

Through Email

Date: 27.11.2023

NBH/PC-14/C11/

To,

The Scientist E, IA - (Industrial Projects - 1 sector)

Ministry of Environment, Forest & Climate Change,

Indira Paryavaran Bhawan, JOR Bagh Road, Aliganj,

New Delhi-110003

Sub: Compliance report of Environmental Clearance for Expansion of Integrated Cement Plant (Clinker 5.0 MTPA to 5.2 MTPA) Cement 3.6 MTPA to 6.5 MTPA) WHRS {13.2 (Water Cooled) to 15 MW (Air Cooled)} along with additional WHRS {15 MW (Air Cooled)} and Reduction in capacity of Captive Power Plant (47 to 22 MW) at Nimbahera, District: Chittorgarh (Rajasthan) by M/s. JK Cement Limited.

Ref: EC letter no. - IA-J-11011/243/2016-IA-II(I) dated 23.07.2018 and amended on vide letter no IA-J-11011/243/2016-IA-II(I) dated 14.02.2022

Dear Sir,

Kindly refer to the above subject matter and refer above EC letter no., please find attached herewith compliance of EC for the period of **April 2023 to September 2023**.

As per MoEF & CC notification no. S.O. 5845 (E) 26.11.2018 the soft copy of same has been sent through email to iro.jaipur-mefcc@gov.in, moef@nic.in, ccb.cpcb@nic.in, member-secretary@rpcb.nic.in, cpcb.bhopal@gov.in, monitoring-ec@nic.in, iro.jaipur-mefcc@gov.in, seiaams2021@gmail.com.

We hope that the compliance is in order.

Thanking you.

Yours Faithfully

For J. K. Cement Works, Nimbahera



R. B. M. Tripathi
President (Operations)

Encl: as above

Copy to:

1. The Deputy Director(S), Ministry of Environment, Forests & Climate Change, Integrated Regional office, Jaipur, A-218, Aranya Bhawan, Jhalana Institutional Area, **Jaipur-302004**
2. The Regional Director Central Pollution Control Board, Paryavaran Parisar, E-5, Arera colony, **Bhopal (M.P) 462016**
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, **New Delhi 110032**.
4. The Chairman, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, **Jaipur - 302004 (Rajasthan)**

Corporate Office

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**JK SUPER
CEMENT**
BUILD SAFE

Manufacturing Units at :
Nimbahera, Mangrol, Gotan (Rajasthan) | Muddapur (Karnataka)
Jharli (Haryana) | Katni (M.P.) | Aligarh (U.P.) | Balasinor (Gujarat)

JK CEMENT
WallMaxX
White Cement Wall Putty



Form for Uploading Six Monthly Compliance Report

Proposal Details

Proposal No.	IA/RJ/IND/236959/2021, dated 22 Dec 2021	Project Name	Expansion in Clinker Production Capacity (5.0 to 5.2 MTPA) and WHRS {13.2 (Water Cooled) to 15 MW (Air Cooled)} along with additional WHRS {15 MW (Air Cooled)} and Reduction in capacity of Captive Power Plant (47 to 22 MW) at Nimbahera, District: Chittorgarh (Rajasthan) by M/s. J. K. Cement Limited.
Category	A	MoEF File No.	IA-J-11011/243/2016-IA-II(I), dated 14/02/2022
Name of the Entity / Corporate Office*	J. K. CEMENT LTD. KANPUR, J. K. Cement Works, Kailash Nagar, Nimbahera, Chittorgarh, Rajasthan-312617		
Entity's PAN*	AABCJ0355R		
Entity Name as per PAN	J K CEMENT LIMITED.		

Compliance Letter/Report

Reporting Year*	2023-2024	Reporting Period*	April-2023 to September-2023
Remarks (if any)	Submitting herewith the Six Monthly EC Compliance Report for the period: April-2023 to September-2023 of Expansion in Clinker Production Capacity (5.0 to 5.2 MTPA) and WHRS {13.2 (Water Cooled) to 15 MW (Air Cooled)} along with additional WHRS {15 MW (Air Cooled)} and Reduction in capacity of Captive Power Plant (47 to 22 MW) at Nimbahera, District: Chittorgarh (Rajasthan) by M/s. J. K. Cement Limited.		

Details of Production and Project Area

Date of Commencement of Project /Activity:*	<ul style="list-style-type: none"> Line 1 : 1974 Line 2 : 1978 Kiln 3 : 1982 & Upgraded in 1998-99 & converted SLC to ILC in 2021 	Project Area as Per EC Granted (In Case of Mine Lease):*	98.05 ha.
Actual Project Area (In Case of Mine Lease):*	98.05 ha.		

PRODUCTION CAPACITY

Name of the Product*	Units*	As per EC granted*	Production during last Financial Year: 2022-23	Production during Current Year: 2023-24(April-Sep-23)
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Clinker Production	Million Tons Per Annum	5.20	2.191689	1.202670
Cement Production	Million Tons Per Annum	6.50	3.285768	1.681625
CPP (Electricity Generation)	MW/Hr.	22	5820 Mwh	1449.0045MWh
WHRB (Electricity Generation)	MW/Hr.	30	70051.817 Mwh	43281.036MWh

ENVIRONMENT CLEARANCE COMPLIANCE REPORT OF J. K. CEMENT WORKS, NIMBAHERA (RAJASTHAN)				
EC Compliance Report: April-2023 to September-2023				
Expansion in Clinker Production Capacity (5.0 to 5.2 MTPA) and WHRS {13.2 (Water Cooled) to 15 MW (Air Cooled)} along with additional WHRS {15 MW (Air Cooled)} and Reduction in capacity of Captive Power Plant (47 to 22 MW) at Nimbahera, District: Chittorgarh (Rajasthan) by M/s. J. K. Cement Limited				
EC Letter No.: IA-J-11011/243/2016-IA-II(I) dated 14.02.2022				
A.	SPECIFIC CONDITION: -			
S. No.	Condition Type	Condition Details	Self Declaration	Remarks / Reason
i.	Miscellaneous	All the observations made in the inspection report of Regional Office dated 02/12/2021 shall be compiled within one month from date of issue of the Environment Clearance. Compliance status in this regard shall be furnished to the Ministry and the concerned Regional Office of the MoEF&CC.	Complied	Unit has complied with all the observations in the inspection report of Regional Office dated 02/12/2021 and submitted Compliance status report to IRO & RO MoEFCC, Jaipur on 22/12/2021.
ii.	Air Quality Monitoring And Preservation	Particulate matter emissions from all the stacks shall be less than 30 mg/Nm ³ .	Complied	<ul style="list-style-type: none"> Stack emission are being maintained less than 30 mg/Nm³. Detail stack emission monitoring results (in-house & NABL accredited third party) for the period: April-2023 to September-2023 are enclosed as <u>Annexure-1</u>.
iii.	Water Quality Monitoring And Preservation	Air Cooled condensers shall be used in the captive power plant in place of water-cooled system	Complied	Unit has provided the air cooled condensers (ACC) in it is CPP and commissioning of ACC is under progress of WHRS.

iv.	Water Quality Monitoring And Preservation	Water consumption shall be reduced from 4071 KLD to 2892 KLD due to switch over from water cooled system to air cooled condensers. Compliance status in this regard shall be submitted to the concerned Regional Office of the MoEF&CC along with the six-monthly compliance report.	Yet to be complied	<ul style="list-style-type: none"> Air cooled condenser is commission in the month of June-2023 for WHRS and presently water consumption is less than 150 KLD in WHRS.
v.	Air Quality Monitoring And Preservation	Dioxin and furans shall be monitored twice a year during co-processing of hazardous waste and report shall be submitted to the Regional Office of the MoEF&CC.	Complied	Unit has conducted dioxin & furans monitoring through NABL accredited laboratory at twice a year basis during co-processing of hazardous wastes and monitoring report of the same for the period: April-2023 to September-2023 is enclosed as <u>Annexure-2</u> .
vi.	Greenbelt	Greenbelt shall be developed in 33% of the total area all the entire periphery of the area with a density of 2500 trees per ha by 31 st December, 2022 as committed. This shall include development of greenbelt with a width of 20m within the project site towards 4 villages around the plant i.e. Rampura (220 m), Ahirpura (340 m), Kautha (350 m) and Nimbahera (860 m) from the project site. Additionally, 14.57 ha land located outside the project shall be brought under greenbelt development as committed by the proponent.	Complied	<p>Unit has developed the greenbelt in 33% of the total area.</p> <p>Details of greenbelt/plantation are: -</p> <ul style="list-style-type: none"> Total plant area - 98.05 ha. Total plantation area covered - 32.36 ha. Total nos. of tree planted - 90481 nos. till FY 2021-22. Plantation done in FY 2022-23 is 3237 nos. of sapling to increase the plant density. Plantation done in FY 2023-24 is 3177 nos. of sapling to increase the plant density. Apart from above additional plantation has done on 14.57 ha outside the plant premises.
vii.	Water Quality Monitoring And Preservation	Rainwater harvesting shall be implemented as per the action plan submitted in the addendum EIA report.	Complied	Unit have not proposed any action plan for rainwater harvesting implementation in addendum EIA report. However, unit has constructed 5 nos. of injection wells, 2 nos. of check dams at seasonal nalla and 1 water pond in south direction of the plant.
viii.	Statutory compliance	All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.	Complied	Unit has developed covered storage yard with impervious flooring. Provided water spray system for dust suppression at raw material handling transfer point, as per requirement.
ix.	Miscellaneous	Slip roads shall be provided at the gates and	Complied	Unit has provided separate entry and exit gates for raw material

		along crossings on main roads.		and manpower, hence slip road is not required.
x.	Miscellaneous	All internal and connecting road to the Highway shall be black topped/concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.	Complied	All internal and connecting roads to the Highways are blacked topped & concreted.
xi.	Statutory compliance	Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to the concerned Regional Office of the MoEF&CC.	Complied	Performance monitoring of pollution control equipment is being done and stack emissions are observed less than 30 mg/Nm ³ . Please refer the Annexure-1 for in house and NABL accredited third party stack emission monitoring reports.
xii.	Statutory compliance	The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Complied	<p>Combined WLCP has been prepared for 5 Nos. of captive Limestone Mines and 2 Nos. of Integrated Cement Plant of J K Cement Ltd are situated within 10 Km radius in Tehsil Nimbahera, Chittorgarh District.</p> <p>Wildlife Conservation Plan (WCP) has been prepared for 6 Schedule-I Species found in the buffer area during the survey i.e.:</p> <p>-</p> <ul style="list-style-type: none"> a) Pavocristatus (Indian Peafowl), b) Pantherapadusfusca (Indian Leopard), c) Prionailurusrubiginosus (Rusty-Spotted Cat), d) Canis lupus pallipes (Indian Wolf), e) Varanusbengalensis (Indian Monitor Lizard) f) Gyps indicus/Gyps bengalensis (Indian Vulture) <p>Wild life conservation plan has been forwarded by the DFO - Chittorgarh to Divisional Chief Conservator of Forest vide letter No.: F(5) Survey/UVS/2021-22/4089 dated 13.07.2021 and accordingly 20% amount of Rs. 57.07 Lakh deposited to DFO - Chittorgarh against the total amount of WCP of Rs. 285.30/- Cr in July-2021.</p>
B.	GENERAL EC CONDITIONS: -			
I.	Statutory Compliance			
i.	Statutory compliance	The Environment Clearance (EC) granted to the project/activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It	Complied	<ul style="list-style-type: none"> • Unit has obtained the CTE from RSPCB, Jaipur vide letter No.: F(CPM)/Chittorgarh (Nimbahera)/4002(1)/2020-2021/1203-1205, Order No.: 2022-2023/CPM/8585 dated 18.07.2022.

		does not tantamount/ construe to approvals/ consent/permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/ Subordinate legislations, etc., as may be applicable to the project.		<ul style="list-style-type: none"> Unit has obtained the CTO from RSPCB, Jaipur vide letter No.: F(HSW)/Chittorgarh (Nimbahera)/20(1)/2022-2023/2567-2569, Order No.: 2022-2023/CPM/8620 dated 22.09.2022.
II.	Air Quality Monitoring And Preservation			
i.	Air Quality Monitoring And Preservation	The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules, 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complied	<ul style="list-style-type: none"> Continuous emission monitoring system has been installed for monitoring of PM, SO₂ and NO_x at the stack of all Kilns, Boilers. Opacity meters have been installed for continuous monitoring of PM at the stacks of Coal mill, Cement mill and Clinker cooler etc. Real time continuous monitoring system has been connected 24x7 with RSPCB and CPCB online server. Online CAAQMS system already installed at 4 locations in periphery of plant area and 24x7 connected to RPCB/CPCB web portal. CEMS remote calibration done by CPCB and CEMS & CAAQMS periodical calibration done by OEM and NABL lab.
ii.	Air Quality Monitoring And Preservation	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Complied	<ul style="list-style-type: none"> Fugitive emission monitoring is being carried out by in-house facility as well as NABL recognized laboratory. Detail fugitive emission monitoring results (NABL accredited laboratory) for the period: April-23 to September-23 is enclosed as <u>Annexure-3</u>.
iii.	Air Quality Monitoring And Preservation	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Complied	Bag house and bag filter are having mechanized bag cleaning system and DP system provided which indicate the leakages.
iv.	Air Quality Monitoring And Preservation	The project proponent shall ensure covered transportation and conveying of ore, coal, and other raw material to prevent spillage and dust generation; Use closed bulkers for	Complied	Raw materials transported through trucks covered with tarpaulin and bulker are being used for fly ash transportation.

		carrying fly ash.		
v.	Air Quality Monitoring And Preservation	The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;	Complied	Covered sheds are provided for storage of raw materials & also developed dense plantation around the plant hence, wind shelter fence is not required.
vi.	Air Quality Monitoring And Preservation	Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.	Complied	Ventilation system has been provided at all the required locations.
III. Water Quality Monitoring And Preservation				
i.	Water Quality Monitoring And Preservation	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25 th August, 2014 (Cement) and subsequent amendment dated 9 th May, 2016 (Cement) and 10 th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305(E) dated 7 th December, 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complied	The unit is Zero liquid discharge facility and as per the CPCB guideline, the continuous effluent monitoring system is not required for cement plant. <ul style="list-style-type: none"> • OCEMS have been installed and connected 24x7 with RSPCB and CPCB online portal. • CEMS Remote calibration done by CPCB and periodical calibration by OEM and NABL lab.
ii.	Water Quality Monitoring And Preservation	The project proponent shall regularly monitor ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complied	Ground water quality is being test by NABL recognized lab, the Pre-monsoon ground water quality analysis report is enclosed as <u>Annexure - 4.</u>

iii.	Water Quality Monitoring And Preservation	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Complied	<ul style="list-style-type: none"> • STP of capacity: 500 KLD; based on Activated Sludge Process (ASP) technology has been provided for domestic waste water treatment and treated water is being utilized for plantation. • Additionally, unit has installed two reed bed technology based STP with the capacity of 55 KLD and 35 KLD each. • STP treated water quality analysis report for the period: April-23 to September 23 is enclosed as Annexure-5.
iv.	Water Quality Monitoring And Preservation	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	Complied	Raw material stored in covered shed and finished product in silo. The garland drains and collection pits has been provided for each stockpile to arrest the run-off in the event of heavy rainfall.
v.	Water Quality Monitoring And Preservation	Water meters shall be provided at the inlet to all unit processes in the cement plant.	Complied	Water meters has been provided at all the strategic locations in the existing plant.
vi.	Water Quality Monitoring And Preservation	The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Complied	<ul style="list-style-type: none"> • Cement manufacturing process is based on dry process technology. • Air cooled condensers in captive power plant is installed. • Treated waste water from CPP is being reused in coal yard for dust suppression. • WHR treated waste water is being recycle in cement plant for machineries cooling purpose only. • Domestic sewage generated is being treated at STP and treated water is reused for plantation/greenbelt development. • 'Zero' liquid discharge are being maintained.
IV.	Noise And Vibration Monitoring And Prevention			
i.	Noise And Vibration Monitoring And Prevention	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Complied	<ul style="list-style-type: none"> • Unit is being monitored the ambient noise level on regular basis. • Noise level monitoring report for the period: April-23 to September-23 is enclosed as Annexure- 6.
V.	Energy Conservation Measures			
i.	Energy Conservation	Waste heat recovery system shall be provided for kiln and cooler.	Complied	Presently, Waste Heat Recovery system has been installed with capacity of 15 MW

	Measures																																					
ii.	Energy Conservation Measures	The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	Complied	<p>All suitable measures like VVFD, high efficient motors have been adopted to reduce power consumption.</p> <p>The specific Power and Thermal Energy Consumption is as given below:</p> <table><tr><th rowspan="2">Month</th><th colspan="2">Power Consumption (kwh/ton of Cement</th><th rowspan="2">Thermal Energy Kcal/ Kg. of Clinker (with loss)</th></tr><tr><th>OPC (43+53)</th><th>PPC (PPC+WS+PPCSS)</th></tr><tr><td>Apr-23</td><td>29.57</td><td>24.6</td><td>780</td></tr><tr><td>May-23</td><td>30.03</td><td>24.92</td><td>783</td></tr><tr><td>Jun-23</td><td>31.43</td><td>26.19</td><td>822</td></tr><tr><td>Jul-23</td><td>32.06</td><td>27.34</td><td>819</td></tr><tr><td>Aug-23</td><td>34.66</td><td>27.89</td><td>816</td></tr><tr><td>Sep-23</td><td>32.13</td><td>27.08</td><td>845</td></tr><tr><td>Average</td><td>31.66</td><td>26.33</td><td>811</td></tr></table>	Month	Power Consumption (kwh/ton of Cement		Thermal Energy Kcal/ Kg. of Clinker (with loss)	OPC (43+53)	PPC (PPC+WS+PPCSS)	Apr-23	29.57	24.6	780	May-23	30.03	24.92	783	Jun-23	31.43	26.19	822	Jul-23	32.06	27.34	819	Aug-23	34.66	27.89	816	Sep-23	32.13	27.08	845	Average	31.66	26.33	811
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iii.	Energy Conservation Measures	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.	Complied	Unit has recently installed & commissioned 7.0 MW solar power plant, apart from this solar street light in colony and rooftop solar system has provided.																																		
iv.	Energy Conservation Measures	Provide the project proponent for LED lights in their offices and residential areas.	Complied	LED lights provided in offices & residential township.																																		
VI.	Waste Management																																					
i.	Waste management	Used refractories shall be recycled as far as possible.	Complied	Used refractories is sold and partially recycled in existing plant and same practice will be adopted in proposed plant																																		
VII.	Green Belt																																					
i.	Green Belt	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees in the plant premises.	Complied	GHG emission inventory report has been submitted along with last compliance report.																																		
VIII.	Public Hearing And Human Health Issues																																					

i.	Public hearing and human health issues	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Complied	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan are implemented.
ii.	Public hearing and human health issues	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.	Complied	There is no any activity is carried out in high temperature work zone however during shutdown, we start working after cooling of equipment and same practice will be followed in proposed unit. Personal protective equipment is being provided to respective worker.
iii.	Public hearing and human health issues	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Complied	Periodical medical examination of all employee and workmen are being carried out and report is being maintained.

IX. Environment Management

i.	Environment Management	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017- IA.III dated 30/09/2020.	Complied	Unit has been carried out combined CSR activities for Cement Plant and its associated mines, on the focus area of infrastructure, health, sanitation & water, women-empowerment, sports, education etc. CSR activities expenditure occurred in the FY: 2022-23 is given as below: -
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Details of CSR amount spent in FY 2022-23

SN	Name of the project	Item from the list of activities in Schedule VII to the Act	Local Area or other	District	Amount spent for the Project (inRs.)
1	BOOKS PROVIDED IN SHRI KALLAJI VEDIC VISHVAVIDYA	Art & Culture	Nimbahera	Chittorgarh	₹ 1,49,800.00
2	BOOKS PROVIDED IN SHRI KALLAJI VEDIC VISHVAVIDYA		Nimbahera	Chittorgarh	₹ 19,704.00
3	PROV.ZEE RAJ.LAUNCHING FLAGSHIP PROG."ZEE VIBRANT"		Chittorgadh	Chittorgarh	₹ 2,00,000.00
	Especial Eye Camp	Health	Nimbahera	Chittorgarh	₹ 2,26,000.00
4	REPAIR & RENOVATION WORK GOVT. HOSPITAL		Nimbahera	Chittorgarh	₹ 7,62,284.00
5	CC FLOORING WORK AT MALIAKERA SCHOOL	Educational Charity	Maliakhedi	Chittorgarh	₹ 2,51,845.00
6	480 SILVER COINS PUR FOR REUBLIC DAY JAN'23		Nimbahera	Chittorgarh	₹ 3,56,021.00
7	Malyakhedi boundry wall		Maliakhedi	Chittorgarh	₹ 2,93,316.00

8	Anganwari Banjara Basti		Nimbahera	Chittorgarh	₹ 11,47,917.00
9	Govt. school Nimbahera		Nimbahera	Chittorgarh	₹ 41,742.00
10	Tree pruning work below 132KV D/C	Enviroment	Bamaniya	Chittorgarh	₹ 47,536.00
11	Construction of CC Road at Karunda Village	Infrastructure Development	karunda	Chittorgarh	₹ 15,70,940.00
12	Community Center and Boundary Wall Falwa		Falwa	Chittorgarh	₹ 9,99,591.00
13	Development at Karunda Village Mokshdham		karunda	Chittorgarh	₹ 20,23,239.00
14	Selfie point at JK Circle Nimbahera		Nimbahera	Chittorgarh	₹ 15,34,000.00
15	Construction of CC Chowk at Dhanora Vill		Dhanora	Chittorgarh	₹ 16,37,104.00
16	MAKING OF WBM ROAD AT FACHAR AHIRAN VILL		Phachar	Chittorgarh	₹ 10,92,980.00
19	CC ROAD CONSTRUCTION AT KARUNDA VILLAGE		karunda	Chittorgarh	₹ 14,22,158.00
20	GREWAL WORK LOADING & TRANSPORTATION for road con.		Nimbahera	Chittorgarh	₹ 3,39,486.00
22	Const.of CC road at Dhanora village		Dhanora	Chittorgarh	₹ 7,31,712.00
23	GREWAL TRANSPORTATION WORK AT BAMNIYA VI		Bamaniya	Chittorgarh	2,20,660.00
24	Transporation of gravel nbh-Bansa vill		Bansa	Chittorgarh	₹ 50,268.00
25	CONST OF community hall near HANUMAN TEMPLE		Charliya	Chittorgarh	₹ 4,72,922.00
26	Const.of CC Road in Bansa		Bansa	Chittorgarh	₹ 36,90,737.00
28	3 NOS.COOLER & 4 NOS.FAN FR GOVT.HOSPITAL NAYAGAON		Nayagaon	Chittorgarh	₹ 29,330.00
31	Bhanwaliya road cons.		Bhanwaliya	Chittorgarh	₹ 71,42,523.00
32	4 NOS.LED HIGHT MAST LIGHTING FOR MURLIYA VILLAGE		Murliya	Chittorgarh	₹ 14,094.00
33	Pipaliya(Karunda)Shamshan Development		karunda	Chittorgarh	₹ 13,47,110.00
34	CC Road Sand		Sand	Chittorgarh	₹ 12,52,461.00
35	Phalwa community hall		Falwa	Chittorgarh	₹ 5,22,105.00
36	Karthana boundry wall		Karthjana	Chittorgarh	₹ 8,03,818.00
37	Shamshan Phachar		Phachar	Chittorgarh	₹ 21,94,543.00
38	Charbhuja temple community center Charliya		Charliya	Chittorgarh	₹ 12,49,665.00
39	community councelling hall at SDM office		Nimbahera	Chittorgarh	₹ 11,90,482.00
41	CONTRIBUTION OF DR APJ ABDUL KALAM 7TH DEATH ANNIV	National Functions	Nimbahera	Chittorgarh	₹ 20,000.00
42	PAY AG 2000 NATIONAL FLAG-GHAR GHAR TIRANGA YOJANA		Nimbahera	Chittorgarh	₹ 50,000.00
43	PAY AG 4000 NATIONAL FLAG-GHAR GHAR TIRANGA YOJANA		Nimbahera	Chittorgarh	₹ 1,00,000.00
44	CONTRIBUTION FOR DISTRICT FOOTBALL ASSOCIATION	Sports Promotion	Nimbahera	Chittorgarh	₹ 25,000.00
45	CONTRIBUTION OF RAJKIYA UCHCH MADHYAMIK VIDYALAYA		Nimbahera	Chittorgarh	₹ 50,000.00
46	CONTRIBUTION FR 18TH NATIONAL SCOUT GUIDE JAMBOREE		Nimbahera	Chittorgarh	₹ 1,50,000.00
47	SPORTS ITEM PURCHASED FOR KARUNDA PANCHAYAT		karunda	Chittorgarh	₹ 14,550.00

48	280 NOS.KABADDI MAT PUR.FR PAYARI & SAND GRAM PANC		Sand	Chittorgarh	₹ 3,01,056.00
49	CONTRIBUTION OF CRICKET TOURNAMENT BADOLI GHATA		Badolighata	Chittorgarh	₹ 40,000.00
50	CONTRIBUTION OF CRICKET TOURNAMENT CHITTORGARH		Chittorgadh	Chittorgarh	₹ 10,00,000.00
51	CONTRIBUTION OF HURA BA GO SEWA SANSTHAN		Nimbahera	Chittorgarh	₹ 1,25,000.00
52	PROV.SPORTS TOURNAMNET"408191		Nimbahera	Chittorgarh	₹ 1,00,000.00
53	CONTRIBUTION FOR DISTRICT FOOTBALL ASSOCIATION		Nimbahera	Chittorgarh	₹ 60,000.00
54	CONTRIBUTION OF RAJIV GANDHI SPORTS COMPETITON		Nimbahera	Chittorgarh	₹ 50,000.00
55	ORGANISING CULTURAL EVENT-MEERA SMRATI SANSTHAN		Chittorgadh	Chittorgarh	₹ 1,00,000.00
57	Khel Ayojan Samiti Sukhwara	Chittorgadh	Chittorgarh	₹ 3,00,000.00	
58	CONSTRUCTION OF NALLA AT DHANORA VILLAGE	Sanitation	Dhanora	Chittorgarh	₹ 5,11,140.00
59	Skill Development for women	Livelihood Development	All	Chittorgarh	19,78,700.00
TOTAL					₹ 3,97,82,879.00

ii.	Environment Management	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/ violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Complied	Unit has implemented the Environment Policy duly approve by the Board of Directors and same has been submitted to all concern authorities along with last EC compliance report.
iii.	Environment Management	A Separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Complied	A separate environmental management cell with qualified personnel is already established & has sufficient monitoring equipment in environmental laboratory.
X.	Miscellaneous			

i.	Miscellaneous	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied	Publically published in 02 local newspapers namely Rajasthan Patrika and Dainik Bhaskar on 17/02/2022 regarding grant of Environment Clearance.
ii.	Miscellaneous	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied	A copy of EC has been submitted to the all concern local authority and pollution control board, Zila Parishad Chittorgarh, DIC office Chittorgarh, District Collector Chittorgarh, SDM Office, Nimbahera on 16/02/2022.
iii.	Miscellaneous	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied	Six monthly compliance report has been uploaded at company website, which can be access on: https://www.jkcement.com/environmental-compliance
iv.	Miscellaneous	The project proponent shall monitor the criteria pollutants level namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Complied	Unit is monitoring the PM ₁₀ , SO ₂ , NO _x in ambient levels and PM, SO ₂ , NO _x in stack emission on regular basis. Data of the same are being displayed outside the plant main gate and uploaded on the website of the company along with EC compliance report.
v.	Miscellaneous	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Complied	Periodical EC compliance is being submitted. Last six-monthly EC compliance report for the period: Oct-22 to March-23 has been submitted through e-mail on 29.05.2023 to the respective Regional Office of MoEF&CC, Zonal Office of CPCB and HO/RO of RSPCB vide letter No.: NBH/PC-14/C11 dated 17.05.2023 and same has also been uploaded at MoEF&CC

				website.
vi	Miscellaneous	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Complied	Unit has submitted the Environment Statement Report (ESR) in Form-V for the FY: 2022-23 for Cement Plant, 22 MW CPP and 13.2 MW WHRS to RSPCB Office vide our letter No.: NBH-PC-ESR-21- 762, 763 & 764, dated 22.09.2023, respectively.
vii.	Miscellaneous	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Complied	The total existing capital investment of Rs. 913.87 crores for cement plant.
viii.	Miscellaneous	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Complied	Complied with.
ix.	Miscellaneous	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Complied	Noted, No further expansion or modifications in the plant will be done without prior approval of the MoEF&CC.
x.	Miscellaneous	Concealing factual data or submission of false/ fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Complied	Noted.
xi.	Miscellaneous	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Complied	Noted
xii.	Miscellaneous	The Ministry reserves the right to stipulate	Complied	Agreed.

		additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.		
xiii.	Miscellaneous	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Complied	Noted and agreed.
xiv.	Miscellaneous	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Complied	Noted and agreed.

In compliance to the MoEF&CC Office Memorandum F. No. IA3-22/8/2021-1A.III [150512] dated 18.07.2022 regarding Sensitization of project proponents on implementation of ban on Single Use Plastic (SUP) – Unit has been conducted awareness program to their employee, stakeholders and to the society in nearby villages, photographs of the same is enclosed in as **Annexure-07** and CEMS calibration report has been attached as **Annexure-08**

J.K. Cement WORKS, NIMBAHERA (RAJ)									Annexure-1
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE									
HALF YEARLY REPORT FY-2023-24 (April' 2023 to September' 2023)									
DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT	CROSS SECTIONAL AREA OF DUCT (M ²)	STACK GASES TEMP. (°K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)	
April'2023									
07.04.2023	L.S. CRUSHER (B.F.)	0.26	335	9.91	2.29	12.4	15.7	0.002	
14.04.2023	L.S. CRUSHER (B.F.)	0.26	336	10.37	2.39	16.7		0.003	
21.04.2023	L.S. CRUSHER (B.F.)	0.26	331	9.65	2.26	19.0		0.004	
27.04.2023	L.S. CRUSHER (B.F.)	0.26	337	9.87	2.27	14.5		0.003	
May'2023									
04.05.2023	L.S. CRUSHER (B.F.)	0.26	328	9.27	2.19	13.1	18.1	0.002	
12.05.2023	L.S. CRUSHER (B.F.)	0.26	330	9.77	2.29	25.0		0.005	
17.05.2023	L.S. CRUSHER (B.F.)	0.26	326	9.65	2.29	15.7		0.003	
26.05.2023	L.S. CRUSHER (B.F.)	0.26	331	10.61	2.48	18.5		0.004	
June'2023									
05.06.2023	L.S. CRUSHER (B.F.)	0.26	328	9.27	2.19	13.1	15.5	0.002	
12.06.2023	L.S. CRUSHER (B.F.)	0.26	330	9.77	2.29	14.6		0.003	
21.06.2023	L.S. CRUSHER (B.F.)	0.26	326	9.65	2.29	15.7		0.003	
26.06.2023	L.S. CRUSHER (B.F.)	0.26	331	10.61	2.48	18.5		0.004	
July'2023									
01.07.2023	L.S. CRUSHER (B.F.)	0.26	333	9.68	2.25	18.6	14.6	0.004	
07.07.2023	L.S. CRUSHER (B.F.)	0.26	325	8.43	2.01	12.1		0.002	
21.07.2023	L.S. CRUSHER (B.F.)	0.26	323	9.65	2.31	10.1		0.002	
28.07.2023	L.S. CRUSHER (B.F.)	0.26	323	7.70	1.85	17.4		0.003	
August'2023									
02.08.2023	L.S. CRUSHER (B.F.)	0.26	325	11.49	2.74	10.2	12.5	0.002	
09.08.2023	L.S. CRUSHER (B.F.)	0.26	327	11.02	2.61	15.0		0.003	
17.08.2023	L.S. CRUSHER (B.F.)	0.26	328	9.65	2.28	13.0		0.003	
24.08.2023	L.S. CRUSHER (B.F.)	0.26	332	9.04	2.11	11.8		0.002	
September'2023									
07.09.2023	L.S. CRUSHER (B.F.)	0.26	329	9.62	2.27	10.2	13.8	0.002	
13.09.2023	L.S. CRUSHER (B.F.)	0.26	332	9.18	2.14	17.5		0.003	
21.09.2023	L.S. CRUSHER (B.F.)	0.26	333	9.65	2.25	11.7		0.002	
28.09.2023	L.S. CRUSHER (B.F.)	0.26	335	9.36	2.16	15.7		0.003	
April'2023									
STOPPED	KILN No.1 (Bag House)	Not in operation					0.0	0.000	
May'2023									
STOPPED	KILN No.1 (Bag House)	Not in operation					0.0	0.000	
June'2023									
STOPPED	KILN No.1 (Bag House)	STOPPED					12.0	STOPPED	
12.06.2023		4.90	388.00	14.38	54.12	14.80		0.069	
20.06.2023		4.90	393.00	14.68	54.54	12.20		0.057	
26.06.2023		4.90	391.00	15.35	57.32	8.90		0.044	
July'2023									
04.07.2023	KILN No.1 (Bag House)	4.90	425.00	10.33	35.49	6.30	9.1	0.019	
10.07.2023	KILN No.1 (Bag House)	4.90	431.00	11.47	38.86	8.60		0.029	
21.07.2023	KILN No.1 (Bag House)	4.90	428.00	12.13	41.38	12.90		0.046	
29.07.2023	KILN No.1 (Bag House)	4.90	425.00	13.25	45.52	8.70		0.034	
August'2023									
STOPPED	KILN No.1 (Bag House)	Not in operation							
September'2023									
STOPPED	KILN No.1 (Bag House)	Not in operation							

April'2023								
03.04.2023	KILN No. 2 (Bag house)	3.80	425.00	14.29	38.08	14.00	16.8	0.046
10.04.2023	KILN No. 2 (Bag house)	3.80	439.00	15.16	39.11	15.90		0.054
17.04.2023	KILN No. 2 (Bag house)	3.80	421.00	15.81	42.53	15.20		0.056
26.04.2023	KILN No. 2 (Bag house)	3.80	426.00	14.65	38.94	22.20		0.075
May'2023								
03.05.2023	KILN No. 2 (Bag house)	3.80	398.00	14.65	41.68	14.10	14.2	0.051
10.05.2023	KILN No. 2 (Bag house)	3.80	408.00	15.04	41.74	12.90		0.047
15.05.2023	KILN No. 2 (Bag house)	3.80	417.00	14.83	40.27	15.70		0.055
STOPPED	KILN No. 2 (Bag house)	STOPPED						STOPPED
June'2023								
STOPPED	KILN No. 2 (Bag house)	STOPPED					7.4	STOPPED
17.06.2023	KILN No. 2 (Bag house)	3.80	411.00	15.93	43.89	9.50		0.036
20.06.2023	KILN No. 2 (Bag house)	3.80	438.00	16.65	43.05	3.10		0.012
27.06.2023	KILN No. 2 (Bag house)	3.80	421.00	14.85	39.94	9.70		0.033
July'2023								
STOPPED	KILN No. 2 (Bag house)	STOPPED					9.5	0.000
11.07.2023	KILN No. 2 (Bag house)	3.80	438.00	14.03	36.27	9.50		0.030
17.07.2023	KILN No. 2 (Bag house)	3.80	433.00	14.37	37.58	8.10		0.026
24.07.2023	KILN No. 2 (Bag house)	3.80	435.00	13.55	35.27	10.90		0.033
August'2023								
05.08.2023	KILN No. 2 (Bag house)	3.80	418.00	14.29	38.71	6.40	7.2	0.021
11.08.2023	KILN No. 2 (Bag house)	3.80	425.00	16.40	43.70	8.70		0.033
18.08.2023	KILN No. 2 (Bag house)	3.80	411.00	15.36	42.32	6.20		0.023
25.08.2023	KILN No. 2 (Bag house)	3.80	410.00	14.09	38.92	7.40		0.025
September'2023								
STOPPED	KILN No. 2 (Bag house)	STOPPED					13.9	0.000
15.09.2023	KILN No. 2 (Bag house)	3.80	433.00	13.76	35.99	14.80		0.046
22.09.2023	KILN No. 2 (Bag house)	3.80	438.00	14.51	37.51	11.90		0.039
28.09.2023	KILN No. 2 (Bag house)	3.80	431.00	15.08	39.62	15.00		0.051
April'2023								
06.04.2023	KILN No. 3 (Bag House)	15.89	388	15.62	190.63	13.30	11.9	0.219
12.04.2023	KILN No. 3 (Bag House)	15.89	407	15.80	183.82	14.80		0.235
19.04.2023	KILN No. 3 (Bag House)	15.89	428	16.46	182.11	8.00		0.126
27.04.2023	KILN No. 3 (Bag House)	15.89	413	15.45	177.14	11.30		0.173
May'2023								
04.05.2023	KILN No. 3 (Bag House)	15.89	398	15.37	182.87	6.10	8.6	0.096
11.05.2023	KILN No. 3 (Bag House)	15.89	406	14.58	170.05	11.20		0.165
18.05.2023	KILN No. 3 (Bag House)	15.89	409	16.33	189.06	10.50		0.172
24.05.2023	KILN No. 3 (Bag House)	15.89	401	15.07	177.95	6.60		0.101
June'2023								
STOPPED	KILN No. 3 (Bag House)	STOPPED					9.6	STOPPED
STOPPED	KILN No. 3 (Bag House)	STOPPED						STOPPED
20.06.2023	KILN No. 3 (Bag House)	15.89	411	16.91	194.82	7.90		0.133
28.06.2023	KILN No. 3 (Bag House)	15.89	414	16.34	186.89	11.30		0.182
July'2023								
05.07.2023	KILN No. 3 (Bag House)	15.89	378	8.93	111.87	7.90	13.0	0.076
11.07.2023	KILN No. 3 (Bag House)	15.89	381	9.99	124.16	14.30		0.153
17.07.2023	KILN No. 3 (Bag House)	15.89	388	11.15	136.08	15.60		0.183
24.07.2023	KILN No. 3 (Bag House)	15.89	380	12.00	149.53	14.10		0.182
August'2023								
07.08.2023	KILN No. 3 (Bag House)	15.89	419	14.13	159.69	12.60	13.4	0.174
17.08.2023	KILN No. 3 (Bag House)	15.89	421	15.01	168.83	11.50		0.168
24.08.2023	KILN No. 3 (Bag House)	15.89	406	15.32	178.68	14.10		0.218
29.08.2023	KILN No. 3 (Bag House)	15.89	420	15.79	178.02	15.30		0.235
September'2023								
05.09.2023	KILN No. 3 (Bag House)	15.89	398	11.43	135.99	9.30	10.6	0.109
13.09.2023	KILN No. 3 (Bag House)	15.89	403	11.36	133.48	14.30		0.165
18.09.2023	KILN No. 3 (Bag House)	15.89	397	12.07	143.97	12.40		0.154
27.09.2023	KILN No. 3 (Bag House)	15.89	401	12.64	149.26	6.50		0.084
April'2023								
06.04.2023	FOLAX COOLER (E.S.P)	12.56	395	12.91	154.87	12.30	16.6	0.165
12.04.2023	FOLAX COOLER (E.S.P)	12.56	391	11.53	138.76	16.60		0.199
19.04.2023	FOLAX COOLER (E.S.P)	12.56	399	10.37	124.01	22.00		0.236
27.04.2023	FOLAX COOLER (E.S.P)	12.56	382	7.92	94.71	15.60		0.128

May'2023								
03.05.2023	FOLAX COOLER (E.S.P)	12.56	381	9.05	108.92	16.10	14.0	0.152
10.05.2023	FOLAX COOLER (E.S.P)	12.56	394	9.77	117.20	15.70		0.159
19.05.2023	FOLAX COOLER (E.S.P)	12.56	388	9.30	111.93	12.30		0.119
26.05.2023	FOLAX COOLER (E.S.P)	12.56	385	9.81	117.68	11.80		0.120
June'2023								
STOPPED	FOLAX COOLER (E.S.P)	STOPPED					17.0	0.000
STOPPED	FOLAX COOLER (E.S.P)	STOPPED						0.000
20.06.2023	FOLAX COOLER (E.S.P)	12.56	378	10.09	121.43	14.90		0.156
28.06.2023	FOLAX COOLER (E.S.P)	12.56	375	9.98	119.72	19.10		0.198
July'2023								
06.07.2023	FOLAX COOLER (E.S.P)	12.56	385	9.66	117.39	15.70	12.2	0.159
14.07.2023	FOLAX COOLER (E.S.P)	12.56	381	8.00	97.53	9.30		0.078
20.07.2023	FOLAX COOLER (E.S.P)	12.56	388	9.30	112.65	14.30		0.139
27.07.2023	FOLAX COOLER (E.S.P)	12.56	375	9.53	115.81	9.60		0.096
August'2023								
08.08.2023	FOLAX COOLER (E.S.P)	12.56	389	9.06	110.46	8.90	10.8	0.085
18.08.2023	FOLAX COOLER (E.S.P)	12.56	375	7.46	91.25	13.40		0.106
22.08.2023	FOLAX COOLER (E.S.P)	12.56	390	10.10	122.74	10.90		0.116
29.08.2023	FOLAX COOLER (E.S.P)	12.56	398	8.08	98.51	9.90		0.084
September'2023								
07.09.2023	FOLAX COOLER (E.S.P)	12.56	395	8.15	100.01	22.10	16.3	0.191
12.09.2023	FOLAX COOLER (E.S.P)	12.56	401	9.03	110.81	12.50		0.120
22.09.2023	FOLAX COOLER (E.S.P)	12.56	388	7.88	97.02	17.70		0.148
29.09.2023	FOLAX COOLER (E.S.P)	12.56	393	9.68	119.57	12.80		0.132
April'2023								
STOPPED	COAL MILL - 1 (B.F.)	Not in operation						
May'2023								
STOPPED	COAL MILL - 1 (B.F.)	Not in operation						
June'2023								
STOPPED	COAL MILL - 1 (B.F.)	Not in operation						
July'2023								
STOPPED	COAL MILL - 1 (B.F.)	Not in operation						
August'2023								
STOPPED	COAL MILL - 1 (B.F.)	Not in operation						
September'2023								
STOPPED	COAL MILL - 1 (B.F.)	Not in operation						
April'2023								
STOPPED	COAL MILL - 2 (B.F.)	Not in operation						
May'2023								
STOPPED	COAL MILL - 2 (B.F.)	Not in operation						
June'2023								
STOPPED	COAL MILL - 2 (B.F.)	Not in operation						

July'2023									
STOPPED	COAL MILL - 2 (B.F.)		Not in operation						
August'2023									
STOPPED	COAL MILL - 2 (B.F.)		Not in operation						
September'2023									
STOPPED	COAL MILL - 2 (B.F.)		Not in operation						
April'2023									
05.04.2023	COAL MILL - 3 (B.F.)	3.52	341	9.59	32.24	8.3	9.4	0.023	
11.04.2023	COAL MILL - 3 (B.F.)	3.52	343	10.86	36.40	9.8		0.031	
19.04.2023	COAL MILL - 3 (B.F.)	3.52	347	10.28	34.56	6.2		0.019	
28.04.2023	COAL MILL - 3 (B.F.)	3.52	345	9.21	30.96	13.1		0.035	
May'2023									
02.05.2023	COAL MILL - 3 (B.F.)	3.52	341	12.05	40.51	9.6	9.0	0.034	
12.05.2023	COAL MILL - 3 (B.F.)	3.52	342	12.92	43.58	9.70		0.037	
16.05.2023	COAL MILL - 3 (B.F.)	3.52	344	10.75	36.14	7.9		0.025	
26.05.2023	COAL MILL - 3 (B.F.)	3.52	348	11.48	38.72	8.6		0.029	
June'2023									
STOPPED	COAL MILL - 3 (B.F.)	STOPPED					7.1	STOPPED	
STOPPED	COAL MILL - 3 (B.F.)	STOPPED						STOPPED	
21.06.2023	COAL MILL - 3 (B.F.)	3.52	339	8.76	29.45	7.7		0.020	
26.06.2023	COAL MILL - 3 (B.F.)	3.52	340	9.43	31.81	6.4		0.018	
July'2023									
05.07.2023	COAL MILL - 3 (B.F.)	3.52	335	7.50	25.46	5.3	8.9	0.012	
11.07.2023	COAL MILL - 3 (B.F.)	3.52	337	7.40	25.20	13.9		0.030	
17.07.2023	COAL MILL - 3 (B.F.)	3.52	338	6.50	22.28	7.7		0.015	
24.07.2023	COAL MILL - 3 (B.F.)	3.52	339	7.20	24.60	8.8		0.019	
August'2023									
10.08.2023	COAL MILL - 3 (B.F.)	3.52	341	11.71	39.88	4.0	7.3	0.014	
17.08.2023	COAL MILL - 3 (B.F.)	3.52	340	12.20	41.69	8.70		0.031	
23.08.2023	COAL MILL - 3 (B.F.)	3.52	339	11.28	38.79	7.2		0.024	
31.08.2023	COAL MILL - 3 (B.F.)	3.52	337	9.94	33.74	9.1		0.027	
September'2023									
05.09.2023	COAL MILL - 3 (B.F.)	3.52	348	11.78	40.51	10.6	8.5	0.037	
13.09.2023	COAL MILL - 3 (B.F.)	3.52	349	12.52	43.20	7.3		0.027	
18.09.2023	COAL MILL - 3 (B.F.)	3.52	345	12.01	41.44	9.3		0.033	
27.09.2023	COAL MILL - 3 (B.F.)	3.52	348	11.42	39.28	6.6		0.022	
April'2023									
06.04.2023	COAL MILL - 4 (B.F.)	1.13	335	12.27	13.29	11.9	13.0	0.014	
15.04.2023	COAL MILL - 4 (B.F.)	1.13	337	12.88	13.90	16.9		0.020	
21.04.2023	COAL MILL - 4 (B.F.)	1.13	339	13.52	14.55	10.90		0.014	
28.04.2023	COAL MILL - 4 (B.F.)	1.13	345	12.12	13.08	12.4		0.014	
May'2023									
03.05.2023	COAL MILL - 4 (B.F.)	1.13	355	8.60	11.82	10.1	12.6	0.010	
10.05.2023	COAL MILL - 4 (B.F.)	1.13	350	5.80	9.62	15.1		0.013	
15.05.2023	COAL MILL - 4 (B.F.)	1.13	359	10.80	13.33	12.5		0.014	
STOPPED	COAL MILL - 4 (B.F.)	STOPPED						STOPPED	
June'2023									
08.06.2023	COAL MILL - 4 (B.F.)	1.13	341	10.70	11.59	10.90	12.2	0.011	
15.06.2023	COAL MILL - 4 (B.F.)	1.13	345	8.84	9.54	9.20		0.008	
19.06.2023	COAL MILL - 4 (B.F.)	1.13	339	11.96	12.95	18.60		0.021	
28.06.2023	COAL MILL - 4 (B.F.)	1.13	342	11.44	12.43	10.10		0.011	
July'2023									
07.07.2023	COAL MILL - 4 (B.F.)	1.13	329	7.61	8.29	9.7	10.4	0.007	
11.07.2023	COAL MILL - 4 (B.F.)	1.13	331	8.95	9.82	8.7		0.007	
18.07.2023	COAL MILL - 4 (B.F.)	1.13	335	8.11	8.90	13.60		0.010	
25.07.2023	COAL MILL - 4 (B.F.)	1.13	332	9.60	10.56	9.4		0.009	
August'2023									
02.08.2023	COAL MILL - 4 (B.F.)	1.13	350	11.28	12.37	8.4	8.5	0.009	
11.08.2023	COAL MILL - 4 (B.F.)	1.13	347	10.67	11.67	7.6		0.008	
19.08.2023	COAL MILL - 4 (B.F.)	1.13	343	9.75	10.63	11.8		0.011	
25.08.2023	COAL MILL - 4 (B.F.)	1.13	345	9.57	10.46	6.10		0.006	

September'2023								
STOPPED	COAL MILL - 4 (B.F.)	STOPPED					6.0	
15.09.2023	COAL MILL - 4 (B.F.)	1.13	341	9.16	10.11	8.30		0.007
22.09.2023	COAL MILL - 4 (B.F.)	1.13	344	10.50	11.55	6.20		0.006
28.09.2023	COAL MILL - 4 (B.F.)	1.13	337	11.24	12.45	3.60		0.004
April'2023								
07.04.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	357	9.37	2.51	12.9	13.4	0.003
12.04.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	355	11.54	3.09	11.70		0.003
17.04.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	348	11.48	3.06	16.50		0.004
26.04.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	347	13.07	3.47	12.30		0.004
May'2023								
10.05.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	357.00	8.60	2.33	12.80	14.20	0.003
19.05.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	356.00	9.06	2.43	15.50		0.003
27.05.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	355.00	11.95	3.20	14.60		0.004
30.05.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	350.00	12.48	3.34	13.70		0.004
June'2023								
06.06.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	355	8.57	2.32	9.70	10.40	0.002
17.06.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	357	9.07	2.43	10.80		0.002
21.06.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	351	11.88	3.18	12.00		0.003
27.06.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	361	12.68	3.39	9.10		0.003
July'2023								
07.07.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	351	12.00	3.24	7.2	9.4	0.002
11.07.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	355	10.86	2.94	10.60		0.003
20.07.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	353	12.97	3.50	11.60		0.004
27.07.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	354	13.51	3.66	8.30		0.003
August'2023								
07.08.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	355.00	8.57	2.32	15.40	13.30	0.003
16.08.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	357.00	9.07	2.46	17.70		0.004
22.08.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	351.00	11.88	3.23	15.00		0.004
28.08.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	361.00	12.68	3.44	5.10		0.002
September'2023								
08.09.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	353	9.25	2.53	15.50	14.60	0.003
14.09.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	348	10.75	2.95	11.30		0.003
20.09.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	355	11.54	3.15	17.20		0.005
26.09.2023	CEMENT MILL - 1 (BAG FILTER)	0.28	357	10.16	2.79	14.40		0.003
April'2023								
08.04.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	341	12.38	7.24	11.90	13.2	0.007
11.04.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	351	12.93	7.51	15.7		0.010
19.04.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	346	13.66	7.96	14.1		0.010
26.04.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	347	13.22	7.65	11.00		0.007
May'2023								
10.05.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	312	10.89	6.34	15.70	15.00	0.009
19.05.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	313	13.04	7.57	13.70		0.009
27.05.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	313	12.49	7.25	15.30		0.010
30.05.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	314	12.08	6.99	15.20		0.009
June'2023								
06.06.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	341	10.74	6.26	15.3	15.7	0.008
15.06.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	339	11.62	6.75	15.3		0.009
21.06.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	342	11.21	6.51	17.1		0.010
27.06.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	343	11.86	6.87	15.2		0.009
July'2023								
08.07.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	347	8.28	4.93	19.70	13.8	0.008
15.07.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	346	8.49	5.01	9.4		0.004
24.07.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	345	7.67	4.54	13.2		0.005
29.07.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	350	8.19	4.85	13.00		0.005
August'2023								
04.08.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	341	10.74	6.34	11.50	11.28	0.006
11.08.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	339	11.62	6.88	9.40		0.006
17.08.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	342	11.21	6.62	13.40		0.008
25.08.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	343	11.86	6.98	10.80		0.007
September'2023								
08.09.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	353	9.32	5.55	9.6	8.6	0.005
13.09.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	341	8.64	5.17	7.2		0.003
22.09.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	345	12.82	7.69	8.3		0.006
25.09.2023	CEMENT MILL - 2 (BAG FILTER)	0.61	343	11.97	7.16	9.3		0.006
April'2023								
03.04.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	358	13.89	6.64	10.4	10.1	0.006
12.04.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	355	13.38	6.42	8.7		0.005
21.04.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	356	14.05	6.72	13.6		0.008
25.04.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	359	13.91	6.63	7.5		0.004

May'2023								
06.05.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	359	14.41	6.94	9.50	8.0	0.006
10.05.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	361	13.12	6.30	12.10		0.007
16.05.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	362	14.61	6.99	6.1		0.004
23.05.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	358	15.10	7.27	4.4		0.003
June'2023								
02.06.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	355	10.20	4.91	9.6	7.8	0.004
09.06.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	359	9.84	4.72	7.3		0.003
14.06.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	353	12.15	5.81	8.1		0.004
24.06.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	352	11.06	5.32	6.0		0.003
July'2023								
06.07.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	369	10.10	4.93	10.5	11.4	0.004
14.07.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	365	9.50	4.62	14.3		0.006
21.07.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	361	9.54	4.64	11.1		0.004
26.07.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	362	9.88	4.79	9.7		0.004
August'2023								
05.08.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	355	10.20	4.96	9.8	9.6	0.004
12.08.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	359	9.84	4.80	8.1		0.003
18.08.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	353	12.15	5.91	13.3		0.007
24.08.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	352	11.06	5.36	7.2		0.003
September'2023								
06.09.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	358	10.90	5.35	10.2	12.4	0.005
11.09.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	353	11.57	5.66	12.9		0.006
18.09.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	351	12.93	6.37	14.9		0.008
25.09.2023	CEMENT MILL - 3 (BAG FILTER)	0.50	347	11.87	5.87	11.4		0.006
April'2023								
08.04.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	348	12.98	7.81	9.7	8.2	0.007
14.04.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	347	13.38	8.08	8.4		0.006
20.04.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	346	12.47	7.50	5.3		0.003
27.04.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	351	13.14	7.88	9.5		0.006
May'2023								
02.05.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	358	13.45	8.12	10.7	12.0	0.008
08.05.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	357	14.09	8.48	11.3		0.008
STOPPED	CEMENT MILL - 4 (BAG FILTER)	0.63						0.000
25.05.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	361	12.92	7.80	14.7		0.010
June'2023								
09.12.2022	CEMENT MILL - 4 (BAG FILTER)	0.63	358	9.61	6.10	7.1	5.4	0.004
14.12.2022	CEMENT MILL - 4 (BAG FILTER)	0.63	357	10.89	6.95	5.5		0.003
20.12.2022	CEMENT MILL - 4 (BAG FILTER)	0.63	363	12.20	7.82	4.0		0.003
26.12.2022	CEMENT MILL - 4 (BAG FILTER)	0.63	357	13.04	8.30	4.8		0.003
July'2023								
03.07.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	361	12.18	7.40	8.7	9.1	0.006
10.07.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	355	12.48	7.66	9.5		0.006
21.07.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	361	13.08	7.95	8.8		0.006
28.07.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	363	12.19	7.45	9.4		0.006
August'2023								
05.08.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	367	13.62	8.30	8.5	10.5	0.006
12.08.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	374	14.42	8.82	11.3		0.009
21.08.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	371	15.58	9.56	9.5		0.008
29.08.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	383	13.30	8.13	12.7		0.009
September'2023								
02.09.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	355	13.13	8.08	7.2	7.7	0.005
07.09.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	353	12.16	7.46	7.6		0.005
11.09.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	348	13.10	8.06	8.0		0.006
20.09.2023	CEMENT MILL - 4 (BAG FILTER)	0.63	351	14.17	8.72	8.1		0.006

J.K. Cement WORKS, NIMBAHERA (RAJ) (1.3 MMTPA HRP)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
HALF YEARLY REPORT FY-2023-24 (April' 2023 to September' 2023)

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT	CROSS SECTIONAL AREA OF DUCT (M ²)	STACK GASES TEMP. (^o K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)
Apr-23								
06.04.2023	HYRADULIC ROLLER PRESS- Bag House	7.07	366	9.5	54.6	13.2	15.3	0.062
13.04.2023		7.07	374	10.5	58.9	21.2		0.108
20.04.2023		7.07	370	10.9	62.0	16.1		0.086
27.04.2023		7.07	371	11.8	67.0	10.5		0.061
May-23								
06.05.2023	HYRADULIC ROLLER PRESS- Bag House	7.07	377	7.2	40.1	9.4	13.8	0.033
11.05.2023		7.07	368	8.1	46.5	14.9		0.060
STOPPED		STOPPED						STOPPED
26.05.2023		7.07	375	7.2	40.2	17.2		0.060
Jun-23								
09.06.2023	HYRADULIC ROLLER PRESS- Bag House	7.07	371	9.1	51.6	11.1	9.1	0.049
15.06.2023		7.07	378	9.7	53.8	9.3		0.043
22.06.2023		7.07	374	10.4	58.6	9.9		0.050
28.06.2023		7.07	369	10.9	62.0	5.9		0.032
Jul-23								
07.07.2023	HYRADULIC ROLLER PRESS- Bag House	7.07	365	9.4	54.2	10.3	7.8	0.048
11.07.2023		7.07	369	11.3	64.3	7.7		0.043
20.07.2023		7.07	370	12.3	69.8	8.2		0.049
27.07.2023		7.07	363	12.8	74.1	4.9		0.031
Aug-23								
03.08.2023	HYRADULIC ROLLER PRESS- Bag House	7.07	373	7.8	44.1	9.5	10.8	0.036
10.08.2023		7.07	370	7.4	42.2	11.1		0.040
17.08.2023		7.07	371	8.3	46.8	9.7		0.039
24.08.2023		7.07	371	8.7	49.3	12.7		0.054
Sep-23								
05.09.2023	HYRADULIC ROLLER PRESS- Bag House	7.07	371	6.8	38.7	14.2	12.9	0.047
12.09.2023		7.07	375	6.5	36.6	11.3		0.036
20.09.2023		7.07	372	9.8	55.4	17.3		0.083
26.09.2023		7.07	378	8.4	46.9	8.9		0.036



Report No. 20230622008

Report Issue Date: 04.07.2023

TEST REPORT

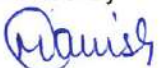
1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 20.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Kiln- 01
9. Method of Sampling : IS:11255(Part 1, Part 2, & Part 7) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	52	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	2.50	Meter

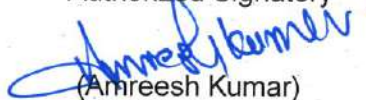
Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)	SO ₂ (mg/Nm ³)	NO _x (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission								
1.	1 st	09:15 AM	147	11.76	39.87	3.45	BDL (<5)	210.79
2.	2 nd	10:00 AM	149	11.93	40.23	3.02	BDL (<5)	175.86
3.	3 rd	10:45 AM	148	11.64	39.36	2.60	BDL (<5)	186.61

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
2. The results listed refer only to the tested sample (s) and parameter (s) Endorsement of product is neither inferred nor implied.
3. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Page 1 of 1
End of Report



Report No. 20230622009

Report Issue Date: 04.07.2023

TEST REPORT


1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 19.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Kiln- 02
9. Method of Sampling : IS:11255(Part 1, Part 2, & Part 7) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	60.15	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	2.2	Meter


Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)	SO ₂ (mg/Nm ³)	NO _x (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission								
1.	1 st	09:00 AM	143	16.13	42.75	1.80	BDL (<5)	21.85
2.	2 nd	09:45 AM	141	16.01	42.63	1.59	BDL (<5)	28.23
3.	3 rd	10:45 AM	142	16.28	43.24	1.66	BDL (<5)	53.86

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amresh Kumar)
Lab Incharge
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Page 1 of 1
End of Report

Report No. 20230622010

Report Issue Date: 04.07.2023

TEST REPORT

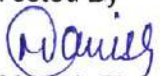
1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 19.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Kiln- 03
9. Method of Sampling : IS:11255(Part 1, Part 2, & Part 7) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	174	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	4.5	Meter

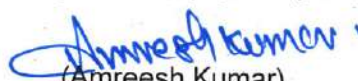
Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)	SO ₂ (mg/Nm ³)	NO _x (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission								
1.	1 st	11:30 AM	122	11.73	136.98	7.67	23.58	575.53
2.	2 nd	12:15 PM	123	11.81	137.55	7.25	25.09	634.44
3.	3 rd	01:15 PM	121	11.65	136.41	7.77	27.91	589.04

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No. 20230622011

Report Issue Date: 04.07.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 20.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Cooler- Line- 3
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	54.65	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	4.0	Meter

Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	01:30 PM	107	4.16	39.85	18.30
2.	2 nd	02:30 PM	108	4.33	41.43	16.46
3.	3 rd	03:30 PM	108	4.07	38.96	18.08

Tested By

(Manish Bhagora)
Chemist

Authorized Signatory

(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102 M.I.A. UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No. 20230622012

Report Issue Date: 04.07.2023

TEST REPORT


1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 19.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Coal Mill-03-VRM
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	47.50	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	2.12	Meter

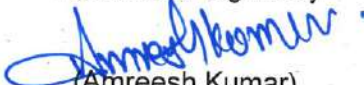
Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	02:30 PM	66	11.10	33.52	3.20
2.	2 nd	03:15 PM	65	11.20	33.92	3.40
3.	3 rd	04:00 PM	65	11.14	33.75	3.30

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.J.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report



Report No. 20230622013

Report Issue Date: 04.07.2023

TEST REPORT


1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 19.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Coal Mill-04
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	31.59	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	1.2	Meter


Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	04:15 PM	66	7.17	6.93	21.18
2.	2 nd	05:15 PM	66	7.25	7.02	23.27
3.	3 rd	06:15 PM	65	7.21	7.00	22.29

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report





Report No. 20230622014

Report Issue Date: 04.07.2023

TEST REPORT


1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 21.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Cement Mill-01
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	30.0	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	0.63	Meter

Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	08:30 AM	104	14.78	3.54	10.91
2.	2 nd	09:15 AM	104	14.68	3.52	7.04
3.	3 rd	10:00 AM	105	14.75	3.53	8.53

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A. UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report





Report No. 20230622015

Report Issue Date: 04.07.2023

TEST REPORT


1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 21.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Cement Mill-02
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	30.0	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	0.65	Meter

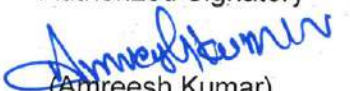
Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	11:00 AM	76	12.33	3.40	1.42
2.	2 nd	11:45 AM	78	12.20	3.35	1.69
3.	3 rd	12:30 PM	78	12.23	3.35	1.79

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A. UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report





Report No. 20230622016

Report Issue Date: 04.07.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 21.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Cement Mill-03
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	30.0	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	0.60	Meter

Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	01:15 PM	73	10.24	2.43	2.78
2.	2 nd	02:00 PM	74	10.32	2.44	2.48
3.	3 rd	02:45 PM	74	10.12	2.39	2.65

Tested By

Manish

(Manish Bhagora)
Chemist

Authorized Signatory

Amreesh Kumar

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report





Report No. 20230622017

Report Issue Date: 04.07.2023

TEST REPORT


1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 21.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Cement Mill-04
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	30.0	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	0.90	Meter

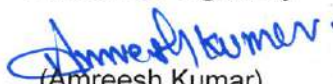
Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	03:15 PM	68	13.15	7.12	5.73
2.	2 nd	04:00 PM	70	13.29	7.15	5.43
3.	3 rd	04:45 PM	69	13.23	7.14	5.93

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A. UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No. 20230622018

Report Issue Date: 04.07.2023

TEST REPORT

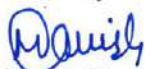
1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 21.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to Cement Mill-HRP
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	58	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	3.0	Meter


Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm3/S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	05:00 PM	87	7.66	43.60	3.74
2.	2 nd	05:35 PM	85	7.55	43.21	3.64
3.	3 rd	06:20 PM	85	7.72	44.23	3.85

Tested By


(Manish Bhagora)
Chemist

Authorized Signatory


(Anreesh Kumar)
Lab Incharge

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Page 1 of 1
End of Report



Report No. 20230622019

Report Issue Date: 04.07.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit Cement Plant), Tehsil- Nimbahera,
District- Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated: - 13.06.2023
3. Date & Time of Monitoring : 20.06.2023
4. Sample Identification : Stack Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 22.06.2023
7. Period of Analysis : 22.06.2023 to 03.07.2023
8. Name of Location : Stack attached to LS-Crusher
9. Method of Sampling : IS:11255(Part 1) & Instrument Manual

S. No	Stack Details	Description	Unit
1.	Height of stack	30.0	Meter
2.	No. of stack	1.0	Nos
3.	Stack Dia	0.58	Meter

Results

S. No.	Test Id	Time (Hrs)	Temp. (°C)	Velocity (m/S)	Flow Rate (Nm ³ /S)	PM (mg/Nm ³)
Chemical Testing- Atmospheric Pollution- Stack Emission						
1.	1 st	03:45 PM	42	11.64	2.83	13.34

Tested By

(Manish Bhagora)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report



FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7022**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of cooler Line-3 attached with ESP** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	11

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7023**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of coal mill -3 VRM attached with Bag House** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	21

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7024**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of Kiln -3 attached with Bag House** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	17

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7025**

Report On : **28/07/2023**

I hereby certify that I Dr Giriraj Kumar Songara, State Board Analyst duly appointed under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981 received on the 14/07/2023 from Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh a sample of Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97 Collected from Stack of Cement Mill-2 attached with Bag House Collected on 10/07/2023. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on 28/07/2023 and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	10

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7026**

Report On : **28/07/2023**


I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of Cement Mill-1 attached with Bag House** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	13

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7027**

Report On : **28/07/2023**


I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of Kiln- 1 attached with Bag House** Collected on **11/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	3

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7028**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of Kiln -2 attached with Bag House** Collected on **11/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	3

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7029**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of coal mill -4 attached with Bag House** Collected on **11/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	25

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7030**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of Cement Mill HRP attached with Bag House** Collected on **11/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	24

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7031**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Source Emission (Stack) of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Stack of Cement Mill -3 attached with Bag House** Collected on **11/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter mg/Nm ³	23

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

ISSUED TO:

M/S. J.K. CEMENT LIMITED
Unit: - J.K. CEMENT WORKS
KAILASH NAGAR, NIMBAHERA,
DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number : **VLL/VLS/23/10184/001**
Issued Date : **2023/09/25**
P.O. Ref : **4600094828**
P.O. Date : **31/07/2023**

Page 1 of 2

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-III

Sample Registration Date	: 2023/09/11	Sample Collection Date	: 2023/09/06
Analysis Starting Date	: 2023/09/11	Analysis Completion Date	: 2023/09/25
Test Required	: O ₂ , PM, SO ₂ , NO _x , HCl, HF, CO, CO ₂ and TOC.		
Sample Collected by Vimta Labs Ltd.			

TEST REPORT

Sr. No.	Parameters	UoM	Method of Testing	Results	Limits as per MoE, F&CC Notification GSR 497(E)
1	Diameter of stack	m	-	4.5	--
2	Flue gas temperature	°C	-	138	--
3	Fuel	-	Co-processing of AFR Liquid and Solid waste	--	--
4	Velocity	m/sec	USEPA Method -3	8.04	--
5	Volumetric flow rate	Nm ³ /Sec		83.64	--
6	Oxygen as O ₂	%	Combustion Analyzer	7.02	--
7	Carbon Monoxide as CO	mg/Nm ³		40	<100.0
8	Carbon Dioxide as CO ₂	%		22.06	--
9	Sulphur Dioxide	mg/Nm ³		12	<100.0
10	Oxides of Nitrogen, NO _x as NO ₂	mg/Nm ³		371	<800.0
11	Particulate Matter	mg/Nm ³	USEPA method-5	17.5	<30.0
12	Hydrogen Chloride as HCl	mg/Nm ³	USEPA method -26	3.4	<10.0
13	Hydrogen Fluoride as HF	mg/Nm ³	USEPA method -13	0.46	<1.0
14	Total Organic Compounds as TOC	mg/nm ³	USEPA method -40 & MM5(10)	4.2	<10.0

All the Values are represented at 10% O₂



Dr. SubbaReddy Mallampati
Manager-Environment.

ISSUED TO:

M/S. J.K. CEMENT LIMITED
Unit: - J.K. CEMENT WORKS
KAILASH NAGAR, NIMBAHERA,
DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number : **VLL/VLS/23/10184/001**
Issued Date : **2023/09/25**
P.O. Ref : **4600094828**
P.O. Date : **31/07/2023**

Page 2 of 2

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-III

Sample Registration Date		: 2023/09/11	Sample Collection Date	: 2023/09/06
Analysis Starting Date		: 2023/09/11	Analysis Completion Date	: 2023/09/25
Test Required		: Heavy Metals And its Compounds		
Sample Collected by Vimta Labs Ltd.				

TEST REPORT

Sr. No	Parameters	UoM	Method of Testing	Results	Limits as per MoE, F&CC Notification GSR 497(E)
1	Mercury as Hg + their Compound	mg/Nm ³	USEPA method - 29	<0.001	< 0.05
2	Cadmium + Thallium (Cd + Tl) + their Compound			<0.001	< 0.05
3	Chromium as Cr + their Compound			0.019	--
	Manganese as Mn + their Compound			0.015	
	Arsenic as As + their Compound			0.007	
	Antimony as Sb + their Compound			0.017	
	Lead as Pb + their Compound			0.021	
	Cobalt as Co + their Compound			0.036	
	Copper as Cu + their Compound			0.025	
	Nickel as Ni + their Compound			0.029	
	Vanadium as V + their Compound			0.031	
	Sb+ As+ Pb+ Co+ Cr+ Cu+ Mn+ Ni+ V+ Their compounds			0.153	< 0.5

Instruments used: GC-FID, ICP-MS, Cold Vapor AAS and GC-MS
All the values are represented at 10% O₂



ISSUED TO:

Dr. SubbaReddy Mallampati
Manager-Environment.

Registered Office: Plot No. 142, IDA Phase -II, Cherlapally, Medchal District, Hyderabad -500 051, Telangana, India.
Corporate Office & Life Science Facility: Plot No: 5, MN Park, Genome Valley, Shameerpet, Hyderabad - 500 101, Telangana, India.
Tel: +91 40 6740 4040, www.vimta.com

M/S. J.K. CEMENT LIMITED
Unit: - J.K. CEMENT WORKS
KAILASH NAGAR, NIMBAHERA,
DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number : **VLL/VLS/23/10184/002**
Issued Date : **2023/09/26**
P.O. Ref : **4600094828**
P.O. Date : **31/07/2023**

Page 1 of 1

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-III

Sample Registration Date	: 2023/09/11	Sample Collection Date	: 2023/09/06
Analysis Starting Date	: 2023/09/11	Analysis Completion Date	: 2023/09/26
Test Required	: PCDD & PCDF		
Sample Collected by Vimta Labs Ltd.			

TEST REPORT

Sr.No.	Congeners of Dioxin & Furans	UoM	Results
1	1,2,3,4,6,7,8-HpCDD	ng/Nm ³ , TEQ	0.0014
2	1,2,3,4,6,7,8-HpCDF		0.0010
3	1,2,3,4,7,8,9-HpCDF		0.0056
4	1,2,3,4,7,8-HxCDD		0.0016
5	1,2,3,4,7,8-HxCDF		0.0001
6	1,2,3,6,7,8-HxCDD		0.0006
7	1,2,3,6,7,8-HxCDF		0.0005
8	1,2,3,7,8,9-HxCDD		0.0031
9	1,2,3,7,8,9-HxCDF		0.0003
10	1,2,3,7,8-PeCDD		0.0004
11	1,2,3,7,8-PeCDF		0.0004
12	2,3,4,6,7,8-HxCDF		0.0108
13	2,3,4,7,8-PeCDF		0.0023
14	2,3,7,8-TCDD		0.0039
15	2,3,4,7,8-TCDF		0.0145
16	OCDD		0.00014
17	OCDF		0.00016
Total Furans & Dioxins		ng/Nm³, TEQ	0.0467
Total Furans & Dioxins		ng/Nm³, TEQ Corrected to 10% O₂ Concentration	0.0367
Limits as per MoE,F&CC Notification GSR 497(E)			<0.1

Method of Testing: As per USEPA 23 A & 8290

Instruments used: Auto spec Premier (HRGC/HRMS). Detection Limit: 0.01 pg



Dr. SubbaReddy Mallampati
Manager-Environment.

Registered Office: Plot No. 142, IDA Phase -II, Cherlapally, Medchal District, Hyderabad -500 051, Telangana, India.

Corporate Office & Life Science Facility: Plot No: 5, MN Park, Genome Valley, Shameerpet, Hyderabad - 500 101, Telangana, India.

Tel: +91 40 6740 4040, www.vimta.com



Laboratory : E- 102, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan (INDIA)



INDIA LIMITED

Phone : 91 294 2494600 to 02 E-mail : info.wcs@wolkem.com

www.wolkem.com

Report No. 20230531249

Report Issue Date: - 15.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 25.05.2023/10:00AM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 05.06.2023
8. Name of Location : Near Coal Yard (Cement Plant)
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	475.6
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.185
3.	Ambient Temperature	°C	30.5
4.	Relative Humidity	%	46

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	437.96

BDL- Below Detection Limit

Tested By

Leena
(Leena Sharma)
Chemist

Authorized Signatory

Amreesh Kumar
(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
2. The results listed refer only to the tested sample (s) and parameter (s) Endorsement of product is neither inferred nor implied.
3. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Page 1 of 1
End of Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust



TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 25.05.2023/10:25AM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 05.06.2023
8. Name of Location : Near Limestone Crushing Site
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	479.1
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.19
3.	Ambient Temperature	°C	30.8
4.	Relative Humidity	%	44

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	472.79

BDL- Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
2. The results listed refer only to the tested sample (s) and parameter (s) Endorsement of product is neither inferred nor implied.
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4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Page 1 of 1
End of Report





TEST REPORT

1. **Name of Customer** : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. **Purchase Order Number** : 4600093209 Dated:- 13.06.2023
3. **Date & Time of Monitoring** : 25.05.2023/11:10AM
4. **Sample Identification** : Fugitive Sample
5. **Condition of Sample** : Sealed/Ok
6. **Sample Received On** : 31.05.2023
7. **Period of Analysis** : 31.05.2023 to 05.06.2023
8. **Name of Location** : Near Stacker & Reclaimer
9. **Method of Sampling** : IS: 5182(Part 4) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	472.6
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.195
3.	Ambient Temperature	°C	31.6
4.	Relative Humidity	%	49

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	487.61

BDL- Below Detection Limit

Tested By

Leena
(Leena Sharma)
Chemist

Authorized Signatory

Amreesh Kumar
(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory

Wolkem India Limited

E-102, M.I.A., UDAIPUR (Rajasthan)

Note

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
2. The results listed refer only to the tested sample (s) and parameter (s) Endorsement of product is neither inferred nor implied.
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Page 1 of 1
End of Report



TEST REPORT

1. **Name of Customer** : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. **Purchase Order Number** : 4600093209 Dated:- 13.06.2023
3. **Date & Time of Monitoring** : 25.05.2023/11:45AM
4. **Sample Identification** : Fugitive Sample
5. **Condition of Sample** : Sealed/Ok
6. **Sample Received On** : 31.05.2023
7. **Period of Analysis** : 31.05.2023 to 05.06.2023
8. **Name of Location** : Near Gypsum Yard
9. **Method of Sampling** : IS: 5182(Part 4) & Instrument Manual

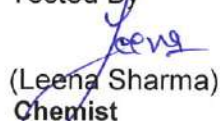
S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	468.2
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.175
3.	Ambient Temperature	°C	32.1
4.	Relative Humidity	%	51

Results Ambient Air Quality

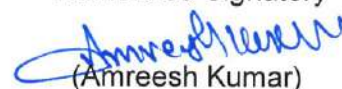
S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	380.20

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Page 1 of 1
End of Report



TEST REPORT

1. **Name of Customer** : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. **Purchase Order Number** : 4600093209 Dated:- 13.06.2023
3. **Date & Time of Monitoring** : 25.05.2023/12:40PM
4. **Sample Identification** : Fugitive Sample
5. **Condition of Sample** : Sealed/Ok
6. **Sample Received On** : 31.05.2023
7. **Period of Analysis** : 31.05.2023 to 05.06.2023
8. **Name of Location** : Near Coal Yard (Power Plant)
9. **Method of Sampling** : IS: 5182(Part 4) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	476.5
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.185
3.	Ambient Temperature	°C	32.7
4.	Relative Humidity	%	52

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	336.45

BDL- Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amresh Kumar)
Lab Incharge

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Page 1 of 1
End of Report



Report No. 20230915012

Report Issue Date: - 26.09.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 11.09.2023/12:20PM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 11.09.2023
7. Period of Analysis : 11.09.2023 to 22.09.2023
8. Name of Location : Near Stacker & Reclaimer
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

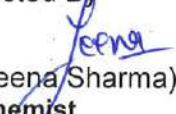
S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	474
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.145
3.	Ambient Temperature	°C	31.8
4.	Relative Humidity	%	52

Results Ambient Air Quality


S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	481.97

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Report No. 20230915013

Report Issue Date: - 26.09.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 11.09.2023/11:30AM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 15.09.2023
7. Period of Analysis : 15.09.2023 to 22.09.2023
8. Name of Location : Near Coal Yard (Power Plant)
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

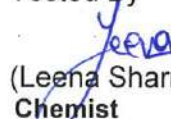
S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	479
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.145
3.	Ambient Temperature	°C	31.5
4.	Relative Humidity	%	51

Results Ambient Air Quality

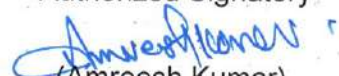
S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	321.38

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Report No. 20230915014

Report Issue Date: - 26.09.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 11.09.2023/11:40AM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 15.09.2023
7. Period of Analysis : 15.09.2023 to 22.09.2023
8. Name of Location : Near Gypsum Yard
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

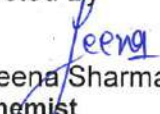
S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	480.6
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.16
3.	Ambient Temperature	°C	31.5
4.	Relative Humidity	%	52

Results Ambient Air Quality


S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	368.85

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Report No. 20230915015

Report Issue Date: - 26.09.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 11.09.2023/12:05PM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 15.09.2023
7. Period of Analysis : 15.09.2023 to 22.09.2023
8. Name of Location : Near Coal Yard (Cement Plant)
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

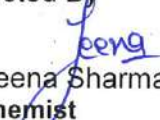
S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	482.4
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.2
3.	Ambient Temperature	°C	31.6
4.	Relative Humidity	%	54

Results Ambient Air Quality

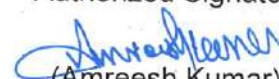
S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	427.77

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report

Report No. 20230915016

Report Issue Date: - 26.09.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 11.09.2023/12:30PM
4. Sample Identification : Fugitive Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 15.09.2023
7. Period of Analysis : 15.09.2023 to 22.09.2023
8. Name of Location : Near Limestone Crushing Site
9. Method of Sampling : IS: 5182(Part 4) & Instrument Manual

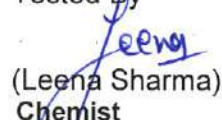
S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	480.7
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.135
3.	Ambient Temperature	°C	32.0
4.	Relative Humidity	%	54

Results Ambient Air Quality

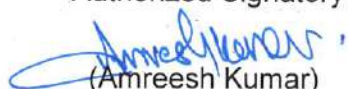
S. No	Parameters	Test Method	Unit	Results
Chemical Testing- Atmospheric Pollution- Fugitive Emission				
1.	SPM	IS:5182 (Part-4)	µg/m ³	464.26

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

J.K. Cement WORKS, NIMBAHERA (RAJ)
AMBIENT AIR QUALITY AVERAGE SPM RESULTS
(ALL VALUES IN MICROGRAMS / CUBIC METER)

HALF YEARLY REPORT FY-2023-24 (April' 2023 to September' 2023)

S.No.	LOCATION	Month					
			PM10	PM2.5	SO2	NOx	CO
1	NEAR MAIN SECURITY GATE	Apr-23	69.2	33.3	13.0	23.8	610
2		May-23	73.1	30.0	14.8	26.1	774
3		Jun-23	67.1	34.1	11.4	22.0	707
4		Jul-23	43.6	24.4	7.9	18.4	521
5		Aug-23	58.6	29.1	11.6	22.8	628
6		Sep-23	51.8	27.5	10.4	16.9	494
Half Yearly Average			60.6	29.7	11.5	21.7	622
1	NEAR NEW J.K. FACTORY GATE	Apr-23	88.1	39.9	17.0	22.0	563
2		May-23	79.9	37.9	13.8	24.9	730
3		Jun-23	76.5	30.8	11.3	22.3	770
4		Jul-23	47.9	26.1	10.5	21.7	644
5		Aug-23	50.6	25.5	6.7	16.5	480
6		Sep-23	49.6	34.7	10.4	19.8	571
Half Yearly Average			65.4	32.5	11.6	21.2	626
1	NEAR MINE GATE	Apr-23	70.8	26.5	10.6	16.0	603
2		May-23	73.9	31.5	13.8	24.4	796
3		Jun-23	72.0	27.2	13.8	23.0	732
4		Jul-23	50.4	31.9	13.2	26.2	525
5		Aug-23	56.0	27.9	10.9	23.8	492
6		Sep-23	53.7	29.5	14.5	24.4	606
Half Yearly Average			62.8	29.1	12.8	23.0	626
1	NEAR THERMAL POWER PLANT GATE	Apr-23	77.3	24.5	15.0	26.0	606
2		May-23	71.9	28.1	10.9	23.7	733
3		Jun-23	70.9	27.4	14.7	28.0	732
4		Jul-23	52.0	31.9	10.7	20.4	569
5		Aug-23	65.6	30.7	9.3	17.3	475
6		Sep-23	62.5	27.9	13.5	25.6	501
Half Yearly Average			66.7	28.4	12.3	23.5	603

TEST REPORT

1. **Name of Customer** : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. **Purchase Order Number** : 4600093209 Dated:- 13.06.2023
3. **Date & Time of Monitoring** : 24.05.2023/09:35AM
4. **Sample Identification** : Air Sample
5. **Condition of Sample** : Sealed/Ok
6. **Sample Received On** : 31.05.2023
7. **Period of Analysis** : 31.05.2023 to 14.06.2023
8. **Name of Location** : Near Main Security Gate
9. **Method of Sampling** : IS: 5182(Part 2,6,9,22,23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	1432.3
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.16
3.	Ambient Temperature	°C	30.3
4.	Relative Humidity	%	45

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
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Chemical Testing - Atmospheric Pollution - Ambient Air

1.	PM ₁₀	IS:5182 (Part-23)	µg/m ³	69.47	100
2.	PM _{2.5}	WIL/SOP No. 10/25 Issue date 01.05.2019	µg/m ³	37.01	60
3.	SO ₂	IS:5182 (Part-2)	µg/m ³	BDL(<6)	80
4.	NO ₂	IS:5182 (Part-6)	µg/m ³	12.49	80
5.	Ozone as O ₃	IS:5182 (Part-9)	µg/m ³	BDL(<20)	100
6.	NH ₃	CPCB manual & 401-Method Air sampling & analysis, 3rd Edition	µg/m ³	24.88	400
7.	Lead	IS:5182 (Part-22)	µg/m ³	BDL(<0.05)	1 (24 hour average)
8.	Nickel	CPCB Guidelines 1988	ng/m ³	BDL(<4)	20 (Annual average)

BDL- Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Report No. 20230531245/B

Report Issue Date: - 15.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/09:35AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near Main Security Gate
9. Method of Sampling : IS: 5182(Part 11, 12) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Ambient Temperature	°C	30.3
2.	Relative Humidity	%	45

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
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Chemical Testing - Atmospheric Pollution - Ambient Air

1.	CO	BY CO Meter	mg/m ³	0.29	04 (1 hour)
2.	Benzo(a)pyrene	IS:5182 (Part-12) NAAQS Guideline	ng/m ³	BDL(<0.01)	1 (Annual average)
3.	Arsenic	CPCB Guideline 2011	ng/m ³	BDL(<3)	6 (Annual average)
4.	Benzene	IS:5182 (Part-11) NAAQS Guideline	µg/m ³	BDL(<0.01)	5 (Annual average)

BDL- Below Detection Limit

Tested By

Leena
(Leena Sharma)
Chemist

Authorized Signatory

Amreesh Kumar
(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OHSAS
Certificate No.
01130126322

Our Commitment.. Your Trust



TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/10:10AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near Thermal Power Plant
9. Method of Sampling : IS: 5182(Part 2,6,9,22,23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	1438.5
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.185
3.	Ambient Temperature	°C	30.7
4.	Relative Humidity	%	48

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
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Chemical Testing - Atmospheric Pollution - Ambient Air

1.	PM ₁₀	IS:5182 (Part-23)	µg/m ³	79.44	100
2.	PM _{2.5}	WIL/SOP No. 10/25 Issue date 01.05.2019	µg/m ³	34.34	60
3.	SO ₂	IS:5182 (Part-2)	µg/m ³	BDL(<6)	80
4.	NO ₂	IS:5182 (Part-6)	µg/m ³	13.53	80
5.	Ozone as O ₃	IS:5182 (Part-9)	µg/m ³	BDL(<20)	100
6.	NH ₃	CPCB manual & 401-Method Air sampling & analysis, 3rd Edition	µg/m ³	22.11	400
7.	Lead	IS:5182 (Part-22)	µg/m ³	BDL(<0.05)	1 (24 hour average)
8.	Nickel	CPCB Guidelines 1988	ng/m ³	BDL(<4)	20 (Annual average)

BDL- Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amresh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
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4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Page 1 of 1
End of Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20230531246/B

Report Issue Date: - 15.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/10:10AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near Thermal Power Plant
9. Method of Sampling : IS: 5182(Part 11, 12) & Instrument Manual


S. No	Monitoring Details	Unit	Results
1.	Ambient Temperature	°C	30.7
2.	Relative Humidity	%	48

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Testing - Atmospheric Pollution - Ambient Air					
1.	CO	BY CO Meter	mg/m ³	0.33	04 (1 hour)
2.	Benzo(a)pyrene	IS:5182 (Part-12) NAAQS Guideline	ng/m ³	BDL(<0.01)	1 (Annual average)
3.	Arsenic	CPCB Guideline 2011	ng/m ³	BDL(<3)	6 (Annual average)
4.	Benzene	IS:5182 (Part-11) NAAQS Guideline	µg/m ³	BDL(<0.01)	5 (Annual average)

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



Certificate No.
01130126322

Our Commitment.. Your Trust

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/10:35AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near New J.K. Factory Gate
9. Method of Sampling : IS: 5182(Part 2,6,9,22,23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	1428.3
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.155
3.	Ambient Temperature	°C	30.9
4.	Relative Humidity	%	45

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
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Chemical Testing - Atmospheric Pollution - Ambient Air

1.	PM ₁₀	IS:5182 (Part-23)	µg/m ³	72.75	100
2.	PM _{2.5}	WIL/SOP No. 10/25 Issue date 01.05.2019	µg/m ³	29.94	60
3.	SO ₂	IS:5182 (Part-2)	µg/m ³	BDL(<6)	80
4.	NO ₂	IS:5182 (Part-6)	µg/m ³	13.63	80
5.	Ozone as O ₃	IS:5182 (Part-9)	µg/m ³	BDL(<20)	100
6.	NH ₃	CPCB manual & 401-Method Air sampling & analysis, 3rd Edition	µg/m ³	20.18	400
7.	Lead	IS:5182 (Part-22)	µg/m ³	BDL(<0.05)	1 (24 hour average)
8.	Nickel	CPCB Guidelines 1988	ng/m ³	BDL(<4)	20 (Annual average)

BDL- Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report

Registered & Corporate Office :

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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20230531247/B

Report Issue Date: - 15.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/10:35AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near New J.K. Factory Gate
9. Method of Sampling : IS: 5182(Part 11, 12) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Ambient Temperature	°C	30.9
2.	Relative Humidity	%	45

Results Ambient Air Quality

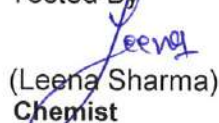
S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
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Chemical Testing - Atmospheric Pollution - Ambient Air

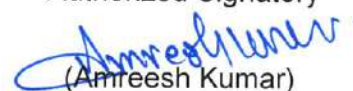
1.	CO	BY CO Meter	mg/m ³	0.32	04 (1 hour)
2.	Benzo(a)pyrene	IS:5182 (Part-12) NAAQS Guideline	ng/m ³	BDL(<0.01)	1 (Annual average)
3.	Arsenic	CPCB Guideline 2011	ng/m ³	BDL(<3)	6 (Annual average)
4.	Benzene	IS:5182 (Part-11) NAAQS Guideline	µg/m ³	BDL(<0.01)	5 (Annual average)

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Anreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

__End of Report__

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/11:15AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near Mine Gate
9. Method of Sampling : IS: 5182(Part 2,6,9,22,23) & Instrument Manual

S. No	Monitoring Details	Unit	Results
1.	Duration of Survey	Minutes	1430
2.	Average Flow rate for PM ₁₀	M ³ / Min	1.19
3.	Ambient Temperature	°C	31.1
4.	Relative Humidity	%	48

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
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Chemical Testing - Atmospheric Pollution - Ambient Air

1.	PM ₁₀	IS:5182 (Part-23)	µg/m ³	67.44	100
2.	PM _{2.5}	WIL/SOP No. 10/25 Issue date 01.05.2019	µg/m ³	26.12	60
3.	SO ₂	IS:5182 (Part-2)	µg/m ³	BDL(<6)	80
4.	NO ₂	IS:5182 (Part-6)	µg/m ³	12.87	80
5.	Ozone as O ₃	IS:5182 (Part-9)	µg/m ³	BDL(<20)	100
6.	NH ₃	CPCB manual & 401-Method Air sampling & analysis, 3rd Edition	µg/m ³	20.30	400
7.	Lead	IS:5182 (Part-22)	µg/m ³	BDL(<0.05)	1 (24 hour average)
8.	Nickel	CPCB Guidelines 1988	ng/m ³	BDL(<4)	20 (Annual average)

BDL- Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Report No. 20230531248/B

Report Issue Date: - 15.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase Order Number : 4600093209 Dated:- 13.06.2023
3. Date & Time of Monitoring : 24.05.2023/11:15AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample Received On : 31.05.2023
7. Period of Analysis : 31.05.2023 to 14.06.2023
8. Name of Location : Near Mine Gate
9. Method of Sampling : IS: 5182(Part 11, 12) & Instrument Manual

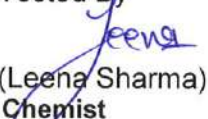
S. No	Monitoring Details	Unit	Results
1.	Ambient Temperature	°C	31.1
2.	Relative Humidity	%	48

Results Ambient Air Quality

S. No	Parameters	Test Method	Unit	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Testing - Atmospheric Pollution - Ambient Air					
1.	CO	BY CO Meter	mg/m ³	0.30	04 (1 hour)
2.	Benzo(a)pyrene	IS:5182 (Part-12) NAAQS Guideline	ng/m ³	BDL(<0.01)	1 (Annual average)
3.	Arsenic	CPCB Guideline 2011	ng/m ³	BDL(<3)	6 (Annual average)
4.	Benzene	IS:5182 (Part-11) NAAQS Guideline	µg/m ³	BDL(<0.01)	5 (Annual average)

BDL- Below Detection Limit

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
__End of Report__

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7018**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Bhupendra Kumar Soni, SO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Ambient Air Quality of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Ambient Air Quality Monitoring near Main Gate of Unit** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Nitrogen Dioxide as NO ₂ µg/M ³	36.1
2	Particulate Matter (PM ₁₀) µg/m ³	80
3	PM 2.5 ug/m ³	32
4	Sulphur Dioxide as SO ₂ ug/m ³	13.5

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**



BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7019**

Report On : **28/07/2023**

I hereby certify that I Dr Giriraj Kumar Songara, State Board Analyst duly appointed under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981 received on the 14/07/2023 from Bhupendra Kumar Soni, SO, Chittorgarh ,RSPCB Chittorgarh a sample of Ambient Air Quality of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97 Collected from Ambient Air Quality Monitoring near TPP Collected on 10/07/2023. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on 28/07/2023 and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Nitrogen Dioxide as NO ₂ µg/M ³	29
2	Particulate Matter (PM ₁₀) µg/m ³	79
3	PM 2.5 ug/m ³	30
4	Sulphur Dioxide as SO ₂ ug/m ³	10.5

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7020**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Bhupendra Kumar Soni, SO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Ambient Air Quality of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Ambient Air Quality Monitoring near Cricket ground of Colony** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Nitrogen Dioxide as NO ₂ µg/M ³	26.6
2	Particulate Matter (PM ₁₀) µg/m ³	74
3	PM 2.5 ug/m ³	25
4	Sulphur Dioxide as SO ₂ ug/m ³	8.8

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST
(See Rule - 10)
Final Report

Report No. : **7021**

Report On : **28/07/2023**

I hereby certify that I **Dr Giriraj Kumar Songara**, State Board Analyst duly appointed **under sub Section(2) of Section 29 of the Air (Prevention & Control of Pollution) Act, 1981** received on the **14/07/2023** from **Bhupendra Kumar Soni, SO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Ambient Air Quality of M/S J.K.Cement Works , Plant - J.K. Cement Works [190] ,Nimbahera, Kailash Nagar , City- Ahirpura Tehsil- Nimbahera , District- Chittorgarh M.L No- 2/97** Collected from **Ambient Air Quality Monitoring near Mine Gate of Unit** Collected on **10/07/2023**. The Sample was in a condition fit for analysis as reported below :-

I further certify that I have analyzed the aforementioned sample on **28/07/2023** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Nitrogen Dioxide as NO ₂ µg/M ³	32.9
2	Particulate Matter (PM ₁₀) µg/m ³	83
3	PM 2.5 ug/m ³	32
4	Sulphur Dioxide as SO ₂ ug/m ³	11.5

The condition of the seals, fastening and container on receipt was as follows : **Intact**

Signed This On **28/07/2023**


BOARD ANALYST

Rajasthan State Pollution Control Board
Regional Office Chittorgarh
Near FCI Godown, Chanderia, Chittorgarh
Phone:01472-255077



Report No. 20230526020/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/02:10PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 1
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.2
2.	Relative Humidity	%	25

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Part-11)	-	7.39	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	1043	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.8	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	628	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	372	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	94.4	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	32.6	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	144	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	144	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.65	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	37.6	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	9.8	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017,4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

Note

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Report No. 20230526020/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/02:10PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 1
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Page 2 of 2

End of Report



Report No. 20230526020/B

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/02:10PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 1
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	33.5
2.	Relative Humidity	%	23

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible

Chemical Testing – Water – Ground Water						
1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed.,3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OHSAS
Certificate No.
01130126322

Our Commitment.. Your Trust

Report No. 20230526021/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/02:40PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 2
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.7
2.	Relative Humidity	%	23

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Part-11)	-	7.23	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	1056	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.7	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	660	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	404	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	124.8	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	22.1	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	152	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	136	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.75	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	42.3	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	12.2	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017,4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

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Report No. 20230526021/A

Report Issue Date: - 14.06.2023

TEST REPORT

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(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/02:40PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 2
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	0.12	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	0.10	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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End of Report



Report No. 20230526021/B

Report Issue Date: - 14.06.2023

TEST REPORT

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(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/OK
5. Date & Time of Sampling : 23.05.2023/02:40PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 2
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.7
2.	Relative Humidity	%	23

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed.,3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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CIN- U29299RJ1971PLC001379



OHSAS
Certificate No.
01130126322

Our Commitment.. Your Trust

Report No. 20230526022/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/03:10PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 3
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.6
2.	Relative Humidity	%	25

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Part-11)	-	7.48	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	1036	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.7	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	628	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	364	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.4	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	21.1	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	176	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	126	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.80	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	51.2	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	11.8	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017,4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

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TEST REPORT

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District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/03:10PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 3
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230526022/B

Report Issue Date: - 14.06.2023

TEST REPORT

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(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/03:10PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 3
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.6
2.	Relative Humidity	%	25

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible

Chemical Testing – Water – Ground Water

1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed., 3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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OHSAS
Certificate No.
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Report No. 20230526023/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/03:45PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 4
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	35.1
2.	Relative Humidity	%	24

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water						
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.95	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	872.9	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.8	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	544	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	284	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	89.6	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	14.4	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	140	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	122	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.70	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	44.7	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	11.2	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017,4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

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Report No. 20230526023/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/03:45PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 4
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A. UDAIPUR (Rajasthan)

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Page 2 of 2

End of Report

Report No. 20230526023/B

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/03:45PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 4
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	35.1
2.	Relative Humidity	%	24

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed., 3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OHSAS
Certificate No.
01130126322

Our Commitment.. Your Trust

Report No. 20230526024/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/04:15PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 5
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.9
2.	Relative Humidity	%	26

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water						
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.20	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	995.9	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.7	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	616	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	420	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	136	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	19.2	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	164	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	114	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.65	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	38.2	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	10.7	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017,4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

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Report No. 20230526024/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/04:15PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 5
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	0.13	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 2 of 2

End of Report



Report No. 20230526024/B

Report Issue Date: - 14.06.2023

TEST REPORT

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(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/04:15PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 5
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.9
2.	Relative Humidity	%	26

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed., 3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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CIN- U29299RJ1971PLC001379



Certificate No.
01130126322

Our Commitment.. Your Trust

Report No. 20230526025/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/04:50PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 6
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.1
2.	Relative Humidity	%	23

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Part-11)	-	7.12	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	991.4	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.9	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	604	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	412	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	123.2	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	24.9	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	170	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	108	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.70	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	43.4	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	12.2	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017,4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

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Report No. 20230526025/A

Report Issue Date: - 14.06.2023

TEST REPORT

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(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/04:50PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 6
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 2 of 2

End of Report

Report No. 20230526025/B

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/04:50PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 6
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	34.1
2.	Relative Humidity	%	23

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed., 3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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End Report

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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OHSAS
Certificate No.
01130126322

Our Commitment.. Your Trust

Report No. 20230526026/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/05:25PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 7
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.6
2.	Relative Humidity	%	24

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible

Chemical Testing – Water- Ground Water						
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.19	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	882	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS:3025(Part-7)	-	Agreeable	Agreeable	Agreeable
6.	Turbidity	IS:3025(Part-10)	NTU	0.8	1	5
7.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	550	500	2000
8.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	292	200	600
9.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	73.6	75	200
10.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	25.9	30	100
11.	Alkalinity	IS:3025(Part-23)	mg/L	156	200	600
12.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	120	250	1000
13.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
14.	Fluoride as F ⁻	APHA 23rd Ed., 4500 FD	mg/L	0.8	1.0	1.5
15.	Sulphate as SO ₄	APHA 23rd Ed.4500 SO ₄ E	mg/L	53.7	200	400
16.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	BDL(<0.01)	0.05	No Relaxation
17.	Nitrate as NO ₃	APHA 23rd Ed., 4500 NO ₃ B	mg/L	10.1	45	No Relaxation
18.	Free Ammonia	APHA 23rd Ed., 2017, 4500-NH ₃ C Page 4-116	mg/L	BDL(<0.5)	0.5	No Relaxation
19.	Settleable Solid	APHA 23rd Ed., 2540F	ml/L	BDL(<5.0)	-	-
20.	Boron	IS:3025(Part-57)	mg/L	BDL(<0.1)	0.5	1.0
21.	Chloramines	IS:3025(Part-26)	mg/L	BDL(<0.01)	4.0	No Relaxation

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Report No. 20230526026/A

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/05:25PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 7
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Residues – Ground water						
22.	Total Chromium	APHA 23rd Ed.3111B	mg/L	BDL(<0.02)	0.05	No Relaxation
23.	Cadmium as Cd	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.003	No Relaxation
24.	Copper as Cu	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	5	15
26.	Iron as Fe	APHA 23rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation
27.	Aluminium	APHA 23rd Ed.3111D	mg/L	BDL(<0.5)	0.03	0.2
28.	Arsenic	APHA 23rd Ed.3114C	mg/L	BDL(<0.05)	-	-
29.	Selenium	APHA 23rd Ed.3111C	mg/L	BDL(<0.05)	0.01	No Relaxation
30.	Barium	APHA 23rd Ed.3111D	mg/L	BDL(<0.01)	0.7	No Relaxation
31.	Manganese as Mn	APHA 23rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A. UDAIPUR (Rajasthan)

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Page 2 of 2

End of Report



Report No. 20230526026/B

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Ground water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 23.05.2023/05:25PM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : Bore well No. 7
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.6
2.	Relative Humidity	%	24

S. No	Parameters	Test Method	Unit	Results	Limits- IS:10500:2012	
					Acceptable	Permissible

Chemical Testing – Water – Ground Water

1.	Silver as Ag	Annex J of IS 13428	mg/L	BDL(<0.1)	0.1	No Relaxation
2.	Nickel as Ni	APHA 23 rd Ed., 3111B	mg/L	BDL(<0.01)	0.02	No Relaxation
3.	Phenolic Compounds as C ₆ H ₅ OH	IS:3025 (Part-43)	mg/L	BDL(<0.001)	0.001	0.002
4.	Anionic Detergent as MBAS	Annex K of IS 13428	mg/L	BDL(<0.1)	0.2	1.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OHSAS
Certificate No.
01130126322

Our Commitment.. Your Trust

J.K. Cement WORKS, Nimbahera (RAJ)
Treated Domestic Effluent Analysis Report
HALF YEARLY REPORT (April'23- Sep'23)

S.No.	PARAMETER	Standards	April-23	May-23	June-23	July-23	August-23	September-23
1	pH	Between 5.5 to 9.0	7.54	7.66	7.60	7.65	7.54	7.70
2	Total Suspended solids	Not to exceed 100 mg/l	31.0	34.0	30.10	28.00	46.00	53.00
3	Chemical Oxygen Demand	Not to exceed 250 mg/l	118.0	133.2	128.30	105.00	125.40	142.00
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	26.20	19.80	18.70	15.60	19.20	15.80
5	Oil & Grease	Not to exceed 10 mg/l	1.5	4.4	<1.0	2.20	4.80	2.10
6	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	3.25	4.48	2.50	4.15	4.29	3.72
7	Sulphide (as S)	Not to exceed 2.0 mg/l	<0.1	0.12	<0.1	<0.1	<0.1	<0.1
8	Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.01	<0.01	<0.1	<0.1	<0.1

Report No. 20230526030

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : Kailash Nagar Resenditil Township,
M/s J.K. Cement Works Nimbahera,
(Unit-Group Housing), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 24.05.2023/08:55AM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : STP-Kailash Nagar Colony water
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	29.7
2.	Relative Humidity	%	23

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Chemical Testing– Pollution and Environment - Waste Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.66	5.5 – 9.0
2.	Total Suspended Solid	IS:3025(Part-17)	mg/L	34	-
3.	Oil & Grease	IS:3025(Part-39)	mg/L	4.4	10
4.	B.O.D. 3 days @27°C	IS:3025(Part-44)	mg/L	19.8	30
5.	Chemical Oxygen Demand	IS:3025 (Part-58)	mg/L	133.24	250
6.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	1.0
7.	Chlorides as Cl-	IS:3025(Part-32)	mg/L	188	-
8.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	0.12	2.0
9.	Ammonical Nitrogen (as NH4-N)	APHA 23rd Ed., 4500 NH3-B	mg/L	4.48	50
10.	Total Kjeldahl Nitrogen (as TKN)	APHA 23rd Ed., 4500 NO3-B	mg/L	8.92	100

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

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Registered & Corporate Office :

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CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20230526031

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 24.05.2023/09:10AM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : STP (35 KLD) water
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	30.1
2.	Relative Humidity	%	25

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Chemical Testing– Pollution and Environment - Waste Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.72	5.5 – 9.0
2.	Total Suspended Solid	IS:3025(Part-17)	mg/L	36	-
3.	Oil & Grease	IS:3025(Part-39)	mg/L	4.8	10
4.	B.O.D. 3 days @27°C	IS:3025(Part-44)	mg/L	18.6	30
5.	Chemical Oxygen Demand	IS:3025 (Part-58)	mg/L	124.92	250
6.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	1.0
7.	Chlorides as Cl-	IS:3025(Part-32)	mg/L	174	-
8.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	0.10	2
9.	Ammonical Nitrogen (as NH4-N)	APHA 23 rd Ed., 4500 NH3-B	mg/L	3.36	50
10.	Total Kjeldahl Nitrogen (as TKN)	APHA 23 rd Ed., 4500 NO3-B	mg/L	7.32	100

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20230526033

Report Issue Date: - 14.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District - Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 24.05.2023/09:20AM
6. Sample received on : 26.05.2023
7. Period of Analysis : 26.05.2023 to 09.06.2023
8. Name of Sample & Location : STP (55 KLD) water
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	30.4
2.	Relative Humidity	%	25

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Chemical Testing- Pollution and Environment - Waste Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.70	5.5 – 9.0
2.	Total Suspended Solid	IS:3025(Part-17)	mg/L	30	-
3.	Oil & Grease	IS:3025(Part-39)	mg/L	3.6	100
4.	B.O.D. 3 days @27°C	IS:3025(Part-44)	mg/L	20.4	30
5.	Chemical Oxygen Demand	IS:3025 (Part-58)	mg/L	116.59	250
6.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	1.0
7.	Chlorides as Cl-	IS:3025(Part-32)	mg/L	198	-
8.	Sulphide	APHA 23rd Ed., 4500-S2- Page 4-181 to 183	mg/L	0.10	2
9.	Ammonical Nitrogen (as NH ₄ -N)	APHA 23 rd Ed., 4500 NH ₃ -B	mg/L	2.98	50
10.	Total Kjeldahl Nitrogen (as TKN)	APHA 23 rd Ed., 4500 NO ₃ -B	mg/L	8.83	10

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20230811026

Report Issue Date: - 22.08.2023

TEST REPORT

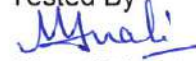
1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 10.08.2023/04:35PM
6. Sample received on : 11.08.2023
7. Period of Analysis : 11.08.2023 to 22.08.2023
8. Name of Sample & Location : Treated waste water source (STP Kailash Nagar Colony)
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	33.4
2.	Relative Humidity	%	50


S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Chemical Testing– Pollution and Environment - Waste Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.54	5.5-9.0
2.	Total Suspended Solid	IS:3025(Part-17)	mg/L	46	-
3.	Oil & Grease	IS:3025(Part-39)	mg/L	4.8	10
4.	B.O.D. 3 days @27°C	IS:3025(Part-44)	mg/L	19.2	30
5.	Chemical Oxygen Demand	IS:3025 (Part-58)	mg/L	125.4	250
6.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	1.0
7.	Ammonical Nitrogen (as NH ₄ -N)	APHA 23 rd Ed., 4500 NH ₃ -B	mg/L	4.29	50

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Asst.Chemist

Authorized Signatory


(Purn Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No.20230811054

Report Issue Date: - 22.08.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase Order No. : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of sample : Sealed/Ok
5. Source/ Location : Treated waste water source (STP Kailash Nagar Colony)
6. Sampling done by : Environmental & Chemical Laboratory, Wolkem India Limited
7. Sample Received on : 11.08.2023
8. Period of Testing : 11.08.2023 to 17.08.2023
9. Environmental conditions : Temp 33.4°C/ RH 50%
10. Sampling method : IS: 1622-1981

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Biological Testing – Water- Waste water					
1.	Faecal Coliforms	IS 1622:1981	MPN/ 100ml	280	-

Authorized Signatory


Amreesh Kumar

(Head & Dy. GM)

Microbiology Testing Laboratory

Wolkem India Limited

E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report

Report No. 20230811027

Report Issue Date: - 22.08.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 10.08.2023/04:50PM
6. Sample received on : 11.08.2023
7. Period of Analysis : 11.08.2023 to 22.08.2023
8. Name of Sample & Location : Treated waste water source (35-KLD)
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.5
2.	Relative Humidity	%	52

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules,1986
Chemical Testing– Pollution and Environment - Waste Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.10	5.5-9.0
2.	Total Suspended Solid	IS:3025(Part-17)	mg/L	30	-
3.	Oil & Grease	IS:3025(Part-39)	mg/L	4.2	10
4.	B.O.D. 3 days @27°C	IS:3025(Part-44)	mg/L	17.4	30
5.	Chemical Oxygen Demand	IS:3025 (Part-58)	mg/L	109.76	250
6.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	1.0
7.	Ammonical Nitrogen (as NH ₄ -N)	APHA 23 rd Ed., 4500 NH ₃ -B	mg/L	4.29	50

BDL-Below Detection Limit

Tested By

(Signature)
(Manali Vyas)
Asst.Chemist

Authorized Signatory

(Signature)
(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No.20230811055

Report Issue Date: - 22.08.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase Order No. : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of sample : Sealed/Ok
5. Source/ Location : Treated waste water source (35-KLD)
6. Sampling done by : Environmental & Chemical Laboratory, Wolkem India Limited
7. Sample Received on : 11.08.2023
8. Period of Testing : 11.08.2023 to 17.08.2023
9. Environmental conditions : Temp 32.5°C/ RH 52%
10. Sampling method : IS: 1622-1981

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Biological Testing – Water- Waste water					
1.	Faecal Coliforms	IS 1622:1981	MPN/ 100ml	350	-

Authorized Signatory


Amreesh Kumar

(Head & Dy. GM)

Microbiology Testing Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note:

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
2. The results listed refer only to the tested sample (s) and parameters (s) Endorsement of product is neither inferred nor implied.
3. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.
4. The samples will be destroyed after 07 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 03 days.

Page 1 of 1

End of Report



Report No. 20230811028

Report Issue Date: - 22.08.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 10.08.2023/05:00PM
6. Sample received on : 11.08.2023
7. Period of Analysis : 11.08.2023 to 22.08.2023
8. Name of Sample & Location : Treated waste water source (55-KLD)
9. Method of Sampling : IS:3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.0
2.	Relative Humidity	%	50

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Chemical Testing– Pollution and Environment - Waste Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.46	5.5-9.0
2.	Total Suspended Solid	IS:3025(Part-17)	mg/L	32	-
3.	Oil & Grease	IS:3025(Part-39)	mg/L	3.2	10
4.	B.O.D. 3 days @27°C	IS:3025(Part-44)	mg/L	19.2	30
5.	Chemical Oxygen Demand	IS:3025 (Part-58)	mg/L	109.76	250
6.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	1.0
7.	Ammonical Nitrogen (as NH ₄ -N)	APHA 23 rd Ed., 4500 NH ₃ -B	mg/L	3.36	50

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst.Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
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Page 1 of 1

End of Report



Report No.20230811056

Report Issue Date: - 22.08.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
Tehsil - Nimbahera, District – Chittorgarh,
State- Rajasthan (INDIA),
2. Purchase Order No. : 4600093209 Dated:- 13.06.2023
3. Sample Identification : Waste water
4. Condition of sample : Sealed/Ok
5. Source/ Location : Treated waste water source (55-KLD)
6. Sampling done by : Environmental & Chemical Laboratory, Wolkem India Limited
7. Sample Received on : 11.08.2023
8. Period of Testing : 11.08.2023 to 17.08.2023
9. Environmental conditions : Temp 32.0°C/ RH 50%
10. Sampling method : IS: 1622-1981

S. No.	Parameters	Test Method	Unit	Results	Limits as per Environment Protection rules, 1986
Biological Testing – Water- Waste water					
1.	Faecal Coliforms	IS 1622:1981	MPN/ 100ml	280	-

Authorized Signatory


Amreesh Kumar

(Head & Dy. GM)

Microbiology Testing Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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5. Any discrepancy in test results should be reported within 03 days.

Page 1 of 1

End of Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

J.K. Cement WORKS, Nimbahera (RAJ)

Annexure-6

**Noise Monitoring Report
(All Values in dB)**

Month	HALF YEARLY REPORT (April-2023 -September '2023) FY 2023-24							
	Main Security Gate		Thermal Power Plant		New JK Factory Gate		Mines Office	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-23	64.6	52.1	60.3	50.2	69.7	55.5	68.4	54.2
May-23	66.2	54.8	66.7	50.1	65.7	52.1	68.3	59.4
Jun-23	69.7	53.4	65.8	49.5	68.2	55.8	70.3	52.1
Jul-23	68.5	55.9	64.6	52.3	66.4	54.8	69.4	56.5
Aug-23	68.4	54.2	62.1	52.2	66.7	53.5	65.4	50.1
Sep-23	70.1	53.4	68.9	54.3	68.4	54.6	63.7	52.2
Average	67.9	54.0	64.7	51.4	67.5	54.4	67.6	54.1



Report Issue Date: 15.06.2023

TEST REPORT

1. Name of Customer : M/s J.K. Cement Works Nimbahera,
(Unit-Cement Plant), Tehsil - Nimbahera,
District – Chittorgarh, State- Rajasthan (INDIA),
2. Purchase order Number : 4600093209 Dated:- 13.06.2023
3. Date of Monitoring : 25.05.2023
4. Sample Identification : Noise Sample
5. Condition of Sample : NA
6. Sample Received On : 31.05.2023
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989– 1981 (Reaffirmed 2014)

Noise Level Monitoring Results

S. No	Station Point	Report No.	Sound pressure Level dB Day Time		Sound pressure Level dB Night Time	
			Maximum	Minimum	Maximum	Minimum
1.	Near Main Security Gate	20230531254	64.3	58.7	56.2	51.4
2.	Near Thermal Power Plant	20230531255	64.8	56.7	54.1	50.2
3.	Near J.K. Factory Gate	20230531256	66.7	53.5	53.1	45.6
4.	Near Mine Gate	20230531257	59.8	55.1	52.8	42.8

CPCB Norms

S. No	Category of area	Day time dB 6.00 AM to 10.00PM	Night Time dB 10.00PM to 6.00am
1.	Industrial area	75.0	70.0
2.	Commercial area	65.0	55.0
3.	Residential area	55.0	45.0
4.	Silence area	50.0	40.0

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongri, Jaipur (Raj.) - 302 004
Result of Ambient Noise Level Monitoring

DATE OF RECEIPT : 14/07/2023

MONITORED BY : Bhupendra Kumar Soni, SO, Chittorgarh

S.No.	Lab Sample No	Name of Industry / Place	Point of Collection / Location	Date of Monitoring	Noise Level In Day Time(Leq dB(A))	Noise Level In Night Time(Leq dB(A))
1	6996	J.K.Cement Works,AhирpuraAhирpura Tehsil:Nimbahera District:Chittorgarh	Ambient Noise Monitoring near Main Gate of unit.	10/07/2023	60.1	ND


LAB INCHARGE

Rajasthan State Pollution Control Board

* ND = Not Done

Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongri, Jaipur (Raj.) - 302 004
Result of Ambient Noise Level Monitoring

DATE OF RECEIPT : 14/07/2023

MONITORED BY : Bhupendra Kumar Soni, SO, Chittorgarh

S.No.	Lab Sample No	Name of Industry / Place	Point of Collection / Location	Date of Monitoring	Noise Level In Day Time(Leq dB(A))	Noise Level In Night Time(Leq dB(A))
1	6997	J.K.Cement Works,AhirpuraAhirpura Tehsil:Nimbahera District:Chittorgarh	Ambient Noise Level Monitoring near TPP	10/07/2023	58	ND



LAB INCHARGE

Rajasthan State Pollution Control Board

* ND = Not Done

Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongri, Jaipur (Raj.) - 302 004

Result of Ambient Noise Level Monitoring

DATE OF RECEIPT : 14/07/2023

MONITORED BY : Bhupendra Kumar Soni, SO, Chittorgarh

S.No.	Lab Sample No	Name of Industry / Place	Point of Collection / Location	Date of Monitoring	Noise Level In Day Time(Leq dB(A))	Noise Level In Night Time(Leq dB(A))
1	6998	J.K.Cement Works,AharpuraAhirpura Tehsil:Nimbahera District:Chittorgarh	Ambient Noise Level Monitoring near Cricket ground of Colony	10/07/2023	59	ND



LAB INCHARGE

Rajasthan State Pollution Control Board

* ND = Not Done

Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongri, Jaipur (Raj.) - 302 004
Result of Ambient Noise Level Monitoring

DATE OF RECEIPT : 14/07/2023

MONITORED BY : Bhupendra Kumar Soni, SO, Chittorgarh

S.No.	Lab Sample No	Name of Industry / Place	Point of Collection / Location	Date of Monitoring	Noise Level In Day Time(Leq dB(A))	Noise Level In Night Time(Leq dB(A))
1	6999	J.K.Cement Works,AhirpuraAhirpura Tehsil:Nimbahera District:Chittorgarh	Ambient Noise Level Monitoring near Mine Gate of Unit	10/07/2023	57.4	ND


LAB INCHARGE

Rajasthan State Pollution Control Board

* ND = Not Done

Awareness Program on Ban of Single Use Plastic

By

J K Cement Works

Nimbahera & Mangrol

Dist. Chittorgarh (Rajasthan)

August 2022



Display Board on Ban of SUP placed at Nimbahera Plant





जे. के. सीमेन्ट , निम्बाहेड़ा

सिंगल यूज प्लास्टिक के प्रयोग पर रोक लगाने के संबंध में।

क्या उपयोग नहीं करना है ?

केंद्रीय पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा अगस्त 2021 में अधिसूचित संशोधित प्लास्टिक अपशिष्ट प्रबंधन नियम 2021 के अनुसार निम्नलिखित एकल उपयोग प्लास्टिक वस्तुओं को प्रतिबंधित किया गया है।



सजावट के लिये प्लास्टिक व थर्माकोल (पॉलिस्टीरिन)



मिठाईयों के डिब्बे, निमंत्रण पत्रिका व सिगरेट के पैकेट और उनके कवर



प्लास्टिक की छड़ों के साथ कानकोरनी, गुब्बारों के लिए प्लास्टिक के झंडे, कैड़ी के छड़े, आईस्क्रीम छड़े



प्लेट्स, कप, ग्लासेस, कटलरी जैसे कि चम्मच, चाकू पिने के लिए स्ट्रॉ, ट्रे, घुलानी (स्टिप्स)



100 माइक्रोन से पतले पीवीसी बेनर्स इन पर प्रतिबंध है।



कंपोस्टेबल प्लास्टिक (कचरा और नर्सरी की थैलियों छोड़कर)



सभी प्रकार के प्लास्टिक की थैलियाँ (कैरी बैग्स, नॉन बुवन बैग्स के साथ) हैण्डल वाली और बिना हैण्डल वाली



वर्तन, कटोरी और डिब्बे



J. K. Cement Works, Nimbahera



सुनो पापा !
अब भारत सरकार
ने सिंगल यूज
प्लास्टिक को बैन
कर दिया है।

बाजार जाते
समय
जूट या कपड़े
का बैग
लेकर जाएँ।

J. K. Cement Works, Nimbahera

सुनो पापा !
अब भारत सरकार
ने सिंगल यूज
प्लास्टिक को बैन
कर दिया है।

बाजार जाते
समय
जूट या कपड़े
का बेग
लेकर जाएँ।

[illegible]

Awareness on Ban of Single Use Plastic conducted at Nimbahera Town



Awareness on Ban of SUP conducted at Nimbahera Town



Awareness on Ban of SUP Audio Clip Played in Loud Speaker



Awareness on Ban of SUP conducted at Sahabad Village



Awareness on Ban of SUP conducted at Arniya Paliwal Village



**Display Board on Ban of Single Use Plastic placed at
Sushila Nagar Colony, Mangrol**



**Awareness on Ban of SUP conducted at Mangrol
Village**



Awareness on Ban of SUP conducted at Mangrol Village



Awareness on Ban of SUP conducted at Tilakhera Village



Awareness on Ban of SUP conducted at Badoli Madhopur Village



Awareness on Ban of SUP conducted at Arniya Joshi Village



Awareness on Ban of Single Use Plastic Conducted at Falwa Village



Awareness on Ban of SUP conducted at Maliakheri Village



Awareness on Ban of SUP conducted at Rasulpura



Awareness on Ban of SUP conducted at Charlia Gadiya Village



Thank You.....





Sponsor:



Cement Division, Unit- Nimbahera

Report Prepared by:



Wolkem India Limited

**"WOLKEM HOUSE" E- 101, Mewar Industrial Area,
Madari, Udaipur- 313003, Rajasthan, India**

**Phone: +91 294 2494600 – 02, E-mail: info@wolkem.com
(QCI/NABET Accredited EIA Consultancy Organization,
NABL Accredited & ISO 17025 Certified Laboratory)**

Preface

J.K. CEMENT LIMITED
Cement Division, Unit- Nimbahera
June- 2023

Calibration Check Monitoring Report
For
Particulate Matter (PM-CEMS)
Continuous Emission Monitoring System

For and on behalf of Wolkem India Limited

Approved by : Mr. Amreesh Malik

Singed : 

Designation : Head & Dy. GM

Date : 11.07.2023

This report has been prepared by Wolkem India Limited with all reasonable skill, care and diligence within the terms of the contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

1. Introduction

JK Cement Ltd. is one of India's leading manufacturers of Grey Cement and one of the leading White Cement manufacturers in the World. Over four decades, the Company has partnered India's multi-sectoral infrastructure needs on the strength of its product excellence, customer orientation and technology leadership. JK Cement's operations commenced with commercial production at its flagship grey cement unit at Nimbahera, Rajasthan in May 1975.

The Company has an installed Grey Cement capacity of 15 MTPA as on date, making it one of the top cement manufacturers in the Country.

2. Background

Cement, power, chemical, textile and various other industries are indicators of country's progress, however all these industries have adverse impact on environment through emission of pollutants. India, like many other countries, has put in place a regulatory regime to control industrial emissions into air. For industries it is very difficult to follow these regimes due to continuous varying emission level depending on various factors like variation in per day production based on market demand, load, operating hours, season etc. and conventional emission monitoring system represent the emission level of particular time period only.

Continuous emission monitoring system (CEMS) has become necessity to monitor & regulate emission level. CEMS refers to the instrumentation and associated computing hardware and software used to measure pollutant levels in exhaust gas from industrial sources at a higher frequency (e.g., once or more per minute). Most PM CEMS device technologies employ indirect measurement principles and therefore require calibration before use. For instance, light scattering CEMS technology, which is commonly used to measure PM emissions, calculates the concentration of pollutants based on changes in the optical properties of stack gas. Calibration (performance & reliability) of CEMS ensures the complete integrity & reliability of data acquired from CEMS.

JK Cement Ltd, Situated at Kailash Nagar Village, Post. Nimbahera, Chittorgarh District of Rajasthan, has put Particulate matter CEMS (PM- CEMS) for monitoring of particulate matter emission level. Calibration Check of CEMS was performed by M/s Wolkem India Limited, Udaipur. To comply the regulatory requirement M/s Wolkem India Limited was follow Central Pollution Control Board specifications and guidelines for continuous emissions monitoring systems (CEMS) for Particulate Matter (PM) measurement with special reference to emission trading programs (CPCB/e-PUBLICATION/2013-14) and 1st Revised Guidelines for Continuous emission monitoring systems in September 2018. Standard reference method of Iso-kinetic sampling technique was adopted for comparison study of online data received from PM CEMS.

3. Standard Reference Method (SRM)

Particulate matter is withdrawn Iso-kinetically from the duct/stack and collected in a Micro Glass fiber thimble maintained at duct/stack temperature. The particulate matter, which includes any material that collects in the Filter thimble, is determined gravimetrically after the removal of un-combined moisture. The Iso-kinetic flow rate is calculated from the arrived flue gas velocity inside the duct/stack at respective traverse points, which is calculated based on the measured parameters like temperature, moisture, molecular weight, velocity head at respective traverse points and static head.

4. Calibration procedure

Particulate matter emission level of 9 stacks (stationary source of emission) installed in plant was measured by standard reference method of Iso- kinetic sampling technique. Total three measurements were carried out in each stack with changing load of Concern Mills (wherever possible). Micro Glass Fiber Filter thimbles are used for dust collection and were conditioned at 120 °C to constant weighing before & after sampling. Data acquired from PM-CEMS for each stack during Real time period of Iso- kinetic sampling was collected. Since in every study each collected data is associated with some inherent error due to various unavoidable factors, therefore, for comparing both data, regression line graph was made between Iso-kinetic data vs. PM-CEMS data. From this root mean square (RMS), percent root mean square percentage error (%RMSPE), and regression slope (m) intercept factor (C) regression correlation coefficient (R^2) & was calculated. In this study R^2 represents the fitness of data to linear line equation & percent root mean square error for this study indicates the deviation of PM-CEMS data with reference to standard reference method of Iso-kinetic sampling method. As per CPCB/e-Publication/2013-14 guideline, maximum acceptable limit for % RMSPE is less than 30. If % RMSE is more than 30, then factor of m & C needs to apply in CEMS software to get correct data for emission level.

5. Instruments

For this study, Iso-kinetic sampling train for Particulate Matter was carried out in different stacks in JK Cement Ltd. Nimbahera, in Chittorgarh District, Rajasthan, by stack sampling kit TEI- 401 of Thermo Environmental Instrument Private Limited. Dust sample was collected in Whatman glass fiber thimbles.

6. Gaseous Composition Measurement

The measurement of the O₂, & CO₂ was carried out with the Portable Combustion Flue Gas Analyser Make of Kane 900 plus Model.



FIGURE- 1
PORTABLE COMBUSTION GAS ANALYSER

7. Exhaust

7.1 Velocity

The velocity profile was measured using S-type Pitot tube according to USEPA- guideline method no.2.

TABLE- 1
INSTRUMENT DETAILS FOR VELOCITY MEASUREMENT

Parameters	Instrument and Its Specification
S- Type Pitot tube	<ul style="list-style-type: none"> Thermo Environmental Stack Sampling Kit Validated with calibration Report
Dynamic pressure	<ul style="list-style-type: none"> Incline cum vertical manometer Thermo Environmental Stack Sampling Kit Accuracy: ± 1 [%] of measuring range
Static pressure	<ul style="list-style-type: none"> Incline cum vertical manometer Thermo Environmental Stack Sampling Kit Accuracy: ± 1 [%] of measuring range

7.2 Exhaust Gas Temperature

During the whole measuring period the temperature of the exhaust gas was measured in multi- points of the cross-section area of the stack with a K type thermocouple in connection with a display unit.

Thermo Environmental Stack Sampling Kit

TABLE- 2
INSTRUMENT DETAILS FOR TEMPERATURE MEASUREMENT

Parameters	Instrument and Its Specification
Temperature	Digital Thermo Meter o Range: 0 - 600 [°C] o Accuracy: $\pm 0.3\% + 1^{\circ}\text{C}$

8. Measurement of Particulate Matter (PM)

Thermo Iso-kinetic Source Sampling Kit Model TEI- 401 was used to collect dust Sample Iso-kinetically as Per IS: 11255 Part-1 with valid.

Calibration report of Manometer, Orifice Meter, Dry Gas Meter, Sampling Nozzle, Vacuum gauge, Temp indicator, Pitot tube. Sample was collected in Glass Fiber Filter. Hot gas was dried using silica Gel and cooled less than 200 °C before entering to metering Device (Dry Gas Meter). Initial & Final Weight of Filter Thimble was taken at site Laboratory by using Digital Balance.



FIGURE- 2
STACK EMISSION MITORING KIT

9. QA/ QC for Duct Measurement During Sampling

The instruments used for measurement are duly calibrated as per applicable norms as mentioned in ISO/IEC: 17025.

Calibrated S-type Pitot tube, manometer, digital thermometer, Rota meter, dry gas meter & vacuum gauges were used.

For QA/QC Leak Check was done before & after sampling of each port hole at pressure of (-15) inch Hg & was found 100% leak Proof.

Iso-kineticity percentage was in between 90-110 % at Each Port Hole & over all Iso-kineticity Percentage was also in the same range. Field Blank sample was taken care at site.

10. Results & Discussion

Results obtained from PM-CEMS & Iso-kinetic sampling are summarized in **Table-3** and Regression trend data are given in **Table-4** to **Table-14**.

TABLE- 3
SUMMARY OF REGRESSION ANALYSIS

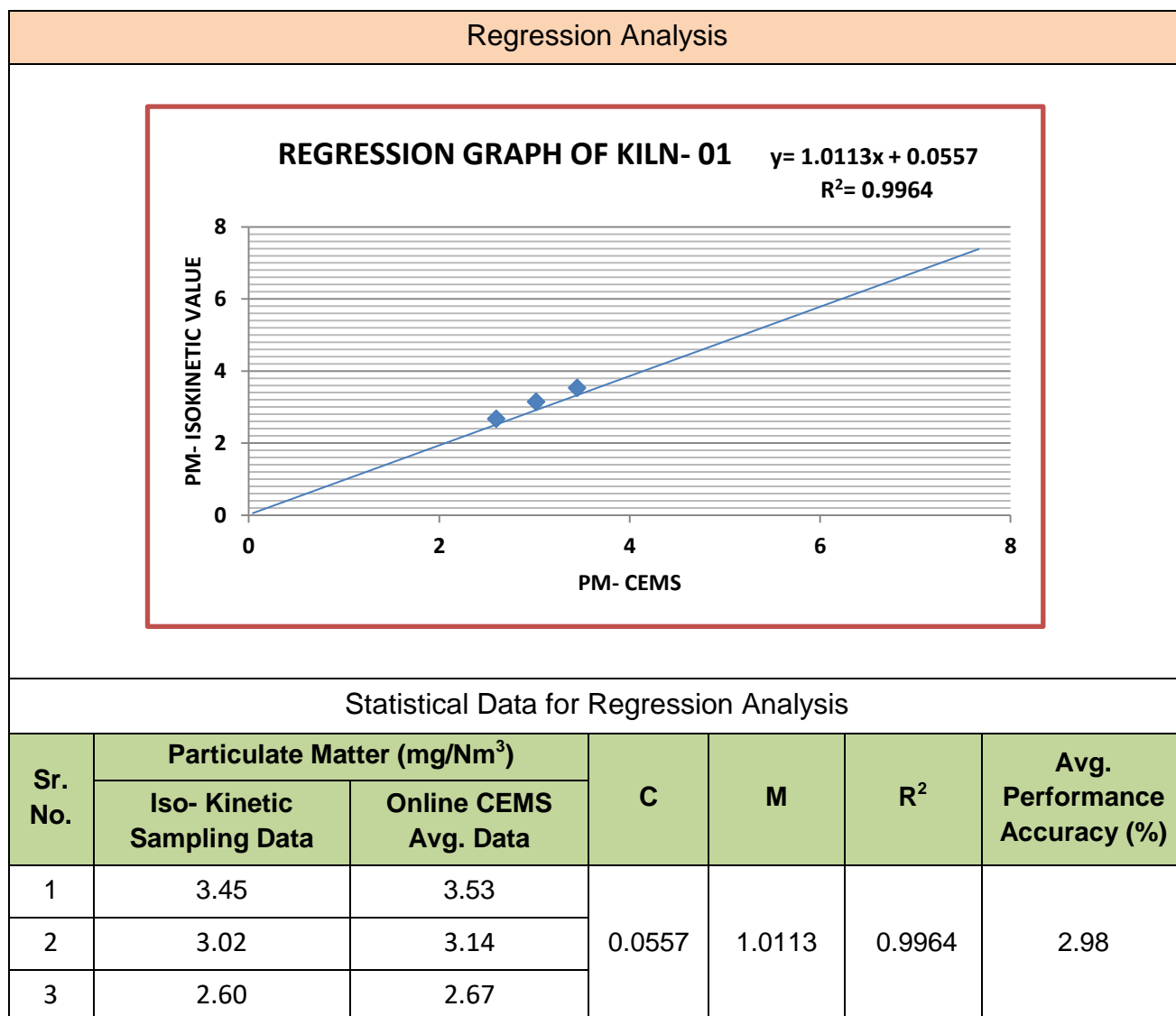
Sr. No	Stack Identity	PD (%)	C	m	R2
1	KILN- 01	2.98	0.0557	1.0113	0.9964
2	KILN- 02	3.87	-0.2216	1.0512	0.9999
3	KILN- 03	0.09	4.7684	0.3687	0.211
4	Cooler Line- 3	2.28	15.699	0.0864	0.5662
5	Coal Mill- 03- VRM	1.11	3.5017	-0.05	0.75
6	Coal Mill- 04	3.33	22.878	0.0049	0.7804
7	Cement Mill- 01	5.20	3.1864	0.5895	0.9213
8	Cement Mill- 02	5.11	0.1948	0.9316	0.9977
9	Cement Mill- 03	4.55	0.5452	0.8387	0.9931
10	Cement Mill- 04	0.47	1.4808	1.2553	0.9717
11	Cement Mill- HRP	3.12	1.3663	0.6662	0.9992
Nomenclature: PD (%) : Allowable Deviation percentage in comparison with SRM Value M : Regression Slope (correction factor) C : Intercept Factor R2 : Correlation Coefficient NA : Data Not Updated Due to Up-gradation Work					

11. Conclusion

From the statistical analysis we found that Performance deviation (%) in Comparison with SRM Data and PM-CEMS data received with real time Monitoring for all stacks are in the range of $\pm 10\%$. Hence, it is clear that measured data logged through PM-CEMs are in compliance with CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Based on present study CDF viz. Regression Slope i.e., all CEMs are require to be calibrate.

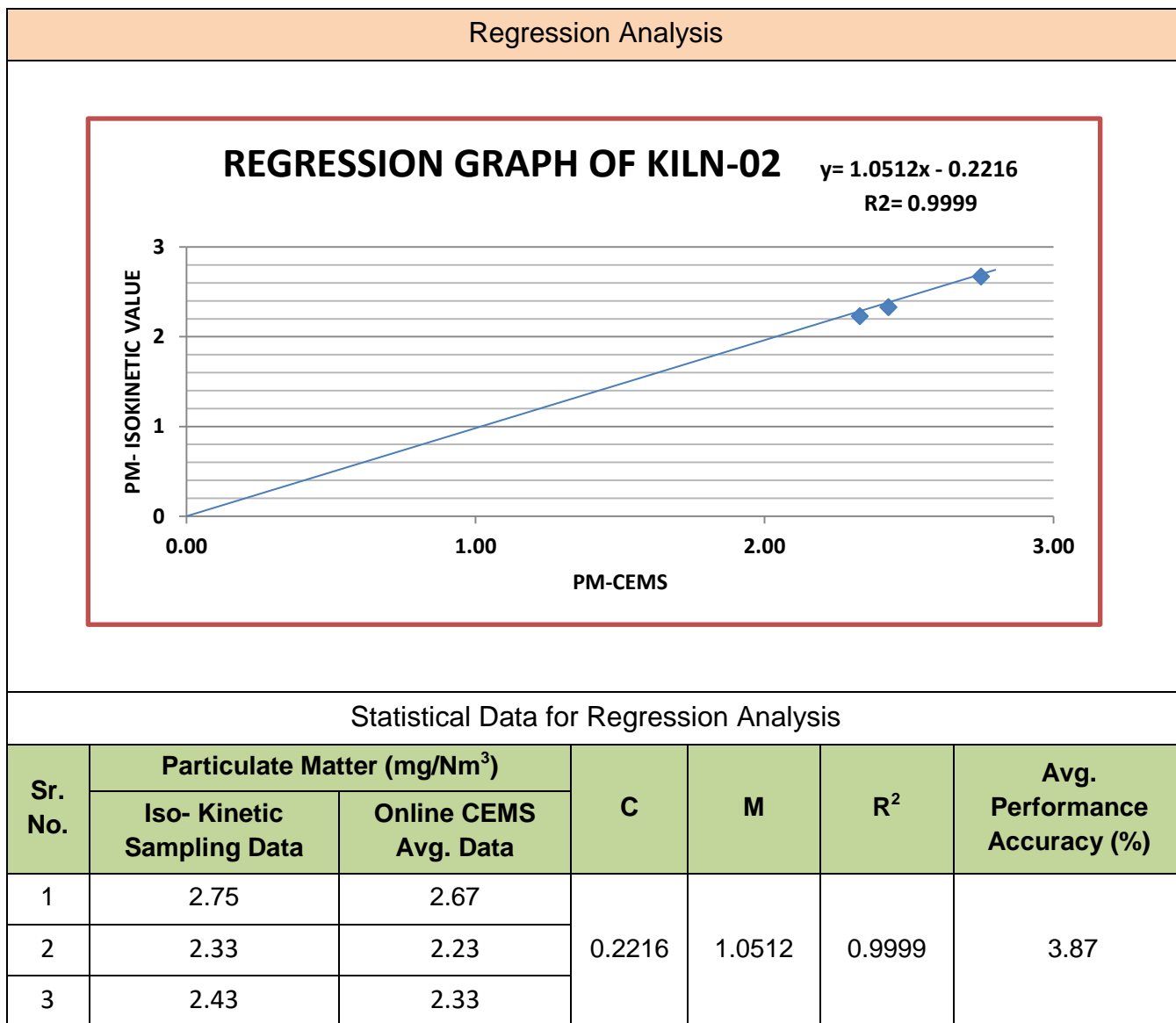
TABLE- 4
REGRESSION ANALYSIS OF KILN- 01



Observation: Installed PM CEMs at **KILN-01** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

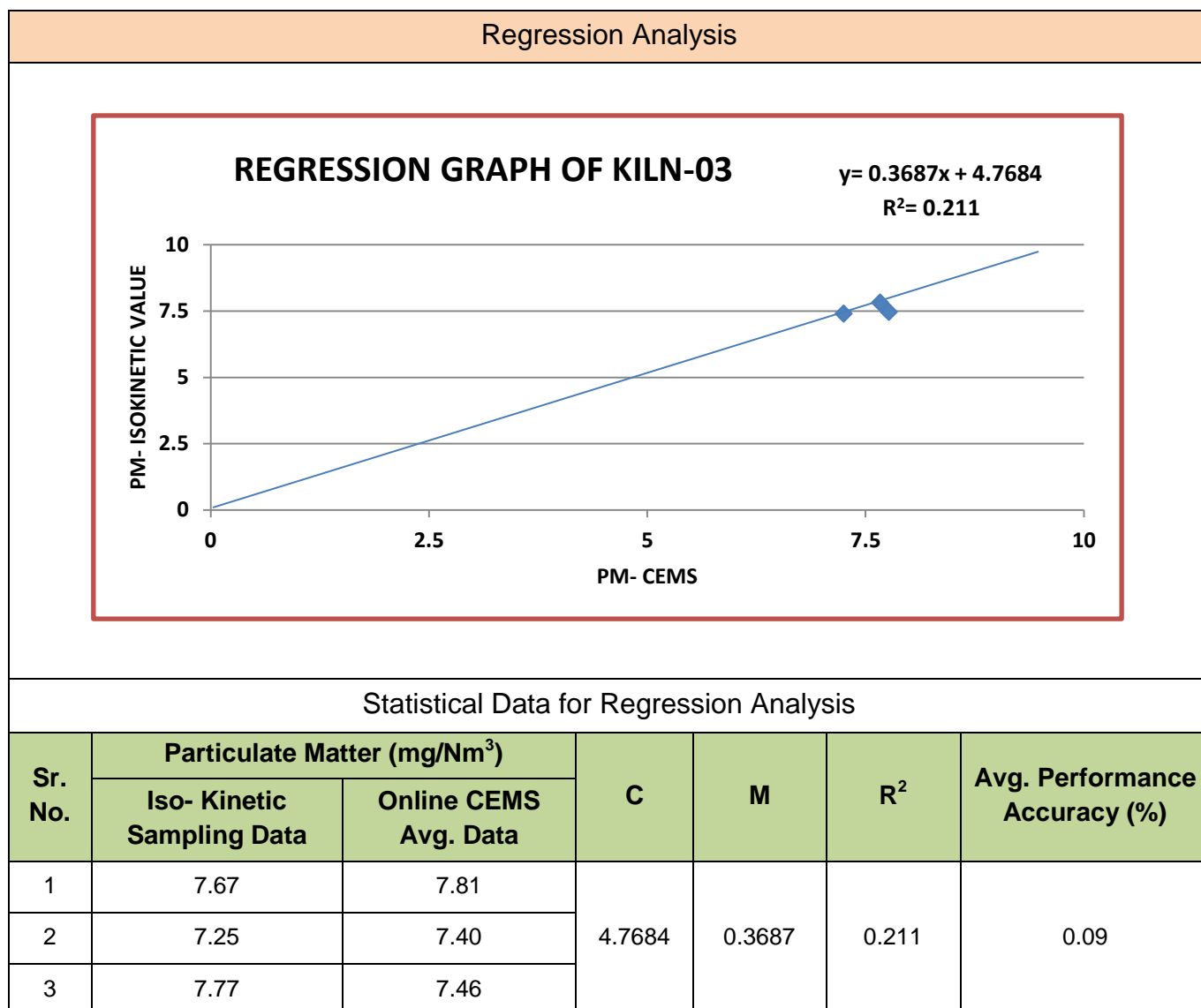
TABLE- 5
REGRESSION ANALYSIS OF KILN- 02



Observation: Installed PM CEMs at **KILN-02** is incompliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

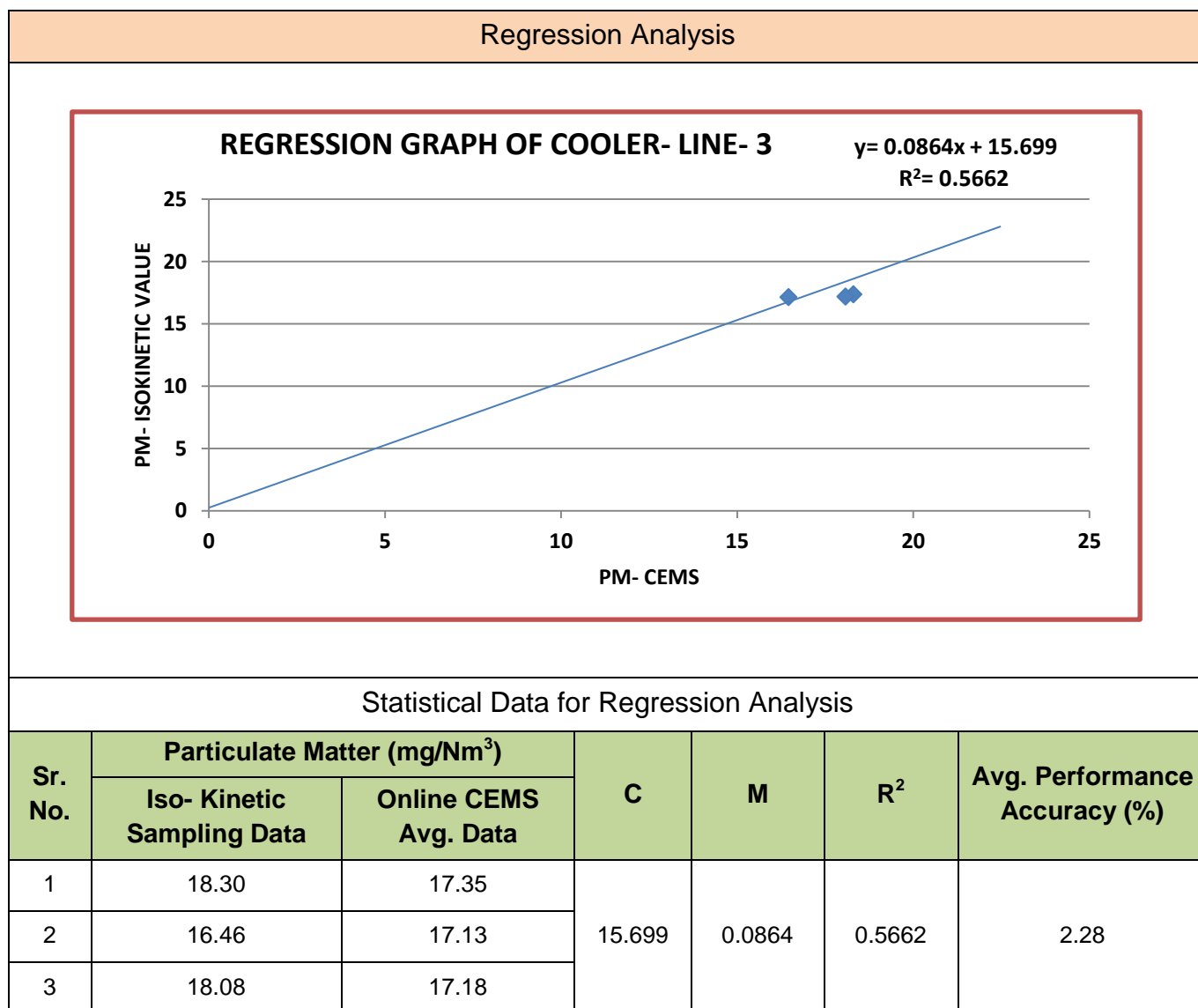
TABLE- 6
REGRESSION ANALYSIS OF KILN- 03



Observation: Installed PM CEMs at **KILN-03** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

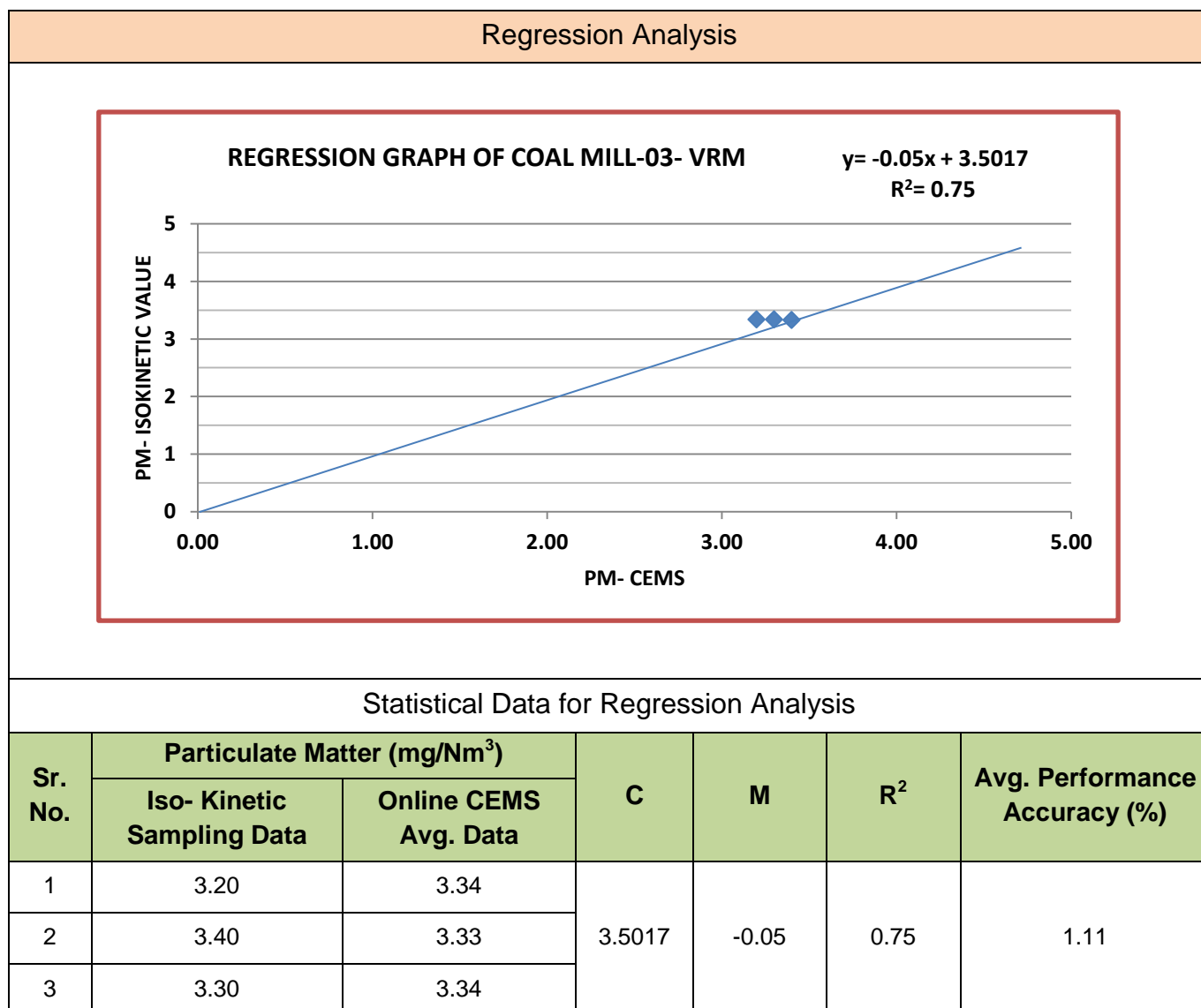
TABLE- 7
REGRESSION ANALYSIS OF COOLER-LINE-03



Observation: Installed PM CEMs at **Cooler-Line-03** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

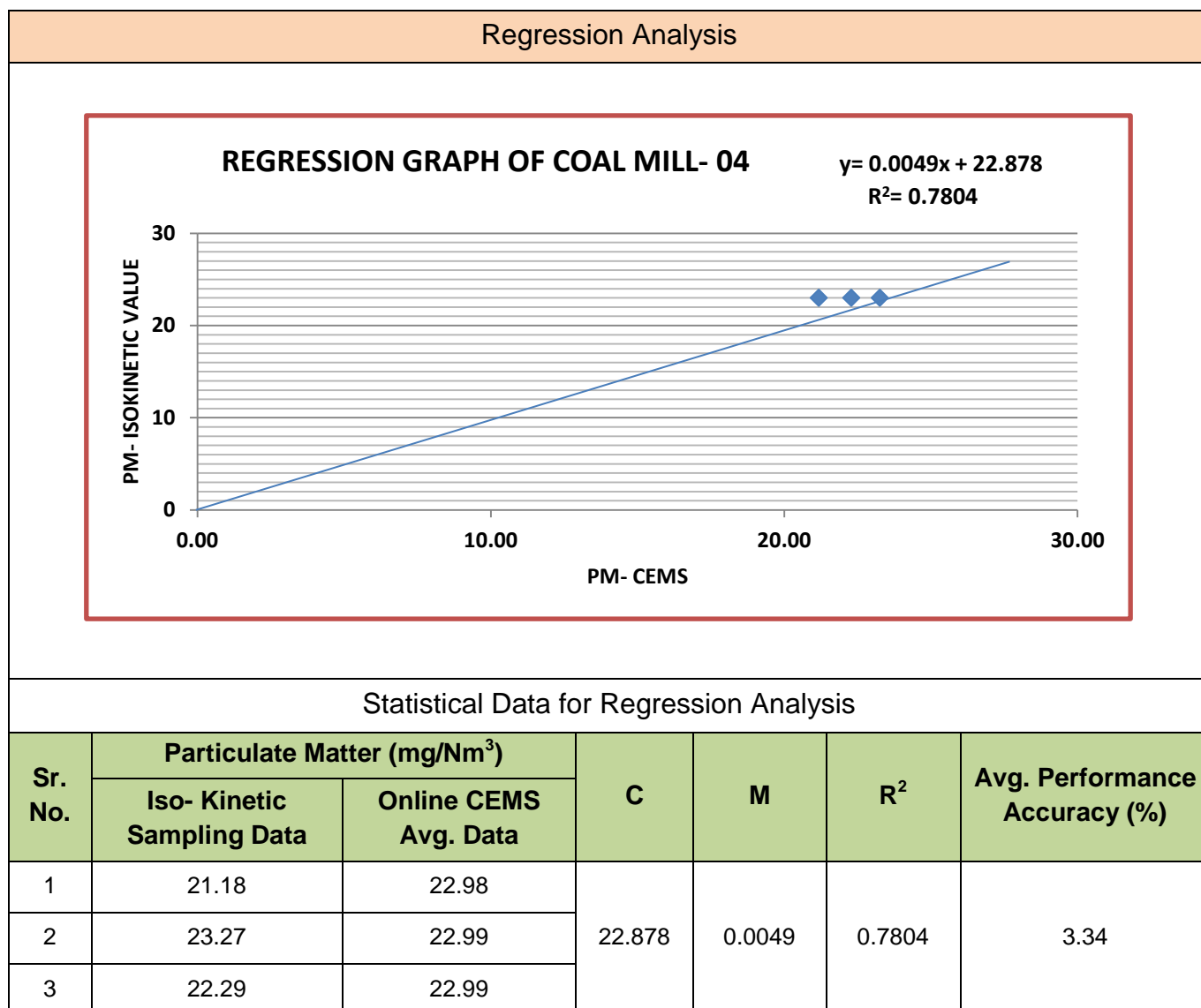
TABLE- 8
REGRESSION ANALYSIS OF COAL MILL-03- VRM



Observation: Installed PM CEMs at **Coal Mill-03-VRM** is incompliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

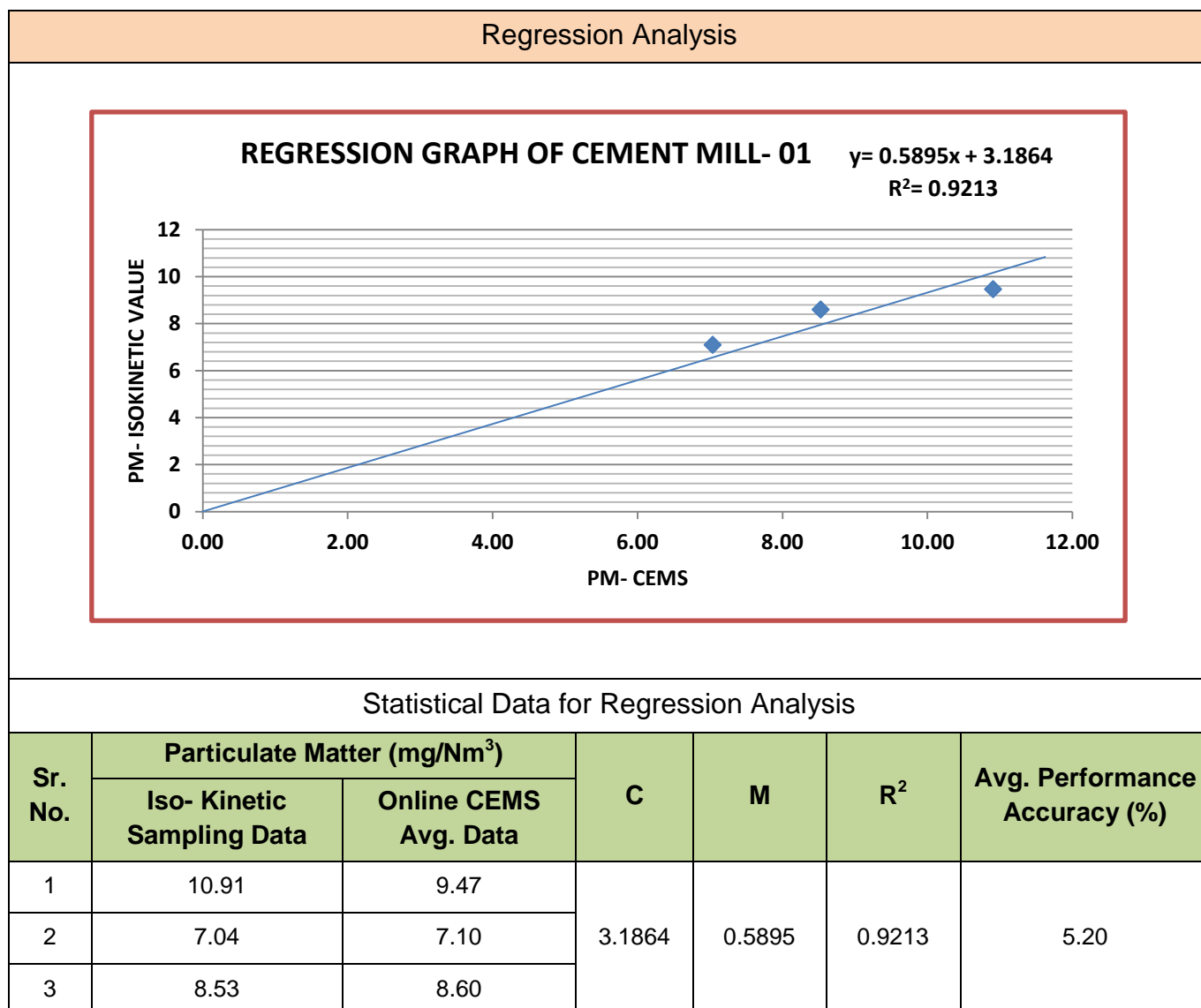
TABLE- 9
REGRESSION ANALYSIS OF COAL MILL-04



Observation: Installed PM CEMs at **Coal Mill-04** is incompliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

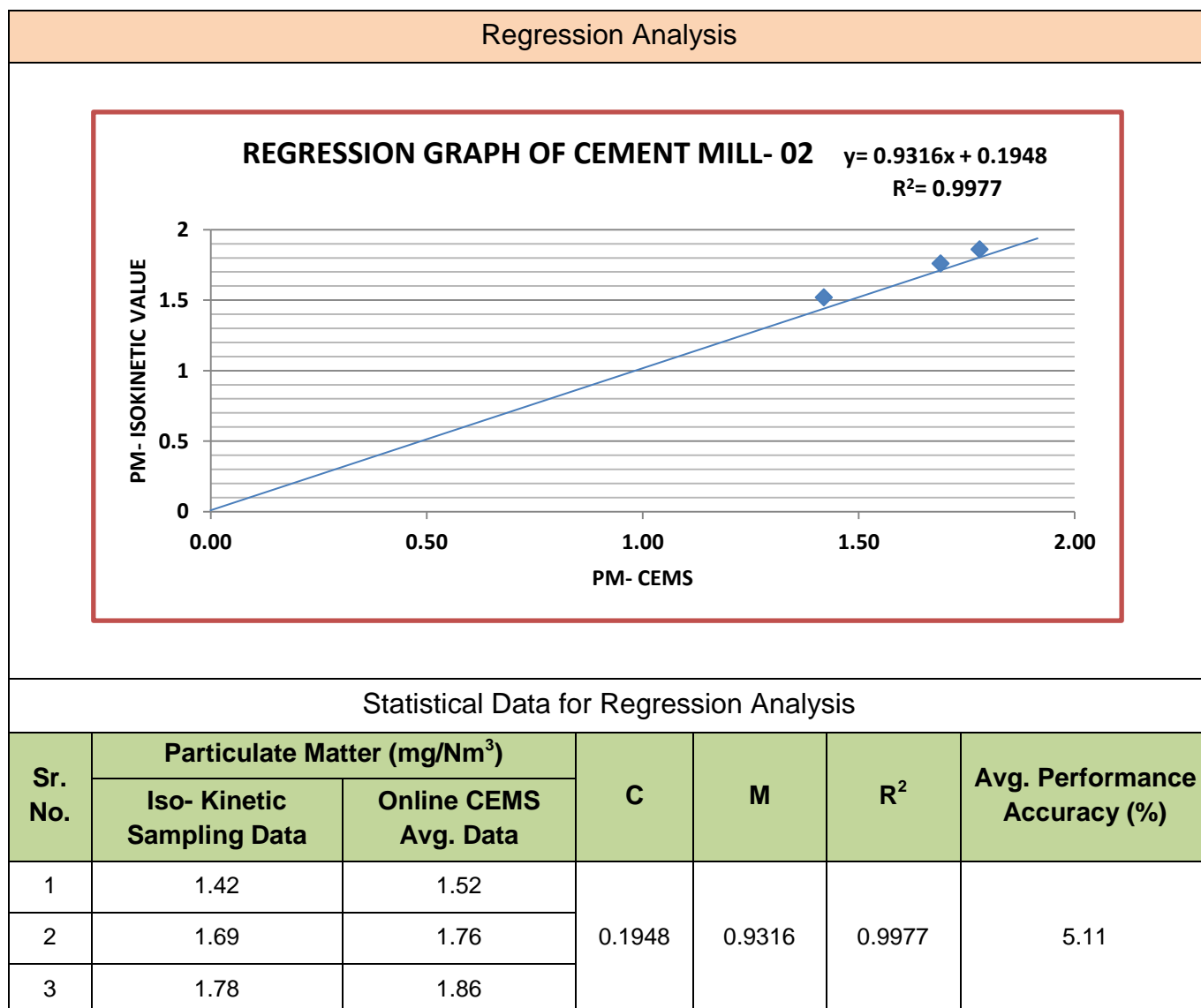
TABLE- 10
REGRESSION ANALYSIS OF CEMENT MILL-01



Observation: Installed PM CEMs at **Cement Mill-01** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

TABLE- 11
REGRESSION ANALYSIS OF CEMENT MILL-02

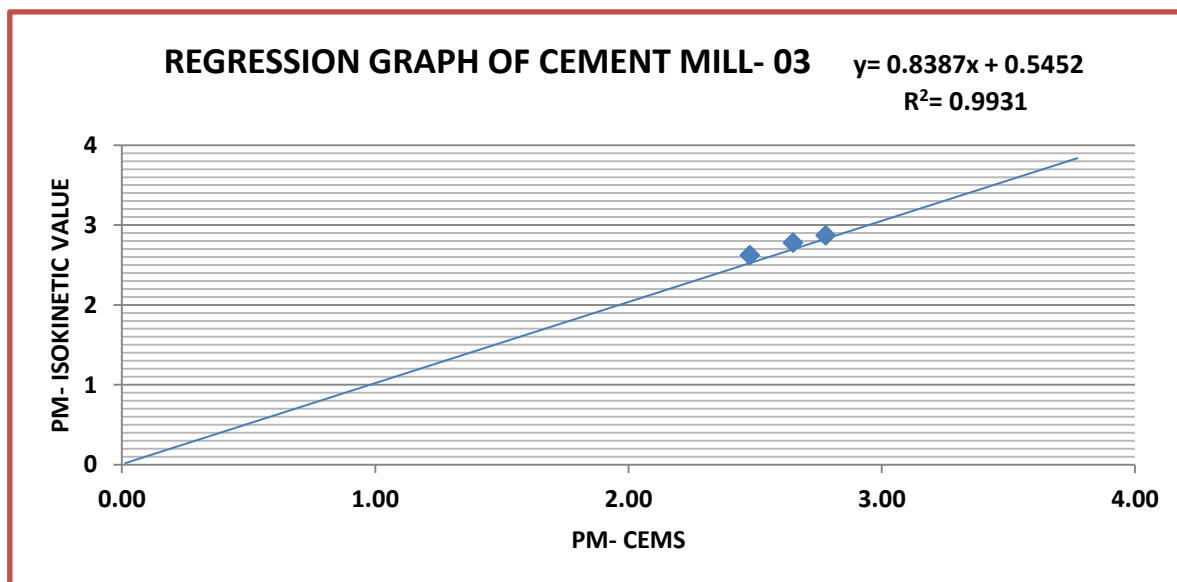


Observation: Installed PM CEMs at **Cement Mill-02** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

TABLE- 12
REGRESSION ANALYSIS OF CEMENT MILL-03

Regression Analysis



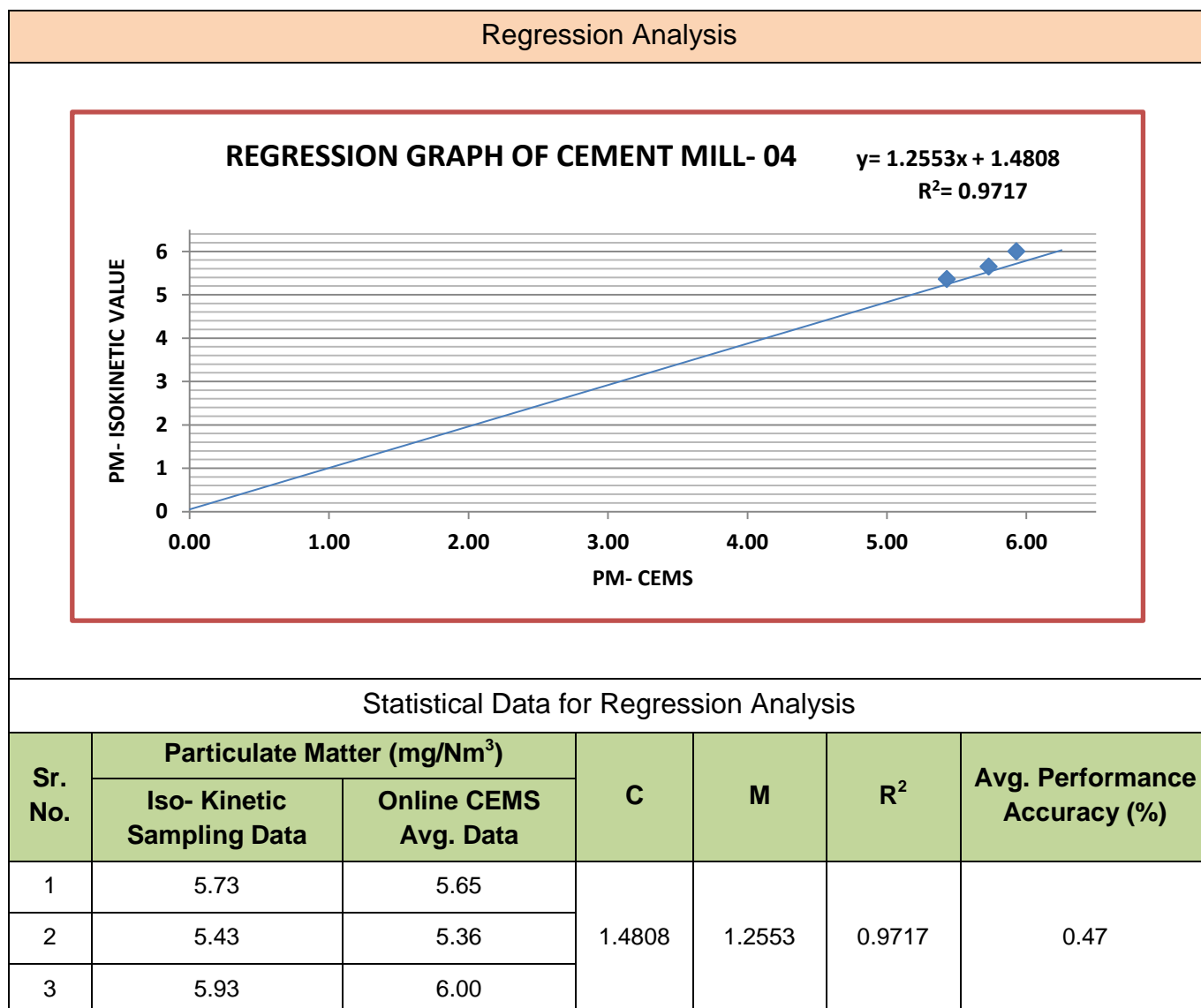
Statistical Data for Regression Analysis

Sr. No.	Particulate Matter (mg/Nm ³)		C	M	R ²	Avg. Performance Accuracy (%)
	Iso- Kinetic Sampling Data	Online CEMS Avg. Data				
1	2.78	2.87	0.5452	0.8384	0.9931	4.55
2	2.48	2.62				
3	2.65	2.78				

Observation: Installed PM CEMs at **Cement Mill-03** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

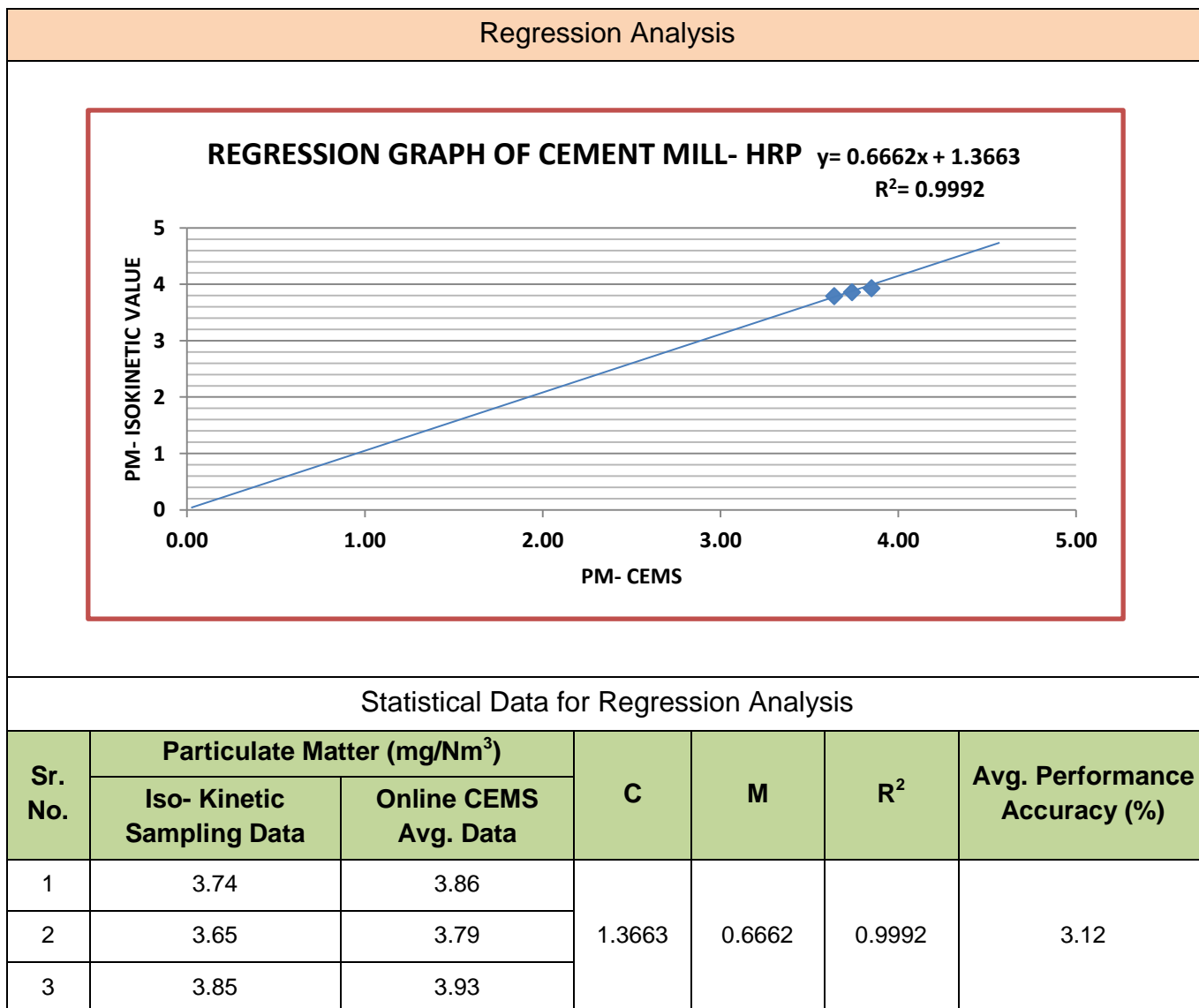
TABLE- 13
REGRESSION ANALYSIS OF CEMENT MILL-04



Observation: Installed PM CEMs at **Cement Mill-04** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

TABLE- 14
REGRESSION ANALYSIS OF CEMENT MILL-HRP



Observation: Installed PM CEMS at **Cement Mill-HRP** is in compliance as per CPCB 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018.

Allowable deviation of Performance Accuracy of PM-CEMS during comparison study against SRM should be $\leq \pm 10\%$.

12. Remark & Compliance

For better performance and more accuracy in PM CEMS and Gaseous CEMS receiving data and Calibration Check of PM CEMS of all stacks is recommended every after Three month as per Protocols for Online Continuous Effluent & Emission Monitoring Systems (OCEMS) 06TH March, 2018. And 1st Revised Guidelines for Continuous Emission Monitoring Systems June 2018 & CEMS Audit (Recalibration) should perform at least once in a year.

KILN- 01														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM- PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	20.06.2023	09:15 AM	30	147	11.76	39.87	3.45	3.53	-2.32	2.32	2.98	0.0557	1.0113	0.9964
2	20.06.2023	10:00 AM	30.2	149	11.93	40.23	3.02	3.14	-3.97	3.97				
3	20.06.2023	10:45 AM	30.4	148	11.64	39.36	2.60	2.67	-2.69	2.69				
KILN- 02														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM- PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	21.06.2023	07:15 PM	29.7	145	16.09	42.43	2.75	2.50	-10	10	3.87	-0.2216	1.0512	0.9999
2	21.06.2023	08:00 PM	30	145	16.15	42.58	2.33	2.23	-4.48	4.48				
3	21.06.2023	18:45 PM	30.5	14	16.06	43.45	2.43	2.33	-4.29	4.29				
KILN- 03														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM- PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	19.06.2023	11:30 AM	31.7	122	11.73	136.98	7.67	7.81	-1.82	1.82	0.09	4.7864	0.3687	0.211
2	19.06.2023	12:15 PM	31.9	123	11.81	137.55	7.25	7.40	-2.06	2.06				
3	19.06.2023	01:15 PM	32.1	121	11.65	136.41	7.77	7.46	-3.99	3.99				
Cooler-Line-03														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM- PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	20.06.2023	01:30 PM	33.8	107	4.16	39.85	18.30	17.35	-5.19	5.19	2.28	15.699	0.0864	0.5662
2	20.06.2023	02:30 PM	34	108	4.33	41.43	16.46	17.13	-4.07	4.07				
3	20.06.2023	03:30 PM	34.3	108	4.07	38.96	18.08	17.18	-4.98	4.98				

Coal Mill-03- VRM														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	19.06.2023	02:30 PM	32.5	66	11.10	33.52	3.20	3.34	-4.38	4.38	1.11	3.5017	-0.05	0.75
2	19.06.2023	03:15 PM	32.7	65	11.20	33.92	3.40	3.33	-2.06	2.06				
3	19.06.2023	04:00 PM	33	65	11.14	33.75	3.30	3.34	-1.21	1.21				
Coal Mill-04														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	19.06.2023	04:15 PM	32.8	66	7.17	6.93	21.18	22.98	-8.50	8.50	3.33	22.878	0.0049	0.7804
2	19.06.2023	05:15 PM	32.9	66	7.25	7.02	23.27	22.99	-1.23	1.23				
3	19.06.2023	06:15 PM	32.6	65	7.21	7.00	22.29	22.99	-3.14	3.14				
Cement Mill-01														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	21.06.2023	08:30 AM	29.8	104	14.78	3.54	10.91	9.47	-13.20	13.20	5.20	3.1864	0.5895	0.9213
2	21.06.2023	09:15 AM	30	104	14.68	3.52	7.04	7.10	-0.85	0.85				
3	21.06.2023	10:00 AM	30.4	105	14.75	3.53	8.53	8.60	-0.82	0.82				
Cement Mill-02														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	21.06.2023	11:00 AM	30.7	76	12.33	3.40	1.52	3.15	-7.04	7.04	5.11	0.1948	0.9316	0.9977
2	21.06.2023	11:45 AM	31	78	12.20	3.35	1.69	1.76	-4.41	4.41				
3	21.06.2023	12:30 PM	32.6	78	12.23	3.35	1.78	1.46	-5.68	5.68				

Cement Mill-03														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	21.06.2023	01:15 PM	32.9	73	10.24	2.43	2.78	2.87	-3.24	3.24	4.55	0.5452	0.8387	0.9931
2	21.06.2023	02:00 PM	33.2	74	10.32	2.44	2.48	2.62	-5.64	5.64				
3	21.06.2023	02:45 PM	33.5	74	10.12	2.39	2.65	2.78	-4.90	4.90				
Cement Mill-04														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	21.06.2023	03:15 PM	33.8	68	13.15	7.12	5.73	5.65	-1.42	1.42	0.47	1.4808	1.2553	0.9717
2	21.06.2023	04:00 PM	34.1	70	13.29	7.15	5.43	5.36	-1.30	1.30				
3	21.06.2023	04:45 PM	34.3	69	13.23	7.14	5.93	6.00	-1.18	1.18				
Cement Mill-HRP														
Sample No.	Date	Time	Ambient Temp	Flue Gas Temp	Avg Velocity	Flow Rate (Nm³/Sec)	SRM-PM	Avg CEM PM	Percentage Error	Absolute Percentage Error	Avg. Deviation in Comparison to SRM Value in %	C	m	R²
1	21.06.2023	05:00 PM	34.5	87	7.66	43.60	3.74	3.86	-3.21	3.21	3.12	1.3663	0.6662	0.9992
2	21.06.2023	05:35 PM	34.1	85	7.55	43.21	3.64	3.79	-4.12	4.12				
3	21.06.2023	06:20 PM	33.8	85	7.72	44.23	3.85	3.93	-2.03	2.03				

13. Comparison of Gaseous CEMS Data

Soon, CPCB plans to regulate source emissions from stationary sources through implementation of an emission trading scheme (ETS). In this context, industries are instructed to install online Continuous Emission Monitoring Systems (CEMS with Data Acquisition System (DAS)) for gaseous pollutants and data generated in DAS will be linked with CPCB Data Acquisition and Handling centre (DAHC). JK Cement Limited proactively initiated the installation of CEMS for gaseous pollutants along with particulate matter (PM).

Various technologies are available for monitoring of Particulate Matter (PM) and gaseous emission from the stack of industries and in terms of the parameters specified in the directions issued by CPCB. The selection and suitability of CEMS specific to the pollutant type and industry wise are recommended in the latest CPCB Guidelines for Continuous Emission Monitoring Systems. The Gaseous and PM CEMS are installed at Kiln stacks to measure the Gaseous Parameters at JK Cement Limited, Nimabehra to continuously measure pollutant levels as per above CPCB guidelines.

To know the Concentrations of SO₂ and NO_x in Kiln stacks, Portable Combustion Flue Gas Analyser Make of Kane 900 is used as Standard Reference Method (SRM). Details of findings are presented below **Tables 15 to Table 17**

TABLE- 15
CEMS DATA (GASEOUS) VERSUS KANE 900 PLUS GAS ANALYSER RESULTS FOR KILN-01

Date of Monitoring	NO _x (mg/m ³)			SO _x (mg/m ³)		
	CEMs Data	Kane 900 plus DATA	Performance Deviation (%)	CEMs Data	Kane 900 plus DATA	Performance Deviation (%)
20.06.2023	201.06	210.79	4.84	0.03	BDL	<1
20.06.2023	187.51	175.86	6.62	0.00	BDL	<1
20.06.2023	182.51	186.61	2.25	0.00	BDL	<1

*All SRM values are corrected to 10% O₂

*BDL- below Detectable Limit

TABLE- 16
CEMS DATA (GASEOUS) VERSUS KANE 900 PLUS GAS ANALYSER RESULTS FOR KILN-02

Date of Monitoring	NO _x (mg/m ³)			SO _x (mg/m ³)		
	CEMs Data	Kane 900 plus DATA	Performance Deviation (%)	CEMs Data	Kane 900 plus DATA	Performance Deviation (%)
19.06.2023	415.25	419.68	1.07	0.00	1.69	<1
19.06.2023	315.79	318.01	0.70	0.00	0.91	<1
19.06.2023	332.33	336.14	1.15	0.00	1.29	<1

*All SRM values are corrected to 10% O₂

TABLE- 17
CEMS DATA (GASEOUS) VERSUS KANE 900 PLUS GAS ANALYSER RESULTS FOR KILN-03

Date of Monitoring	NOx (mg/m3)			SOx (mg/m3)		
	CEMs Data	Kane 900 plus DATA	Performance Deviation (%)	CEMs Data	Kane 900 plus DATA	Performance Deviation (%)
19.06.2023	571.59	575.53	0.69	24.82	23.58	5.26
19.06.2023	621.21	634.44	2.13	24.45	25.09	2.62
19.06.2023	608.96	589.04	3.38	26.47	27.91	5.44

*All SRM values are corrected to 10% O₂

14. Conclusion

PM- CEMS

Since Performance deviation (%) for all CEMS data available stacks is less than 10%, hence PM-CEMS data appears valid. This also concludes that Regression Slope i.e. correction factor (m) can maintain till next calibration.

Gaseous-CEMS

Since Performance deviation (%) for Given all CEMS data available stacks s is less than 10%, hence Gaseous-CEMS data appears is under allowable performance deviation in comparison to Kane 900 plus Gas Analyser.

15. Reference

- ❖ CPCB/e-Publication/2013-14(Specifications and guidelines for Continuous Emissions Monitoring Systems) for PM Measurement with special reference to Emission Trading Programs: Dated 22nd November 2013
- ❖ 1st Revised Guidelines for Continuous Emission Monitoring Systems; June,2018.
- ❖ IS: 11255 (Part- 1, 2 & 7)