

MGR/PC-14/C11

through Email

Date: 18.11.2022

To,

The Director (M),

Ministry of Environment, Forests & Climate Change
Indira Paryavaran Bhavan, JOR Bagh Road,
Near JOR bagh Metro station, **New Delhi 110003.**

Sub: Environmental Clearance Compliance report of Mangrol-Tilakhera Limestone Mine (ML no. 07/97, Area 299.20 ha.) production capacity 2.4 Million TPA (ROM), Village – Mangrol & Tilakhera, Tehsil- Nimbahera, District- Chittorgarh, Rajasthan.

Ref.: Environment Clearance letter No. J-11015 / 25/ 2011-IA.II (M) Dt.03.03.2021.

Dear Sir,

Kindly refer to the above subject matter and refer EC letter no., please find attached herewith compliance of EC for the period of **April 2022 to September 2022.**

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

We trust you will find the same in order.

Thanking you,

Yours Faithfully

For J. K. Cement Works, Mangrol



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

- Padam Tower, 19 DDA Community Centre Okhla, Phase - 1, New Delhi - 110020, India
- +011-49220000
- admin.padamtower@jkcement.com
- www.jkcement.com

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/MIN/181062/2018	Project Name	Proposal for Environmental Clearance (EC) of Mangrol-Tilakhera Limestone Mine with expansion from 1.6 Million TPA [ROM] to 2.4 Million TPA [ROM] Total Excavation (Limestone - 1.80 Million TPA + Mineral Rejects - 0.55 Million TPA + Interstitial clay - 0.04 Million TPA + Soil - 0.01 Million TPA) in the mine lease area of 299.20 ha. located at Village - Mangrol and Tilakhera, Tehsil - Nimbahera, District- Chittorgarh, Rajasthan by M/s. J.K. Cement Limited.
Category	A	MoEF File No.	J-11015/25/2011-IA.II (M) dated 03rd March, 2021
Name of the Entity / Corporate Office*	M/s. J.K. Cement Kamla Tower, Kanpur-208001 Uttar Pradesh		
Entity's PAN*	AABCJ0355R		
Entity Name as per PAN	J K CEMENT LIMITED		

Compliance Letter/Report

Reporting Year*	2022	Reporting Period*	April-2022 to September-2022
Remarks (if any)	Submitting herewith the Six Monthly EC Compliance Report for the period: April-2022 to September-2022 of Mangrol-Tilakhera Limestone Mine with expansion from 1.6 Million TPA [ROM] to 2.4 Million TPA [ROM] Total Excavation (Limestone - 1.80 Million TPA + Mineral Rejects - 0.55 Million TPA + Interstitial clay - 0.04 Million TPA + Soil - 0.01 Million TPA) in the mine lease area of 299.20 ha. located at Village - Mangrol and Tilakhera, Tehsil - Nimbahera, District- Chittorgarh, Rajasthan by M/s. J.K. Cement Limited.		

Details of Production and Project Area

Date of Commencement of Project /Activity: *	07/05/1979	Project Area as Per EC Granted (In Case of Mine Lease): *	299.20 ha.
Actual Project Area (In Case of Mine Lease): *	211.62 ha.		

PRODUCTION CAPACITY

Name of the Product*	Units*	As per EC granted*	Production during last financial year: 2021-22)*
Cement Grade Limestone	Million TPA	1.80	1.5556
Subgrade Limestone	Million TPA	0.55	0.5201
Interstitial Clay/ Screen rejects/ Waste	Million TPA	0.04	0.0251
Top Soil	Million TPA	0.01	0.0085
Total Excavation Quantity	Million TPA	2.40	2.1094

Mangrol-Tilakhera Limestone Mine (M.L. No.: 07/97, ML Area: 299.20 ha.)
At Village - Mangrol and Tilakhera, Tehsil - Nimbahera, District- Chittorgarh, Rajasthan-312617 by M/s. J.K. Cement Limited

EC Compliance Report: April-2022 to September-2022

Proposal for Environmental Clearance (EC) of **Mangrol-Tilakhera Limestone Mine** with expansion from 1.6 Million TPA [ROM] to 2.4 Million TPA [ROM] Total Excavation (Limestone - 1.80 Million TPA + Mineral Rejects - 0.55 Million TPA + Interstitial clay - 0.04 Million TPA + Soil - 0.01 Million TPA) in the mine lease area of 299.20 ha. located at Village - Mangrol and Tilakhera, Tehsil - Nimbahera, District- Chittorgarh, Rajasthan by M/s. J.K. Cement Limited.

Environment Clearance vide No.: J-11015/36/ 2019-IA.II (M), dated 19/08/2021

A.	SPECIFIC CONDITION: -			
S. No.	Condition Type	Condition Details	Self Declaration	Remarks / Reason
(a)	Statutory compliance	The project proponent shall submit an undertaking that gap plantation will be completed in balance 1.72 ha by September 2021 using tall saplings of 5-6 feet as per the guidelines of the ministry.	Complied	<ul style="list-style-type: none"> • Total Planation required in 15.0576 ha. • Plantation done till FY 2021-22 in 20.31 ha with 49692 nos. saplings, which included the safety zone. • Total Plantation done in lease in FY 2022-23 till Sept in 0.825 ha. with 1653 nos. of saplings & gap plantation of 10459. • Total safety zone area (7.5m) is 1.95 ha. as on date EC granted, however present safety zone area 4.3175 ha. • Total Plantation done in safety zone till FY 2021-22 is 2.013 ha. with 6130 nos. of plants. • Total Plantation done in safety zone in FY 2022-23 till Sept in 2.0 ha with 4132 nos. of saplings. • Total plantation done in safety zone till FY 2022-23 till Sept is 4.013 ha with 10262 nos. including gap filling.
(b)	Statutory compliance	The project proponent shall spend Rs. 25 lakh for creating water resources or water harvesting structures to benefit the wildlife	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>a) Pavocristatus (Indian Peafowl),</p>

				<p>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> <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>		
(c)	Mining Plan	The project proponent shall review annually the efficacy of conservation plan and shall submit the progress report to ministry as directed.	Complied	After approval of wildlife conservation plan, implementation progress report will be submitted.		
(d)	Statutory compliance	PP shall establish the environment management cell separately for the mine & engage sufficient number of qualified staff for the implementation of EC conditions & other statutory requirements	Complied	A separate environmental management cell has been established with qualified personnel and having sufficient monitoring equipment's in environmental laboratory.		
(e)	Statutory compliance	PP to ensure that the necessary EMP should be implemented & monitored properly to ensure better compliance of the said conservation measures.	Complied	EMP has been implemented.		
(f)	Statutory compliance	Regular surveillance on Silicosis shall be carried through regular occupational health check-up of 1/3 of the persons every year.	Complied	<p>As per DGMS rule medical checkup are being done to all workmen on periodical basis. Pre placement medical examination of the workers engaged is carried out and record is being maintained. Schedule of health examination will be done in such a manner that every workman will be examined once in five years.</p> <p>Details of Medical examination done during the period: Apr-22 to Sept-22 is given in below table.</p> <table><tr><td>Particular</td><td>Medical Exam. Carried out (in Nos.)</td></tr></table>	Particular	Medical Exam. Carried out (in Nos.)
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				<table><tr><td>No. of persons examined</td><td>25</td></tr><tr><td>Initial Medical Examination</td><td>7</td></tr><tr><td>Periodical Medical Examination</td><td>18</td></tr><tr><td>Disease observed</td><td>No any</td></tr></table>	No. of persons examined	25	Initial Medical Examination	7	Periodical Medical Examination	18	Disease observed	No any
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B.	STANDARDS CONDITIONS:											
I.	Statutory Compliance											
(1)	Statutory Compliance	This environmental clearance is subject to orders / judgement of Hon’ble supreme court of India, Hon’ble high court, Hon’ble NGT and any other court of law, common cause conditions as may be applicable.	Complied	Complied with.								
(2)	Statutory Compliance	The project proponent complies with all statutory requirements and judgement of Hon’ble supreme court dated 2 nd august,2017 in writ petition(civil) no.114 of 2014 in matter of common causes versus union of India & Ors before commencing the mining operations.	Complied	Certificate issued by Mining Department regarding the “No Dues “of compensation levied. NOC letter submitted along with Compliance report on 25.05.2022								
(3)	Statutory Compliance	The state government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied if any for illegal mining paid by the project proponent through their respective department of mining & geology in strict compliance of judgement of Hon’ble supreme court dated 2 nd August 2017 in writ petition civil no-114 of 2014 in matter of common cause versus union of India & Ors.	Complied	Certificate issued by Mining Department regarding the “No Dues “of compensation levied. NOC letter submitted along with Compliance report on 25.05.2022								
(4)	Statutory Compliance	The project proponent shall follow the mitigation measures provided in	Complied	1. Garland drain constructed. 2. Siltation pond facilitated.								

		MoEFCC's office memorandum No. Z-11013/57/2014-IA.II(M), dated 29 th October, 2014 titled "Impact of mining activities on Habitations - issues related to the mining projects where in Habitations and villages are the part of mine lease area"		<p>3. Regular water spray on haul road is being done.</p> <p>4. Rain water collected in mine pit and during the lean period & as per requirement water is being supplied to the nearby villagers.</p> <p>5. Mask light are being kept in off mode during night period.</p> <p>6. Control blasting implemented.</p> <p>7. Company own road used for limestone transportation.</p>
(5)	Statutory Compliance	A copy of EC letter will be marked to concerned Panchayat / local NGO etc if any, from whom suggestion / representation has been received while processing the proposal.	Complied	A copy of EC has been submitted at concern panchayat, Zila Parishad, DIC office, District Collector, SDM office vide letter no. MGR/PC/A/11/748 on 04.03.2021.
(6)	Statutory Compliance	State pollution control board/committee shall be responsible for display of this EC letter at its Regional office, District industries center and collector office / Tehsildar's office for 30 days.	Complied	Agreed & complied.
(7)	Statutory Compliance	The project authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the state pollution control board / committee and web site of the ministry of environment, forest and climate change. a copy of the advertisement may be forwarded to the concerned MoEFCC regional office for compliance and record.	Complied	EC granted information published in two local newspapers i.e. Dainik Bhasker & Rajasthan Patrika on 06.03.2021.

(8)	Statutory Compliance	The project proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA notification, 2006 as amended from time to time.	Complied	If any change in ownership of mining, will be intimated to the ministry accordingly.
II. Air Quality Monitoring And Preservation				
(9)	Air Quality Monitoring And Preservation	The project proponent shall install a minimum 3 online ambient air quality monitoring stations with one in upwind and 2 in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters relevant for mining operations of air pollution viz. PM10, PM2.5 NO ₂ ,CO, & SO ₂ etc. as per the methodology mentioned in NAAQS notification No. B-29016/20/90PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone the ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main gate of the mine site.	Complied	Three (03) nos. of CAAQMS has been installed all along the Mine Lease boundary: - 1. Near Mine office towards Villages Arniya Joshi, Tie & Tilakhera 2. Toward village Mangrol (Common for Tilakhera Mine & JKCW Mangrol Plant) 3. Towards village Sahabad (Common for Tilakhera Mine & JKCW Mangrol plant) 4. Digital display board has been provided at Mine Office. 5. Connectivity of CAAQMS has been done at RSPCB and Request has been made to CPCB for Connectivity. 6. Ambient Air Quality Monitoring report of core & buffer zone area by NABL accredited lab is enclosed as <u>Annexure-1</u> .
(10)	Air Quality Monitoring	Effective safeguard measures for	Complied	Regular water sprinkling is being done on loading, unloading point,

	And Preservation	prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc) shall be carried out in areas prone to air pollution where in high levels of PM10 and PM 2.5 are evident such as haul road, loading and unloading point and transfer points the fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment's/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system it shall be ensured that air pollution level confirm to the standards prescribed by the MoEFCC/ central pollution Board.		transfer point as well as the haul roads to prevent the dust becoming air borne during transportation movement of vehicles. Wet drilling & control blasting system implemented. We are exploring the possibility of water soluble chemical for dust suppression. Periodical fugitive emission monitoring is being carried out, fugitive emission monitoring report for the period: Apr-22 to Sept-22) is enclosed as <u>Annexure-2</u> .
III.	Water Quality Monitoring And Preservation			
(11)	Water Quality Monitoring And Preservation	In case, immediate mining scheme envisages intersection of ground water table then environmental clearance shall become operational only after receiving formal clearance from GGWA. Increase mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.	Complied	Water table is not intersecting due to mining activities. Detail of the Elevation, Ground Water Table and Working Level during the period: Apr-22 to Sept-22 is given in below table.



Detail of the Elevation, Ground Water Table And Working Level During the Period: Apr-22 to Sept-22-

S. No.	Particulars	Levels (MSL)	BGL (m)
1.	Highest Elevation	427	--
2.	Lowest Elevation	438	--
3.	General Ground Level	430	--
4.	Water Table (Pre-Monsoon)	367	60
5.	Water Table (Post-Monsoon)	397	33
6.	Ultimate Pit Limit	374	56
7.	Present working depth pit 1	437-397.70	0-33
8.	Present working depth pit 2	436.0-405.77	0-25

Source: - As per approved Modified Mining Plan with PMCP dated 03.01.2019.

(12)	Water Quality Monitoring And Preservation	Project proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing's wells as well as new piezo meter installations during the mining operation in consultation with central ground water authority / state ground water department. the report on changes in ground water level and quality shall be submitted on six-month basis to the regional office of the ministry CGWA and state ground water department / state pollution control board.	Complied	<p>Regular monitoring of ground water level and quality are being carried out in and around the mining lease area as per the Environment Management Plan of approved Mining plan by establishing a network of existing wells.</p> <p>Unit has installed 3 nos. of piezometer holes for periodic & one DWLR (Digital water level Recorder) with telemetry system for online monitoring of ground water level.</p>
(13)	Water Quality Monitoring And Preservation	The project proponent shall undertake regular monitoring of natural water/course/water resources/springs and perennial nallahs existing /flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within in the lease for management of water. The	Complied	<p>Not applicable, there are no natural water course and water resources are obstructed due to any mining operations.</p> <p>Mine pit water and tube well quality are being tested by NABL accredited lab in Pre-monsoon, Monsson, Post-monsoon & Winter seasons and reports of the same are being submitted to the MOEFCC, CPCB, RPCB & CGWA on regular basis.</p> <p>Water quality analysis reports for the period: Apr-22 to Sept-22 (Pre-monsoon & Monsoon Seasons) is enclosed as <u>Annexure-3</u>.</p>

		parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. it shall be ensured that no obstruction and /or alteration be made to water bodies during mining operation without justification and prior approval of MoEFCC. The monitoring of water courses / bodies existing in the lease area shall be carried out four times in a year viz. Pre-monsoon (April-May), Monsoon (august), Post monsoon {November} and Winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.		
(14)	Water Monitoring And Preservation	Quality of polluted water generated from mining operations which include Chemical Oxygen demand (COD) in mines run-off; acid mine drainage and metal contamination in run-off shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable Location near the main gate of the Company.	Complied	As per the said MOEFCC notification, Mine Key parameter data has been uploaded at www.jkcement.com as well as displayed at mine office.

			The circular No. J-20012/1/ 2006-IA.II {M} dated 27.05.2009 Issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.		
(15)	Water Monitoring And Preservation	Quality And	Project proponent shall plan, develop and implement rainwater harvesting measured on a long term basis to augment ground water resources in the area in consultation with central ground water board / state ground water department. A report on amount of water recharged needs to be submitted to regional office MoEFCC annually.	Complied	To augment the water resources, rain water harvesting is done through mine pit, water stored in lower most benches and one recharge well has constructed.
			Rain Water Harvesting through Mine Pit-1 (North Pit). 	Rain Water Harvesting through Mine Pit-2 (South Pit) 	
(16)	Water Monitoring And Preservation	Quality And	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. the standards shall be prescribed through consent to operate (CTO) issued by concerned state pollution control board (SPCB)the workshop effluent	Complied	Not applicable. <ul style="list-style-type: none">• There is no waste water generation from the Limestone mining operation.• There no workshop in mines.

		shall be treated after this initial passage through oil and grease tap.		
(17)	Water Quality Monitoring And Preservation	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the regional office of the MoEF&CC and state pollution Board/committee.	Complied	Water audit has been carried out by National Productivity Council, New Delhi and same has been submitted to concerned authorities along with last EC Compliance Report on 25.05.2022
IV. Noise And Vibration Monitoring And Preservation				
(18)	Noise And Vibration Monitoring And Preservation	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	Complied	<ul style="list-style-type: none"> Control Blasting operation is being carried out in day time only. Use of Sequential blasting machine (SBM), Delay detonator, Non-Electric detonator for blasting and to mitigate vibration. Water injection system on wagon drill has been provided which suppresses dust at its source of generation. Maximum peak partial velocity is 2.281 mm/sec at 150 mtr. (Safe ppv level is 10 mm/sec) during period: Apr-22 to Sept-22. Vibration monitoring data for the period: Apr-22 to Sept-22 is enclosed in <u>Annexure- 4.</u>
(19)	Noise And Vibration Monitoring And Preservation	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. consequent sleeping disorders and stress may affect the health in the villages located close to mining operations .habitations have a right for darkness and minimal noise levels at night .PPs must ensure that the biological clock of the villages is not disturbed , by orienting the floodlights /masks away from the villages and keeping the noise levels well within the prescribed limits day/night hours.	Complied	<p>Blasting operation is being carried out in day time only. The illumination and Noise level is being monitored and results are well within the limit.</p> <p>Detail Ambient Noise Level Monitoring Results for the period: Apr-22 to Sept-22 is enclosed in <u>Annexure—5.</u></p>
(20)	Noise And Vibration Monitoring And Preservation	The project proponent shall take measures for control of noise levels below 85 dBA in the work	Complied	<p>Regular maintenance (including cabin) of HEMM being done to keep noise level within the specified limits.</p> <p>Workers engaged in operation of HEMM etc. are provided with</p>

		environment the workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs. All personnel including labours working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. the PP shall be held responsible in case it has been found that workers/ personals / labours are working without personal protective equipment.		ear plugs. Onsite tool talk is being provided on daily basis and periodical training given to all employee & workmen.
V.	Mining Plan			
(21)	Mining Plan	The project proponent shall adhere to approved mining plan, inter alia including, total excavation (quantum of mineral, waste , over burden, inter burden and top soil etc.) mining technology lease area scope of working (method of mining, overburden & dump management, OB & dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land use of the mine lease area at various stages of mining scheme as well as at the end of life; etc.)	Complied	Mineral, OB, waste, soil etc. are being handled as per Approved Mining Plan. <ul style="list-style-type: none"> • Sub-grade generated during the FY: 2022-23 till Sept-22 is 285956 MT. • OB/Waste generated the FY: 2022-23 till Sept-22 is NIL. • Top Soil generated during the FY: 2022-23 till Sept-22 is 4700 MT.
(22)	Mining Plan	The shall be governed as per the approved mining plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated	Complied	As per approved mining plan there are no back filling is proposed.

		areas until the vegetation becomes self-sustaining. the compliance status shall be submitted half-yearly to the MoEFCC and its concerned regional office.		
VI.	Land Reclamation			
(23)	Land Reclamation	The overburden (OB) waste and top soil generated during the mining operations shall be stacked at earmarked OB dump sites(s) only and it should not be kept active for a long period of time. The physical parameters of the OB/waste dumps/topsoil dump like height, width and angle of slope shall be governed as per the approved mining plan and the guideline/ circulars issued by D.G.M.S. the topsoil shall be used for land reclamation and plantation.	Complied	Top soil is being used for the plantation purpose. Excavated area will be used as water reservoir in 52.879 ha. at conceptual stage, no backfilling is proposed.
(24)	Land Reclamation	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability prevent erosion and surface run-off. the selection of local species regulates local climatic parameters and help in adaption of plant species to the microclimate. the gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. the dump mass should be consolidated with the help of dozer / compactors there by ensuring proper filling / levelling of dump mass. in critical areas use of geo textiles/ geo membranes /clay liners / bentonite	Complied	Presently OB dumps are active, vegetation and geo textile will be done after the dump are inactive or dead. Garland drains with siltation pond has been provided all around the dump.

		etc. shall be undertaken for stabilization of the dump.																											
(25)	Land Reclamation	Catch drains settling tanks and siltation ponds of appropriate size shall be constructed around the mine working minerals yards and top soil/OB waste dumps to prevent run off water and flow of sediments directly into the water bodies (Nallahs/river/pond etc.) the collected water should be utilized for watering the mine area roads green belt development plantation etc. The drains sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon seasons and maintained properly.	Complied	<p>To collect run off water from subgrade dump and waste dump, garland drain & siltation pit has been constructed. Details are given below: -</p> <table border="1"><thead><tr><th>Garland Drain</th><th>Dimensions</th></tr></thead><tbody><tr><td>East of Subgrade and wastedump</td><td>Length - 1015m Width - 1.0m Depth - 1.0 m</td></tr></tbody></table> <p>Siltation pond is being cleaned every year before monsoon.</p>	Garland Drain	Dimensions	East of Subgrade and wastedump	Length - 1015m Width - 1.0m Depth - 1.0 m																					
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East of Subgrade and wastedump	Length - 1015m Width - 1.0m Depth - 1.0 m																												
(26)	Land Reclamation	Checks dams of appropriate size gradient and length shall be constructed around mine pit and OB dumps to prevent storm runoff and sediment flow into adjoining water bodies. A safety margin of 50 % shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing retention time period thereby allowing proper settling of sediments/silt material the sedimentation pits/ sumps shall be constructed at the corners of the garland drains.	Complied	<p>Total available rainwater in single day (considering maximum 50 mm rainfall): -</p> <ul style="list-style-type: none">Subgrade dump & waste dump (area) X Rainfall (m) X Runoff Coefficient (20%): 218030 M² X 0.05 M X 0.20 = 2180.30 m³ and considering 50% safety margin then total capacity of siltation pond is 4360.6 m³.Total rain water collection capacity of siltation pit requires = 4360.6 m³.Constructed three siltation pit with dimension as given below: - <table border="1"><thead><tr><th>S. No.</th><th>Length (M)</th><th>Width (M)</th><th>Depth (M)</th><th>Capacity (M³)</th></tr></thead><tbody><tr><td>1</td><td>19</td><td>18</td><td>3</td><td>1026</td></tr><tr><td>2.</td><td>22</td><td>20</td><td>3</td><td>1320</td></tr><tr><td>3.</td><td>27</td><td>25</td><td>3</td><td>2025</td></tr><tr><td colspan="4">Total Capacity (m³)</td><td>4371</td></tr></tbody></table> <p>The storm water is being collected to garland drain from the periphery of the subgrade and the waste dump area routed to siltation pond.</p>	S. No.	Length (M)	Width (M)	Depth (M)	Capacity (M ³)	1	19	18	3	1026	2.	22	20	3	1320	3.	27	25	3	2025	Total Capacity (m ³)				4371
S. No.	Length (M)	Width (M)	Depth (M)	Capacity (M ³)																									
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VII.	Transportation																												

(27)	Transportation	No transportation of the minerals shall be allowed in case of roads passing through villagers/habitations in such cases PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. all cost resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal state govt. department. transportation of minerals through road movement in case of existing village / rural roads shall be allowed in consultation with nodal state govt. department only after required strengthening such that carrying capacity of roads is increased to handle the traffic road. the pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. vehicular emissions shall be kept under control and regularly monitored. project should obtain pollution under control (PUC) certificate for all the vehicles from authorized pollution testing centres [if applicable in case of road transport]	Complied	Mineral is being transported by own CC road. Periodical vehicle emission monitoring are being carried out. Details are given below: <table><tr><td>SN</td><td>Vechicle No.</td><td>PUCC No.</td><td>Validity</td></tr><tr><td>1</td><td>RJ-09-GD-2428</td><td>D1007RJ03105617</td><td>03-06-2023</td></tr><tr><td>2</td><td>RJ-09-GD-1928</td><td>D1007RJ03105691</td><td>06-06-2023</td></tr><tr><td>3</td><td>RJ-09-GD-1931</td><td>D1007RJ03105651</td><td>05-06-2023</td></tr><tr><td>4</td><td>RJ-09-GD-0896</td><td>D1007RJ03105650</td><td>06-06-2023</td></tr><tr><td>5</td><td>RJ-09-GD-0895</td><td>D1007RJ03105694</td><td>05-06-2023</td></tr><tr><td>6</td><td>RJ-09-GD-0894</td><td>D1007RJ03105652</td><td>05-06-2023</td></tr><tr><td>7</td><td>RJ-09-GC-9198</td><td>D1007RJ03105690</td><td>06-06-2023</td></tr><tr><td>8</td><td>RJ-09-GC-9153</td><td>D647RJ14106190</td><td>10-06-2023</td></tr><tr><td>9</td><td>RJ-09-GC-9152</td><td>D1007RJ03105693</td><td>06-06-2023</td></tr><tr><td>10</td><td>RJ-09-GC-9155</td><td>D1007RJ03105640</td><td>04-06-2023</td></tr><tr><td>11</td><td>RJ-09-GC-9156</td><td>D1007RJ03105649</td><td>05-06-2023</td></tr><tr><td>12</td><td>RJ-09-GC-0028</td><td>D1007RJ03105642</td><td>04-12-2022</td></tr><tr><td>13</td><td>RJ-09-GB-9928</td><td>D1007RJ03105641</td><td>04-12-2022</td></tr><tr><td>14</td><td>RJ-09-GC-0228</td><td>D1007RJ03105639</td><td>04-12-2022</td></tr><tr><td>15</td><td>RJ-09-GC-0128</td><td>D1007RJ03105643</td><td>04-12-2022</td></tr><tr><td>16</td><td>RJ-09-GD-3528</td><td>D1007RJ03105619</td><td>03-06-2023</td></tr><tr><td>17</td><td>RJ-09-GD-2628</td><td>D1007RJ03105618</td><td>03-06-2023</td></tr><tr><td>18</td><td>RJ-09-GC-2228</td><td>D1007RJ03105695</td><td>06-12-2022</td></tr><tr><td>19</td><td>RJ-09-GC-2128</td><td>D1007RJ03105699</td><td>06-12-2022</td></tr><tr><td>20</td><td>RJ-06-GC-8723</td><td>D1007RJ03105698</td><td>06-12-2022</td></tr></table>	SN	Vechicle No.	PUCC No.	Validity	1	RJ-09-GD-2428	D1007RJ03105617	03-06-2023	2	RJ-09-GD-1928	D1007RJ03105691	06-06-2023	3	RJ-09-GD-1931	D1007RJ03105651	05-06-2023	4	RJ-09-GD-0896	D1007RJ03105650	06-06-2023	5	RJ-09-GD-0895	D1007RJ03105694	05-06-2023	6	RJ-09-GD-0894	D1007RJ03105652	05-06-2023	7	RJ-09-GC-9198	D1007RJ03105690	06-06-2023	8	RJ-09-GC-9153	D647RJ14106190	10-06-2023	9	RJ-09-GC-9152	D1007RJ03105693	06-06-2023	10	RJ-09-GC-9155	D1007RJ03105640	04-06-2023	11	RJ-09-GC-9156	D1007RJ03105649	05-06-2023	12	RJ-09-GC-0028	D1007RJ03105642	04-12-2022	13	RJ-09-GB-9928	D1007RJ03105641	04-12-2022	14	RJ-09-GC-0228	D1007RJ03105639	04-12-2022	15	RJ-09-GC-0128	D1007RJ03105643	04-12-2022	16	RJ-09-GD-3528	D1007RJ03105619	03-06-2023	17	RJ-09-GD-2628	D1007RJ03105618	03-06-2023	18	RJ-09-GC-2228	D1007RJ03105695	06-12-2022	19	RJ-09-GC-2128	D1007RJ03105699	06-12-2022	20	RJ-06-GC-8723	D1007RJ03105698	06-12-2022
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(28)	Transportation	The main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. other roads with in the mine lease	Complied	Tanker-mounted water sprinkling system has provided for control of fugitive dust emission & regular water sprinkling carried out on loading unloading point, transfer point as well as the haul roads to prevent the dust becoming air borne during transportation movement of vehicles by water tanker.																																																																																				

		should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provide with dust suppression arrangements the air pollution control equipment's like bag filter, vacuum suction hoods, dry fogging system etc. shall be installed at crusher belt-conveyors and other areas prone to air pollution. the belt transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.		Fugitive emission monitoring also carried out regularly.
VIII. Green Belt				
(29)	Green Belt	The project proponent shall develop greenbelt in 7.5 m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. the whole green belt shall be developed with in first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the ministry irrespective of the stipulation made in approved mine plan.	Complied	<ul style="list-style-type: none"> • Total Planation required in 15.0576 ha. • Plantation done till FY 2021-22 in 20.31 ha with 49692 nos. saplings, which included the safety zone. • Total Plantation done in lease in FY 2022-23 till Sept in 0.825 ha. with 1653 nos. of saplings & gap plantation of 10459. • Total safety zone area (7.5m) is 1.95 ha. as on date EC granted, however present safety zone area 4.3175 ha. • Total Plantation done in safety zone till FY 2021-22 is 2.013 ha. with 6130 nos. of plants. • Total Plantation done in safety zone in FY 2022-23 till Sept in 2.0 ha with 4132 nos. of saplings. <p>Total plantation done in safety zone till FY 2022-23 till Sept is 4.013 ha with 10262 nos. including gap filling.</p>
(30)	Green Belt	The project proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the	Complied	There is no back filling proposed, details of plantation as mentioned above.

		roadsides, in community areas etc. by planting the native species in consultation with the state forest department /agriculture department/rural development department / tribal welfare department/gram panchayat such that only those species be selected which are of use to the local people. the CPCB guidelines in this respect shall also be adhered the density of the trees should be around 2500 saplings per hectare. adequate budgetary shall be made for protection and care of tress.		
(31)	Green Belt	The project proponent shall make necessary alternative arrangement for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease the development of such grazing land shall be done in consultation with the state government. in this regard project proponent should essentially implement the directions of the Hon'ble supreme court with regard to acquisition of grazing land. the sparse trees on such grazing ground which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against feeling and plantation of such trees should be promoted.	Complied	Mining Lease was initially executed on 09.05.1978 and it was renewed (First renewal) from 09.05.1998. Till date no grazing land was required for any mining activities.
IX.	Public Hearing And Human Health Issues			


(32)	Public Hearing And Human Health Issues	Project proponent shall make provisions for the housing for workers/labors or shall construct labors camps within/ outside (company owned land) with necessary basic infrastructure / facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care crèche for kids etc. the housing may be provided in the form of temporary structured which can be removed after the completion of the project related infrastructures. the domestic waste should be treated with STP in order to avoid contamination of underground water.	Complied	A separate residential colony has been developed, where all the basic amenities are available and STP has installed for sewage treatment.
X.	Corporate Environment Responsibility (CER)			
(33)	Corporate Environment Responsibility (CER)	The Project proponent shall submit the time-bound action plan to the concerned regional; office of the ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF & CC office memorandum No.22/65/201-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.	Complied	Public hearing commitment is being complied.
XI.	Miscellaneous			
(34)	Miscellaneous	The project proponent shall prepare digital map (land use & land cover) of	Complied	The last digital land use map has been submitted vide letter no. MGR/PC-14/C-11/5391 on 30/11/2022 and further report will be

		the entire lease area once in 5 years purpose of monitoring land use pattern and submit a report to concerned regional office of the MoEF & CC .		submitted in due period.
(35)	Miscellaneous	The project authorities should inform to the regional office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Complied	Total project cost is Rs. 29.25 cr. after expansion.
(36)	Miscellaneous	The project proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned regional office, central pollution control board and state pollution control board.	Complied	Unit is periodically submitting the six monthly EC compliance report to concern authority. The pervious report submitted on 25/05/2022.
(37)	Miscellaneous	A separate environmental management cell with suitable qualified manpower should be set up under the control of a senior executive. The senior executive shall directly report to head of the organization. Adequate number of qualified environmental scientist and mining engineers shall be appointed and submit a report to RO, MoEFCC.	Complied	A separate environmental management cell has been established with qualified personnel & has sufficient monitoring equipment in environmental laboratory.
(38)	Miscellaneous	The concerned regional office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officers by furnishing the	Complied	Agreed & noted

		requisite data/ information / monitoring reports.		
(39)	Miscellaneous	In pursuant to ministry's O.M. No. 22/34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble supreme court on 08.01.2020 in W.P.(civil) No.114/2014 in the matter common cause vs union of India the mining lease holder shall after ceasing mining operations undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder , flora, fauna etc.	Complied	Agreed, after end of mining life, regressing will be done as per the approved progressive mine closure plan.
(40)	Miscellaneous	The ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Complied	Agreed & noted
(41)	Miscellaneous	Concealing factual data or submission of false/ fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.	Complied	Agreed & noted
19.	Miscellaneous	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along	Complied	Agreed & noted

		with their amendments and rules made there under and also any other orders passed by the Hon'ble supreme court of India/High court and any other court of law relating to the subject matter.		
20.	Miscellaneous	Any appeal against this environmental clearance 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	Agreed & noted
21.	Miscellaneous	This issues with the approval of competent authority.	Complied	Agreed & noted

Yours Sincerely,
For, Mangrol-Tilakhera Limestone Mines,
J. K. Cement Works, Mangrol


(Authorized Signatory)





TEAM TEST HOUSE

(Unit of Team Institute of Science & Technology Pvt. Ltd.)

ANNEXURE-1



Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

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JDA/UDH

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Phone : +91 9460222039, 9460222049,
Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522400001577	Date :	22-06-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	14-06-2022
Point of Collection :	Arnia Joshi Village, Tilakhera	Date of Receipt :	16-06-2022
Date of Test/Analysis :	16-06-2022 to 22-06-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Ammonia [microgram/m3]	BDL (<10.0)	IS 5182 (Part 25) : 2018	400.00
2	Carbon Monoxide [microgram/m3]	240	TTH/AAQM/08	4000
3	Lead [microgram/m3]	0.11	IS 5182 (Part 22) : 2004 Reaffirmed 2019	1.00
4	Nitrogen Dioxide as NO2 [microgram/m3]	13	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
5	Ozone [microgram/m3]	BDL (<20.0)	APHA 1977, Part 819	100.00
6	Particulate Matter (PM2.5) [microgram/m3]	32.64	IS 5182 (Part 24) : 2019	60.00
7	Sulphur Dioxide [microgram/m3]	2.85	IS 5182 (Part 2) : 2001 RA 2017	80.00
8	Particulate Matter (PM 10) [microgram/m3]	71.88	IS 5182 (Part 23)-2006 RA 2017	100.00
9	Arsenic [ng/m3]	BDL(<2.0)	IS 5182 (Part 22) : 2004 Reaffirmed 2019	6.00
10	Nickel [ng/m3]	6.6	IS 5182 : Part 26 : 2020	20.00

Notes :-

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Puran Mal Yogi

Rajesh Maheshwan



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	400001577	Date :	22-06-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	14-06-2022
Point of Collection :	Arnia Joshi Village, Tilakhera	Date of Receipt :	16-06-2022
Date of Test/Analysis :	16-06-2022 to 22-06-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Benzene [microgram/m ³]	BDL (<1.0)	IS 5182 (Part 11) : 2012 RA 2017	5.00
2	Benzo-alfa- Pyrene [ng/m ³]	BDL(<0.5)	CPCB Guidelines	1.00

Notes :-

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Puran Mal Yogi
Senior Analyst

Rajesh Maheshwari
Authorized Signatory
(Report No: 400001577)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522400001578	Date :	22-06-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	14-06-2022
Point of Collection :	Shahbad Tilakhera Mine	Date of Receipt :	16-06-2022
Date of Test/Analysis :	16-06-2022 to 22-06-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Ammonia [microgram/m3]	BDL (<10.0)	IS 5182 (Part 25) : 2018	400.00
2	Carbon Monoxide [microgram/m3]	260	TTH/AAQM/08	4000
3	Lead [microgram/m3]	0.09	IS 5182 (Part 22) : 2004 Reaffirmed 2019	1.00
4	Nitrogen Dioxide as NO2 [microgram/m3]	12.48	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
5	Ozone [microgram/m3]	BDL (<20.0)	APHA 1977, Part 819	100.00
6	Particulate Matter (PM2.5) [microgram/m3]	33.48	IS 5182 (Part 24) : 2019	60.00
7	Sulphur Dioxide [microgram/m3]	3.67	IS 5182 (Part 2) : 2001 RA 2017	80.00
8	Particulate Matter (PM 10) [microgram/m3]	78.66	IS 5182 (Part 23)-2006 RA 2017	100.00
9	Arsenic [ng/m3]	BDL(<2.0)	IS 5182 (Part 22) : 2004 Reaffirmed 2019	6.00
10	Nickel [ng/m3]	10.8	IS 5182 : Part 26 : 2020	20.00

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TEST REPORT

Report No./ULR No. :	400001578	Date :	22-06-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	14-06-2022
Point of Collection :	Shahbad Tilakhera Mine	Date of Receipt :	16-06-2022
Date of Test/Analysis :	16-06-2022 to 22-06-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Benzene [microgram/m3]	BDL (<1.0)	IS 5182 (Part 11) : 2012 RA 2017	5.00
2	Benzo-alfa- Pyrene [ng/m3]	BDL(<0.5)	CPCB Guidelines	1.00

Notes :-

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Puran Maurya
Senior Analyst

Rajesh Maheshwari
Authorized Signatory
(Report No: 400001578)



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TEST REPORT

Report No./ULR No. :	TC502522400002411	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Near Ravana Office Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Carbon Monoxide [microgram/m3]	190	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	12.63	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	18.03	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.39	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	47.23	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Senior Analyst

Puran Mal Yogi

K.N. MUKHOPADHYAY

Authorized Signatory

(Report No: TC502522400002411)



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TEST REPORT

Report No./ULR No. :	TC502522400002410	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	11-08-2022
Point of Collection :	Near Mine office, Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Carbon Monoxide [microgram/m3]	170	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	10.49	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	17.4	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	4.01	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	34.38	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Senior Analyst

Puran Mal Yogi

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TEST REPORT

Report No./ULR No. :	TC502522400002415	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Shahbad Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Carbon Monoxide [microgram/m3]	140	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	9.56	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	17.16	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.32	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	36.85	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Senior Analyst

Pran Mal Yogi

K.N. Mukhopadhyay

Authorized Signatory

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TEST REPORT

Report No./ULR No. :	TC502522400002414	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Air Quality Monitoring	Date of Sample Collection/Monitoring :	11-08-2022
Point of Collection :	Arnia Joshi Village, Tilakhera	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per National Ambient Air Quality Standard, 2009
1	Carbon Monoxide [microgram/m3]	130	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	10.29	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	15.44	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.44	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	32.05	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Senior Analyst

Pooja Mal Yogi

K.N. MUKHOPADHYAY

Authorized Signatory

(Report No: TC502522400002414)

J. K. Cement Works, MANGROL (RAJ)

TILAKHERA LIMESTONE MINE **MONTHLY AMBIENT AIR MONITORING REPORT**

AMBIENT AIR QUALITY SPM RESULTS : (ALL VALUES IN µg/M3)

Month	Near Mine Office					Near Ravana Office				
	PM10	PM2.5	SO ₂	Nox	CO	PM10	PM2.5	SO ₂	Nox	CO
Apr-22	48.0	31.4	12.7	19.6	641	57.3	38.8	16.5	24.5	670
May-22	51.0	28.0	9.3	16.8	607	57.4	32.0	13.3	19.6	636
Jun-22	66.2	42.2	16.5	24.6	636	77.5	49.0	15.6	25.2	773
Jul-22	59.9	37.2	19	32.4	704	70.0	44.8	23	39.8	742
Aug-22	44.4	23.2	16	23	664	47.4	26.3	20	27.2	705
Sep-22	41.4	21.6	15	20	705	45.6	23.0	20	25.9	745
AVERAGE	51.8	30.6	14.8	22.9	659	59.2	35.7	18.0	27.0	712



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ANNEXURE-2



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522400001575	Date :	22-06-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	13-06-2022
Point of Collection :	3-10 Meter Distance Form Drilling Point of Tilakhera Mine	Date of Receipt :	16-06-2022
Date of Test/Analysis :	16-06-2022 to 22-06-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	468.52	IS 5182 (Part 4) : 1999 RA 2019
2	Sulphur Dioxide [microgram/m3]	4	IS 5182 (Part 2) : 2001 RA 2017
3	Oxides of Nitrogen [microgram/m3]	12.81	IS 5182 (Part 6) : 2006 Reaffirmed 2017
4	Carbon Monoxide [microgram/m3]	380	TTH/AAQM/08

Notes :-

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Puran Mal Yogi
Puran Mal Yogi
Senior Analyst

Rajesh Maheshwar
Rajesh Maheshwar
Authorized Signatory
(Report No: TC502522400001575)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522400001576	Date :	22-06-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	13-06-2022
Point of Collection :	Near Loading point of Tilakhera Mine	Date of Receipt :	16-06-2022
Date of Test/Analysis :	16-06-2022 to 22-06-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	446.5	IS 5182 (Part 4) : 1999 RA 2019
2	Sulphur Dioxide [microgram/m3]	6.83	IS 5182 (Part 2) : 2001 RA 2017
3	Oxides of Nitrogen [microgram/m3]	12.77	IS 5182 (Part 6) : 2006 Reaffirmed 2017
4	Carbon Monoxide [microgram/m3]	290	TTH/AAQM/08

Notes :-

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Puran Mal Yogi
Senior Analyst

Raresh Maheshwari
Authorized Signatory
(Report No: TC502522400001576)



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TEST REPORT

Report No./ULR No. :	TC502522400002413	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Near Loading point of Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	293.92	IS 5182 (Part 4) : 1999 RA 2019
2	Sulphur Dioxide [microgram/m3]	2.16	IS 5182 (Part 2) : 2001 RA 2017
3	Oxides of Nitrogen [microgram/m3]	13.29	IS 5182 (Part 6) : 2006 Reaffirmed 2017
4	Carbon Monoxide [microgram/m3]	260	TTH/AAQM/08

Notes :-

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Senior Analyst
Purni Mal Yogi

K.N. MUKHOPADHYAY
Authorized Signatory
(Report No: TC502522400002413)



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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522400002412	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	11-08-2022
Point of Collection :	3-10 Meter Distance Form Drilling Point of Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	183.45	IS 5182 (Part 4) : 1999 RA 2019
2	Sulphur Dioxide [microgram/m3]	2.37	IS 5182 (Part 2) : 2001 RA 2017
3	Oxides of Nitrogen [microgram/m3]	13.78	IS 5182 (Part 6) : 2006 Reaffirmed 2017
4	Carbon Monoxide [microgram/m3]	250	TTH/AAQM/08

Notes :-

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Senior Analyst

Pran Mal Yogi

K.N. MUKHOPADHYAY
Authorized Signatory
(Report No: TC502522400002412)

J. K. Cement Works, MANGROL (RAJ)

TILAKHERA LIMESTONE MINE **FUGITIVE MONITORING REPORT**

SPM RESULTS : (ALL VALUES IN $\mu\text{g}/\text{M}^3$)

(monthly average basis)

Month	3 to10 Meter Distance From Drilling Operation				Near loading point			
	SPM	SO₂	Nox	CO	SPM	SO₂	Nox	CO
Apr-22	329	14.9	21.4	716	306	9.3	17.6	676
May-22	342	16.9	22.4	744	313	13.6	19.5	710
Jun-22	431	19.4	28.1	710	376	17.4	25.7	590
Jul-22	417	21.4	27.4	704	342	18.3	23.1	737
Aug-22	284	13.7	18.1	653	256	16.3	22.4	618
Sep-22	263	15.2	17.2	687	241	13	13.6	670
AVERAGE	344.3	16.9	22.4	702	305.7	14.6	20.3	667



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TEST REPORT

Report No./ULR No. :	TC502522100000730	Date :	09-05-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	26-04-2022
Point of Collection :	Pit-Water (Surface Water)	Date of Receipt :	28-04-2022
Date of Test/Analysis :	28-04-2022 to 09-05-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2ltr.	Sample Collected By :	Banwari Lal Kumawat
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Color [Hazen]	Less than 5	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.24	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	345.63	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
6	Iron [mg/l]	BDL(<0.01)	IS 3025 (Part 53) : 2003 RA 2019	1.0	-
7	Chloride [mg/l]	63.07	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	511	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00

Note:

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Email : marketinglab@teamtesthouse.com

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Calcium [mg/l]	107.18	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	18.87	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
11	Fluoride [mg/l]	0.61	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	10	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
14	Conductivity [micromho/cm]	790	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	160	APHA : 2017, 2320 B	-	-

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Puran Mal Yogi
Senior Analyst

Rajesh Maneshwan
Authorized Signatory
(Report No: TC502522100000730)



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TEST REPORT

Report No./ULR No. :	TC502522100000731	Date :	09-05-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	26-04-2022
Point of Collection :	Tube well- Ground water	Date of Receipt :	28-04-2022
Date of Test/Analysis :	28-04-2022 to 09-05-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2ltr.	Sample Collected By :	Banwari Lal Kumawat
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Color [Hazen]	Less than 5	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.86	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	376.7	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
6	Iron [mg/l]	BDL(<0.01)	IS 3025 (Part 53) : 2003 RA 2019	1.0	-
7	Chloride [mg/l]	74.9	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	539	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00

Note:

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Email : marketinglab@teamtesthouse.com

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Calcium [mg/l]	128.93	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	13.21	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
11	Fluoride [mg/l]	0.93	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	5	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
14	Conductivity [micromho/cm]	837	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	190	APHA : 2017, 2320 B	-	-

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Purni Mal Yogi
Senior Analyst

Rajesh Maheshwari
Authorized Signatory
(Report No: TC502522100000731)



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TEST REPORT

Report No./ULR No. :	TC502522100000732	Date :	09-05-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	26-04-2022
Point of Collection :	Hand Pump-Shahbad-(Ground water)	Date of Receipt :	28-04-2022
Date of Test/Analysis :	28-04-2022 to 09-05-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2ltr.	Sample Collected By :	Banwari Lal Kumawat
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Color [Hazen]	Less than 5	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.95	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	427.18	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
6	Iron [mg/l]	BDL(<0.01)	IS 3025 (Part 53) : 2003 RA 2019	1.0	-
7	Chloride [mg/l]	92.64	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	660	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00

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RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Calcium [mg/l]	142.91	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	16.99	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
11	Fluoride [mg/l]	1.10	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	4	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
14	Conductivity [micromho/cm]	978	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	200	APHA : 2017, 2320 B	-	-

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Purni Mal Yogi
Senior Analyst

Rakesh Maheshwar
Authorized Signatory
(Report No: TC502522100000732)



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TEST REPORT

Report No./ULR No. :	TC502522100001485	Date :	23-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 - (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Pit-Water (Surface Water)	Date of Receipt :	13-08-2022
Date of Test/Analysis :	13-08-2022 to 23-08-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Color [Hazen]	Less than 5	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.77	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	107.84	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
6	Iron [mg/l]	BDL(<0.01)	IS 3025 (Part 53) : 2003 RA 2019	1.0	-
7	Chloride [mg/l]	15.65	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	205	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Calcium [mg/l]	27.45	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	9.53	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00

K.N. MUKHOPADHYA



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S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
11	Fluoride [mg/l]	0.20	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	9	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
14	Conductivity [micromho/cm]	318	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	90	IS 3025 (Part 23) : 1986 RA 2019	-	-
16	Total coliform [MPN/100ml]	Not Detected	IS 1622 : 1981	Shall not be detectable in 100 ml sample	-
17	E. Coli [MPN/100ml]	Not Detected	IS 5887 (Part 1) : 1976 RA 2018	Shall not be detectable in 100 ml sample	-

Notes :-

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Balram
Balram Agarwal
Senior Analyst

K.N. Mukhopadhyay
K.N. MUKHOPADHYAY
Authorized Signatory
(Report No: TC502522100001485)



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TEST REPORT

Report No./ULR No. :	TC502522100001486	Date :	23-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Tube well- Ground water	Date of Receipt :	13-08-2022
Date of Test/Analysis :	13-08-2022 to 23-08-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Color [Hazen]	Less than 5	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.75	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	362.75	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
6	Iron [mg/l]	BDL(<0.01)	IS 3025 (Part 53) : 2003 RA 2019	1.0	-
7	Chloride [mg/l]	66.53	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	504	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Calcium [mg/l]	105.88	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	23.82	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00

K.N. MUKHOPADHYAY



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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
11	Fluoride [mg/l]	0.85	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	6	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
14	Conductivity [micromho/cm]	802	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	170	IS 3025 (Part 23) : 1986 RA 2019	-	-

Notes :-

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Balram

Senior Analyst

K.N. Mukhopadhyay

K.N. MUKHOPADHYAY

Authorized Signatory

(Report No: TC502522100001486)



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TEST REPORT

Report No./ULR No. :	TC502522100001487	Date :	23-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Hand Pump-Shahbad-(Ground water)	Date of Receipt :	13-08-2022
Date of Test/Analysis :	13-08-2022 to 23-08-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Color [Hazen]	Less than 5	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.82	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	392.16	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
6	Iron [mg/l]	BDL(<0.01)	IS 3025 (Part 53) : 2003 RA 2019	1.0	-
7	Chloride [mg/l]	70.45	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	575	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Calcium [mg/l]	117.65	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	23.82	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00

K.N. MUKHOPADHYAY



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S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
11	Fluoride [mg/l]	0.99	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	6	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
14	Conductivity [micromho/cm]	909	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	180	IS 3025 (Part 23) : 1986 RA 2019	-	-

Notes :-

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Balram
Senior Analyst

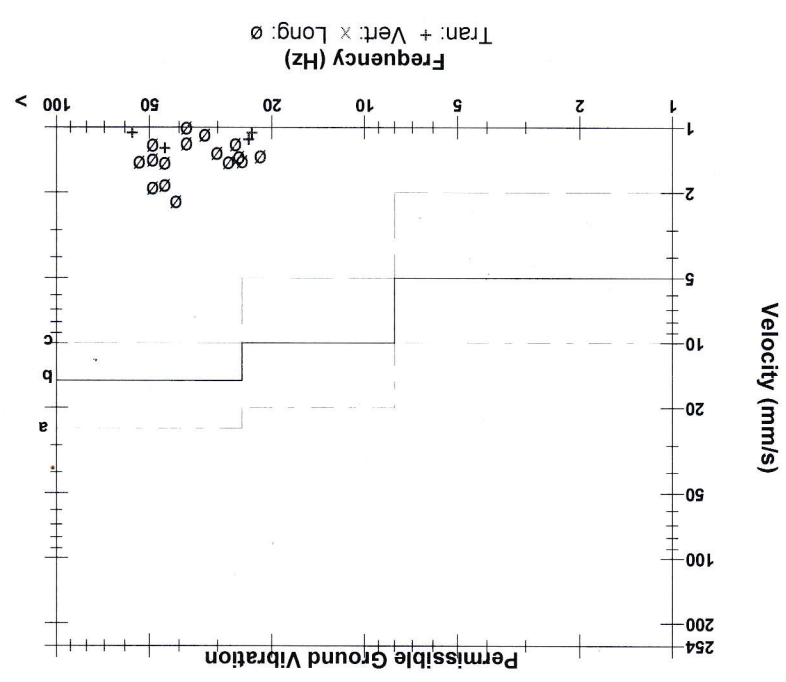
K.N. MUKHOPADHYAY
Authorized Signatory
(Report No: TC502522100001487)

Date/Time: Long at 15:36:23 September 23, 2022
Trigger Source: Geo: 0.700 mm/s, Mic: 105.0 dB(L)
Range: Geo: 254.0 mm/s
Record Time: 3.0 sec at 2048 sps
Operator/Setup: TILAKHERA MINE/Tilakhera.MMB

Notes: NORTH PIT
Client: Tilakhera Mine
User Name: J K Cement Works Mangrol
General: Lime Stone Mine

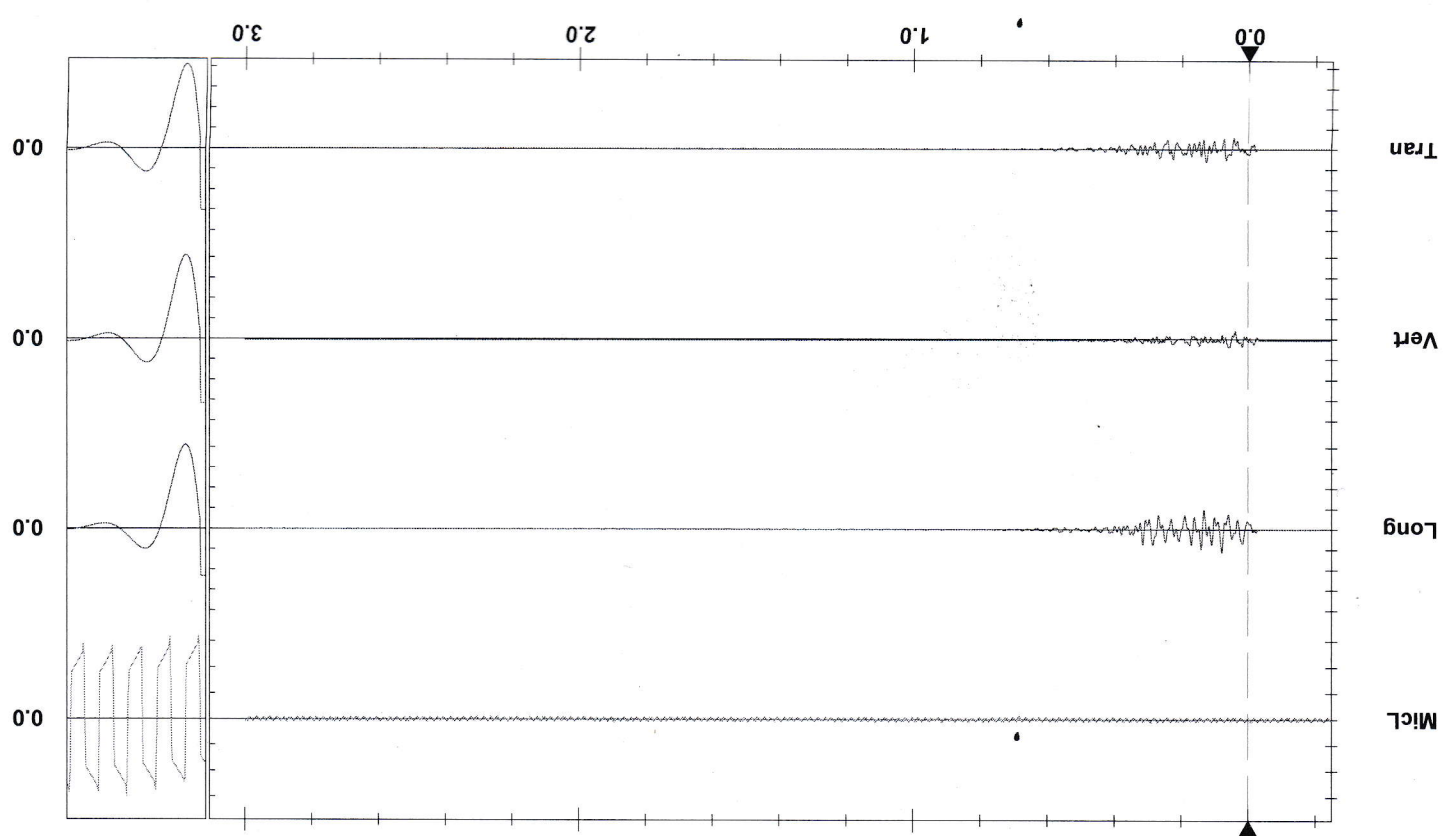
Microphone	Linear Weighting
PSPL	<88 dB(L)
ZC Freq	60 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1238 mv)
PPV	Long 1.245, Vert 0.804, 2.262 mm/s
ZC Freq	45, 31, 41 Hz
Time (Rel. to Trig)	0.125, 0.055, 0.079 sec
Peak Acceleration	0.049, 0.030, 0.071 g
Peak Displacement	0.006, 0.013, 0.008 mm
Sensor Check	Passed
Frequency	7.5, 7.5, 7.1 Hz
Overwringing Ratio	3.6, 3.5, 4.1
Peak Vector Sum	2.281 mm/s at 0.079 sec
N/A: Not Applicable	

DGMS India (A)



Post Event Notes
Serial Number: UM10861
Battery Level: 3.7 Volts
Unit Calibration: February 18, 2022 by UES New Delhi
File Name: UM10861_20220923133825.IDFW
Distance from back side of Blasting face=300 mtr.
BID= A-10, Bench- I N-Pit, 10 holes, C/D=25.25 KG.

a) Industrial Buildings
b) Domestic houses/structures
c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div
Trigger =
Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
Sensor Check

FORM - X
RAJASTHAN STATE POLLUTION CONTROL BOARD
REPORT OF THE STATE BOARD ANALYST

Annexure-5

(See Rule - 10)
Final Report

Report No. : **2079**

Report On : **22/06/2022**

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 **15/06/2022** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Ambient Air Quality** of **M/S J.K Cement Works, Mangrol , Plant - Mangrol [735] ,Village Mangrol , City- Tilakhera and Mangrol Tehsil- Nimbahera , District- Chittorgarh M.L No- ML-~~26108~~** Collected from **Ambient air quality monitoring near tilakhera mines office.** Collected on **14/06/2022**. The Sample was in a condition fit for analysis as reported below :- **CML No. 07/97)**

I further certify that I have analyzed the aforementioned sample on **22/06/2022** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	92
2	PM 2.5 $\mu\text{g}/\text{m}^3$	38
3	Sulphur Dioxide as SO2 $\mu\text{g}/\text{m}^3$	2.6
4	NO2 $\mu\text{g}/\text{m}^3$	12.5

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

Signed This On **22/06/2022**


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. : **2080**

Report On : **22/06/2022**

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 **15/06/2022** from **Surya Pratap Meena, JSO, Chittorgarh ,RSPCB Chittorgarh** a sample of **Ambient Air Quality of M/S J.K Cement Works, Mangrol , Plant - Mangrol [735] ,Village Mangrol , City- Tilakhera and Mangrol Tehsil- Nimbahera , District- Chittorgarh M.L No- ML-26108** Collected from **Ambient air quality monitoring near tilakhera mines View Point.** Collected on **14/06/2022**. The Sample was in a condition fit for analysis as reported below :- **(MLNO-07197)**

I further certify that I have analyzed the aforementioned sample on **22/06/2022** and declare the result of the analysis to be as below :-

S. No.	Parameters	Result
1	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	67
2	PM 2.5 $\mu\text{g}/\text{m}^3$	25
3	Sulphur Dioxide as SO2 $\mu\text{g}/\text{m}^3$	4.2
4	NO2 $\mu\text{g}/\text{m}^3$	14.5

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

Signed This On **22/06/2022**



BOARD ANALYST

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



TEAM TEST HOUSE

(Unit of Team Institute of Science & Technology Pvt. Ltd.)



Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

RSPCB

ISO 9001:2015,

ISO 14001:2015,

ISO 45001:2018 (OH&S)

JDA/UDH

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Phone : +91 9460222039, 9460222049,
Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522600001572	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Noise Level Monitoring	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Near Ravana Office Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	TTH/NOISE/01
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per Environment protection rules, 1986
1	Noise Level (Day Time) : Leq [dB(A)]	58.3	IS 9989	75
2	Noise Level (Night Time) : Leq [dB(A)]	51.4	IS 9989	65

Notes :-

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Senior Analyst

Puran Mal Yogi

K.N. Mukhopadhyay

Authorized Signatory

(Report No: TC502522600001572)



TEAM TEST HOUSE

(Unit of Team Institute of Science & Technology Pvt. Ltd.)



Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

RSPCB

ISO 9001:2015,

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TEST REPORT

Report No./ULR No. :	TC502522600001571	Date :	24-08-2022
Issued To :	M/S Tilakhera Limestone Mine (ML No.- 7/97) , C/o J.K. Cement Works-Nimbahera Tehsil- Nimbahera, District- Chittorgarh 312617 (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Ambient Noise Level Monitoring	Date of Sample Collection/Monitoring :	12-08-2022
Point of Collection :	Near Mine office, Tilakhera Mine	Date of Receipt :	16-08-2022
Date of Test/Analysis :	16-08-2022 to 24-08-2022	Sampling Plan :	TTH/NOISE/01
Quantity of Sample :	-	Sample Collected By :	kishan murari
Unit's representative :	Mr Sunil Singh	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Limits as per Environment protection rules, 1986
1	Noise Level (Day Time) : Leq [dB(A)]	60.9	IS 9989	75
2	Noise Level (Night Time) : Leq [dB(A)]	51.7	IS 9989	65

Notes :-

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Senior Analyst
Pankaj Mal Yogi

K.N. MUKHOPADHYAY
Authorized Signatory
(Report No: TC502522600001571)

J. K. Cement Works, MANGROL (RAJ)

TILAKHERA LIMESTONE MINE
MONTHLY NOISE MONITORING REPORT

NOISE LEVEL MEASUREMENT RESULTS : (ALL VALUES IN dB(A))

Month	Near Mine Office		Near Ravana Office	
	NOISE LEVEL db(A)			
	Day Time	Night Time	Day Time	Night Time
Apr-22	69.4	39.4	71.2	42.2
May-22	65.5	46.3	62.1	47.1
Jun-22	69.4	42.2	63.3	40.1
Jul-22	59.2	40.5	62.2	41.2
Aug-22	60.8	41.5	64.3	46.2
Sep-22	62.0	47.1	65.7	49.9