even the drawal of ground water as and when needed and it is the mandatory of the firm to maintain the Rain water harvesting structure/ structures properly and show the records needed.
- 15 **If any information / Documents submitted by this firm is found to false / in correct or any data provided by the firm is found to be incorrect, the NOC issued to the firm will be cancelled by this department without any prior notice.**

  
Chief Engineer, SG & SWRDC,  
WRD, Tharamani, Chennai-113.

# Annexure - 6

## Water Conservation



- ❖ Village pond in Thamaraiikulam desilted.
- ❖ 3000 m<sup>3</sup> of additional water holding capacity created.
- ❖ 750 meters of bund strengthened using excavated soil
- ❖ Plantations carried out on the bunds for further strengthening and manage erosion.

## Deepening and Bund Strengthening of Thamaraiikulam Pond



## Infrastructure



- Installation of CCTV camera in 21 spots at Thamaraiikulam Village.
- Centralized monitoring facility created in Thamaraiikulam Panchayat Office.
- Facility sponsored by Dalmia Bharat Foundation
- Facility inaugurated by Deputy Superintendent of Police, Ariyalur.

## Installation of CCTV Cameras in Thamaraiikulam Panchayat



## Social Infrastructure



- Two RO Plants dedicated to Ottakovil panchayat for use of villagers.
- Around 800 households benefit with safe drinking water
- Dalmia spent Rs.15L towards installation of new machine, electrical works and shed



## Social Infrastructure



- ❖ 3 tower lights installed in Edayathankudi village.
- ❖ 2 more lights installed in Aaranur and Vaipam villages
- ❖ Around 300 families benefited
- ❖ This enhances road safety for the residents and thousands of road users.



## Livelihood

- DBF team had established 130 domestic poultry units as a sustainable income for house holds
- Set up a skill training center in Ariyalur town to cater around 120 youth.
- 1020 households have been enrolled for livelihood interventions.
- One medical camp organized in collaboration with Health Department, 1000 beneficiaries consulted for general ailments.
- Azolla units for dairy improvement, vermicompost units for soil improvement are also being established leading to additional income in about 19 families.
- 25 families from Thamaraikulam village are newly trained to make palm leaf baskets who earn around Rs.1800 consistently.



# Annexure - 7





# Annexure - 8

# Online Emission Monitoring systems and Real Time display



Sick Opacity meter in all stacks



ABB SO<sub>2</sub>, NO & O<sub>2</sub> analyser



CAAQM Station



Emission display in Main Gate



Online Monitoring at STP



Online Monitoring at ETP

# Annexure – 9



# Awards & Accolades

## Green Product Certification from CII



## Awards & Accolades

24th National Award for Excellence in Energy Management 2023 organized by CII  
“Excellent Energy Efficient Unit” - 12<sup>th</sup> Consecutive year  
“National Energy Leader” – 4<sup>th</sup> Consecutive year.



## Awards & Accolades

### Runner-up in Zero carbon Initiative by Manufacturing Today





Thank You