

MGR/PC-14/C11

through Email

Date: 18.05.2023

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 **October 2022 to March 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 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*	2023	Reporting Period*	October-2022 to March-2023
Remarks (if any)	Submitting herewith the Six Monthly EC Compliance Report for the period: October-2022 to March-2023 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 FY : 2021-22*	Production during FY: 2022-23*
Cement Grade Limestone	Million TPA	1.80	1.5556	1.7887
Subgrade Limestone	Million TPA	0.55	0.5201	0.542
Interstitial Clay/ Screen rejects/ Waste	Million TPA	0.04	0.0251	0.0389
Top Soil	Million TPA	0.01	0.0085	0.0099
Total Excavation Quantity	Million TPA	2.40	2.1094	2.3795

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: October-2022 to March-2023

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 in 0.825 ha. with 1653 nos. of saplings. • 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 in 2.0 ha with 4132 nos. of saplings. • Total plantation done in safety zone till FY 2022-23 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), 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: Oct-22 to March-23 is given in below table.</p>

				<table><tr><td>Particular</td><td>Medical Exam. Carried out (in Nos.)</td></tr><tr><td>No. of persons examined</td><td>12</td></tr><tr><td>Initial Medical Examination</td><td>6</td></tr><tr><td>Periodical Medical Examination</td><td>6</td></tr><tr><td>Disease observed</td><td>NIL</td></tr></table>	Particular	Medical Exam. Carried out (in Nos.)	No. of persons examined	12	Initial Medical Examination	6	Periodical Medical Examination	6	Disease observed	NIL
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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 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"	Complied	<ol style="list-style-type: none"> 1. Garland drain constructed. 2. Siltation pond facilitated. 3. Regular water spray on haul road is being done. 4. Rain water collected in mine pit and during the lean period & as per requirement water is being supplied to the nearby villagers. 5. Mask light are being kept in off mode during night period. 6. Control blasting implemented. 7. Company own road used for limestone transportation.
(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 And Preservation	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road	Complied	Regular water sprinkling is being done on loading, unloading point, 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

		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.		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: Oct-22 to March-23 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 is given in below table. <table><tr><th>S. No</th><th>Particulars</th><th>Levels (MSL)</th><th>BGL (m)</th></tr><tr><td>1.</td><td>Highest Elevation</td><td>427</td><td>--</td></tr><tr><td>2.</td><td>Lowest Elevation</td><td>438</td><td>--</td></tr><tr><td>3.</td><td>General Ground Level</td><td>430</td><td>--</td></tr><tr><td>4.</td><td>Water Table (Pre-Monsoon)</td><td>367</td><td>60</td></tr><tr><td>5.</td><td>Water Table (Post-Monsoon)</td><td>397</td><td>33</td></tr><tr><td>6.</td><td>Ultimate Pit Limit</td><td>374</td><td>56</td></tr><tr><td>7.</td><td>Present working depth pit 1</td><td>437-397.70</td><td>0-33</td></tr><tr><td>8.</td><td>Present working depth pit 2</td><td>436.0-405.77</td><td>0-25</td></tr></table> Source: - As per approved Modified Mining Plan with PMCP dated 03.01.2019.	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
S. No	Particulars	Levels (MSL)	BGL (m)																																					
1.	Highest Elevation	427	--																																					
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(12)	Water Quality Monitoring And	Project proponent shall regularly monitor and maintain records w.r.t.	Complied	Regular monitoring of ground water level and quality are being carried out in and around the mining lease area as per the																																				

	Preservation	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.		<p>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 Monitoring And Preservation	Quality 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 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 he sent regularly to Ministry of Environment, Forest and Climate	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 Post-monsoon & winter Seasons are enclosed as <u>Annexure-3</u>.</p>

		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 And	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. 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.	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.
(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 shall be treated after this initial passage through oil and grease tap.	Complied	<p>Not applicable.</p> <ul style="list-style-type: none"> • There is no waste water generation from the Limestone mining operation. • There no workshop in mines.
(17)	Water Monitoring And Preservation	Quality And	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 4.985 mm/sec at 150 mtr. (Safe ppv level is 10 mm/sec) during period: Oct-22 to March-

				23. Vibration monitoring report 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	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. Detail Ambient Noise Level Monitoring Results for the period: Oct-22 to March-23 is enclosed in <u>Annexure-5.</u>
(20)	Noise And Vibration Monitoring And Preservation	The project proponent shall take measures for control of noise levels below 85 dBA in the work 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.	Complied	Regular maintenance (including cabin) of HEMM being done to keep noise level within the specified limits. Workers engaged in operation of HEMM etc. are provided with 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	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 is 0.542 Million TPA. • OB/Waste generated the FY: 2022-23 is 0.0389 Million TPA.

		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.)		<ul style="list-style-type: none"> Top Soil generated during the FY: 2022-23 is 0.0099 Million TPA.
(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 areas until the vegetation becomes self-sustaining. the compliance status shall be submitted half-yearly to the MoEFCC and its concerned regional office.	Complied	As per approved mining plan there are no back filling is proposed.
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	Complied	Presently OB dumps are active, vegetation and geo textile will be done after the dump are inactive or dead.

		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 etc. shall be undertaken for stabilization of the dump.		Garland drains with siltation pond has been provided all around 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><tr><th>Garland Drain</th><th>Dimensions</th></tr><tr><td>East of Subgrade and wastedump</td><td>Length - 1015m Width - 1.0m Depth - 1.0 m</td></tr></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
Garland Drain	Dimensions							
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	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 =				

		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.		4360.6 m ³ . • 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> The storm water is being collected to garland drain from the periphery of the subgrade and the waste dump area routed to siltation pond.	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																																											
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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	Complied	Mineral is being transported by own CC road. Periodical vehicle emission monitoring are being carried out. Details are given below: <table border="1"><thead><tr><th>SN</th><th>Vehicle No.</th><th>PUCC No.</th><th>Validity</th></tr></thead><tbody><tr><td>1</td><td>RJ-09-GD-0941</td><td>D73RJ21108071</td><td>12-10-2023</td></tr><tr><td>2</td><td>RJ-09-GD-1578</td><td>D73RJ21108072</td><td>12-10-2023</td></tr><tr><td>3</td><td>RJ-09-GD-1579</td><td>D73RJ21108073</td><td>12-10-2023</td></tr><tr><td>4</td><td>RJ-09-GC-8246</td><td>D73RJ21108074</td><td>12-10-2023</td></tr><tr><td>5</td><td>RJ-09-GC-8247</td><td>D73RJ21108076</td><td>12-10-2023</td></tr><tr><td>6</td><td>RJ-09-GC-0616</td><td>D73RJ21108078</td><td>06-10-2023</td></tr><tr><td>7</td><td>RJ-09-GC-2135</td><td>D73RJ21108079</td><td>06-10-2023</td></tr><tr><td>8</td><td>RJ-09-GC-0354</td><td>D73RJ21108084</td><td>06-10-2023</td></tr><tr><td>9</td><td>RJ-09-GC-0615</td><td>D73RJ21108083</td><td>06-10-2023</td></tr><tr><td>10</td><td>RJ-09-GC-0028</td><td>D1007RJ03108993</td><td>31/05/2023</td></tr><tr><td>11</td><td>RJ-09-GB-9928</td><td>D1007RJ03108991</td><td>31/05/2023</td></tr><tr><td>12</td><td>RJ-09-GC-0228</td><td>D1007RJ03108990</td><td>31/05/2023</td></tr><tr><td>13</td><td>RJ-09-GC-0128</td><td>D1007RJ03108983</td><td>31/05/2023</td></tr><tr><td>14</td><td>RJ-09-GC-2228</td><td>D1007RJ03108996</td><td>31/05/2023</td></tr><tr><td>15</td><td>RJ-09-GC-2128</td><td>D1007RJ03108999</td><td>31/05/2023</td></tr><tr><td>16</td><td>RJ-06-GC-8723</td><td>D1007RJ03108998</td><td>31/05/2023</td></tr></tbody></table>	SN	Vehicle No.	PUCC No.	Validity	1	RJ-09-GD-0941	D73RJ21108071	12-10-2023	2	RJ-09-GD-1578	D73RJ21108072	12-10-2023	3	RJ-09-GD-1579	D73RJ21108073	12-10-2023	4	RJ-09-GC-8246	D73RJ21108074	12-10-2023	5	RJ-09-GC-8247	D73RJ21108076	12-10-2023	6	RJ-09-GC-0616	D73RJ21108078	06-10-2023	7	RJ-09-GC-2135	D73RJ21108079	06-10-2023	8	RJ-09-GC-0354	D73RJ21108084	06-10-2023	9	RJ-09-GC-0615	D73RJ21108083	06-10-2023	10	RJ-09-GC-0028	D1007RJ03108993	31/05/2023	11	RJ-09-GB-9928	D1007RJ03108991	31/05/2023	12	RJ-09-GC-0228	D1007RJ03108990	31/05/2023	13	RJ-09-GC-0128	D1007RJ03108983	31/05/2023	14	RJ-09-GC-2228	D1007RJ03108996	31/05/2023	15	RJ-09-GC-2128	D1007RJ03108999	31/05/2023	16	RJ-06-GC-8723	D1007RJ03108998	31/05/2023
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		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]		
(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 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.	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. 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	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.

		ministry irrespective of the stipulation made in approved mine plan.		<ul style="list-style-type: none"> • Total Plantation done in safety zone in FY 2022-23 in 2.0 ha with 4132 nos. of saplings. <p>Total plantation done in safety zone till FY 2022-23 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 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.	Complied	There is no back filling proposed, details of plantation as mentioned above.
(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	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.

		scorching sun, should be scrupulously guarded/ protected against feeling and plantation of such trees should be promoted.		
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 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 .	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 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 last EC compliance report submitted through email on 19/11/2022, vide our letter no. MGR/PC-14/C11 dated 18/11/2022.
(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 requisite data/ information / monitoring reports.	Complied	Agreed & noted

(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 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	Complied	Agreed & noted

		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)

J.K.CEMENT WORKS, MANGROL										Annexure-01	
AIR QUALITY MONITORING REPORT FOR PHERIPHARY OF TILAKHERA LIMESTONE MINE											
MONTHLY AVERAGE AMBIENT AIR QUALITY REPORT October'2022 to March'2023											
Tilakhera Mines											
Sr.No.	Month	Near Mine office					Near Ravana Office				
		PM-10 (in µg/M³)	PM-2.5 (in µg/M³)	SO2 (in µg/M³)	Nox (in µg/M³)	CO (in µg/M³)	PM-10 (in µg/M³)	PM-2.5 (in µg/M³)	SO2 (in µg/M³)	Nox (in µg/M³)	CO (in µg/M³)
		100	60	120	120	4000	100	60	120	120	4000
1	Oct-22	58.6	28.2	12.8	16.8	490	69.4	31.3	13.3	14.5	516
2	Nov-22	51.4	23.2	10.2	18.8	664	62.8	29.3	12.6	15.5	544
3	Dec-22	66.7	25.6	10.4	20.7	716	72.0	29.8	13.0	17.3	607
4	Jan-23	57.0	25.3	8.3	22.0	659	68.0	31.9	10.1	25.0	441
5	Feb-23	67.2	32.4	8.1	23.3	859	60.6	25.3	11.1	22.7	773
6	Mar-23	52.4	26.5	10.9	16.8	716	50.6	30.0	13.8	22.7	441
Average		58.9	26.9	10.1	19.7	684.2	63.9	29.6	12.3	19.6	553.7



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

TEST REPORT

Report No./ULR No. :	TC502523400000492	Date :	15-03-2023
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 / Discipline :	Ambient Air Quality Monitoring / Chemical	Date of Sample Collection/Monitoring :	10-02-2023 11:51 to 11-02-2023 11:51
Point of Collection :	Near Mine office, Tilakhera Mine	Date of Receipt :	08-03-2023
Date of Test/Analysis :	08-03-2023 to 15-03-2023	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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]	360	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	14.73	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	31.59	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	5.34	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	79.62	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

- # The results listed refer only to the tested sample (s) & parameters (s). Endorsement of products is neither inferred nor implied.
- # This report is not to be reproduced wholly or in part and can not be used evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.


Senior Analyst
Sunil Kumar


Authorized Signatory
(Report No: TC502523400000492)



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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 / Discipline :	Ambient Air Quality Monitoring / Chemical	Date of Sample Collection/Monitoring :	10-02-2023 11:52 to 11-02-2023 11:52
Point of Collection :	Near Ravana Office Tilakhera Mine	Date of Receipt :	08-03-2023
Date of Test/Analysis :	08-03-2023 to 15-03-2023	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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]	340	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	14.71	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	37.02	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.92	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	81.81	IS 5182 (Part 23)-2006 RA 2017	100.00

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TEST REPORT

Report No./ULR No. :	TC502523400000496	Date :	15-03-2023
Issued To :	M/S Tilakhara 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 / Discipline :	Ambient Air Quality Monitoring / Chemical	Date of Sample Collection/Monitoring :	13-02-2023 11:56 to 14-02-2023 11:56
Point of Collection :	Arnia Joshi Village, Tilakhara	Date of Receipt :	08-03-2023
Date of Test/Analysis :	08-03-2023 to 15-03-2023	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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]	320	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	14.62	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	42.17	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	5.08	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	82.88	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Sunil Kumar
Senior Analyst

Purnan Mal Yogi
Authorized Signatory
(Report No: TC502523400000496)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502523400000497	Date :	15-03-2023
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 / Discipline :	Ambient Air Quality Monitoring / Chemical	Date of Sample Collection/Monitoring :	13-02-2023 11:57 to 14-02-2023 11:57
Point of Collection :	Shahbad Tilakhera Mine	Date of Receipt :	08-03-2023
Date of Test/Analysis :	08-03-2023 to 15-03-2023	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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]	330	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	14.85	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	29.62	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.67	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	65.48	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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- # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.


Senior Analyst
Sunil Kumar


Authorized Signatory
(Report No: TC502523400000497)



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TEST REPORT

Report No./ULR No. :	TC502522400003513	Date :	01-12-2022
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 :	24-11-2022
Point of Collection :	Near Mine office, Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Krashna 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]	280	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	13.26	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	33.59	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.27	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	63.08	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Purni Mal Yogi
Senior Analyst

Rajendra Kumar Swarnan
(Report No: TC502522400003513)



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TEST REPORT

Report No./ULR No. :	TC502522400003514	Date :	01-12-2022
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 :	25-11-2022
Point of Collection :	Near Ravana Office Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Krashtra 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]	350	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	12.04	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	35.82	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	3.06	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	79.81	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Puran Mal Yogi
Senior Analyst

Rajesh Maheshwari
Authorized Signatory
(Report No: TC502522400003514)



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TEST REPORT

Report No./ULR No. :	TC502522400003517	Date :	01-12-2022
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 :	24-11-2022
Point of Collection :	Arnia Joshi Village, Tilakhera	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Krashtra 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]	260	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	9.95	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	34.18	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	2.93	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	67.48	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Senior Analyst

[Signature]
Rohan Malhotra

[Signature]
Rajesh Maheshwari
(Report No: TC502522400003517)



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TEST REPORT

Report No./ULR No. :	TC502522400003518	Date :	01-12-2022
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 :	25-11-2022
Point of Collection :	Shahbad Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Krashtra 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]	300	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	12.61	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Particulate Matter (PM2.5) [microgram/m3]	28.01	IS 5182 (Part 24) : 2019	60.00
4	Sulphur Dioxide [microgram/m3]	2.13	IS 5182 (Part 2) : 2001 RA 2017	80.00
5	Particulate Matter (PM 10) [microgram/m3]	73.46	IS 5182 (Part 23)-2006 RA 2017	100.00

Notes :-

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Senior Analyst

Authorized Signatory
(Report No: TC502522400003518)

J.K.CEMENT WORKS, MANGROL Annexure-02									
AIR QUALITY MONITORING REPORT FOR PHERIPHARY OF TILAKHERA LIMESTONE MINE									
MONTHLY AVERAGE AMBIENT AIR QUALITY REPORT October'2022 to March'2023									
Tilakhera Mines									
Sr.No.	Month	3 to10 Meter Distance From drilling Operation				Near loading point			
		SPM (in µg/M³)	SO2 (in µg/M³)	Nox (in µg/M³)	CO (in µg/M³)	SPM (in µg/M³)	SO2 (in µg/M³)	Nox (in µg/M³)	CO (in µg/M³)
		600	120	120	4000	600	120	120	4000
1	Oct-22	460	10.9	16.8	573	380	12.7	15.8	619
2	Nov-22	389	11.2	17.7	487	337	13.5	18.6	659
3	Dec-22	363	9.1	17.7	556	344	12.8	21.6	716
4	Jan-23	328	7.9	18.6	682	351	11.4	18.6	550
5	Feb-23	442	12.6	22.4	430	390	12.2	22.0	642
6	Mar-23	370	17.0	24.3	727	354	14.6	22.4	842
Average		392	11.4	19.6	576	359	12.9	19.9	671



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TEST REPORT

Report No./ULR No. :	TC502522400003515	Date :	01-12-2022
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 :	24-11-2022
Point of Collection :	3-10 Meter Distance Form Drilling Point of Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Krashtra 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]	260	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	10.72	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Sulphur Dioxide [microgram/m3]	3.85	IS 5182 (Part 2) : 2001 RA 2017	80.00
4	Suspended Particulate Matter (SPM) [microgram/m3]	496.79	IS 5182 (Part 4) : 1999 RA 2019	-

Notes :-

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Senior Analyst

Puran Mal Yogi

Authorized Signatory

Rajesh Maheshwari

(Report No: TC502522400003515)



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TEST REPORT

Report No./ULR No. :	TC502522400003516	Date :	01-12-2022
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 :	25-11-2022
Point of Collection :	Near Loading point of Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Krashna 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]	280	TTH/AAQM/08	4000
2	Nitrogen Dioxide as NO2 [microgram/m3]	14.21	IS 5182 (Part 6) : 2006 Reaffirmed 2017	80.00
3	Sulphur Dioxide [microgram/m3]	3.94	IS 5182 (Part 2) : 2001 RA 2017	80.00
4	Suspended Particulate Matter (SPM) [microgram/m3]	419.1	IS 5182 (Part 4) : 1999 RA 2019	-

Notes :-

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Puran
Puran Mal Yogi

Senior Analyst

Basir
Basir

(Report No: TC502522400003516)



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TEST REPORT

Report No./ULR No. :	TC502523400000494	Date :	15-03-2023
Issued To :	M/S Tilakhara 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 / Discipline :	Fugitive Emission Quality Monitoring / Chemical	Date of Sample Collection/Monitoring :	10-02-2023
Point of Collection :	3-10 Meter Distance Form Drilling Point of Tilakhara Mine	Date of Receipt :	08-03-2023
Date of Test/Analysis :	08-03-2023 to 15-03-2023	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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]	360.44	IS 5182 (Part 4) : 1999 RA 2019
2	Sulphur Dioxide [microgram/m3]	3.47	IS 5182 (Part 2) : 2001 RA 2017
3	Oxides of Nitrogen [microgram/m3]	14.36	IS 5182 (Part 6) : 2006 Reaffirmed 2017
4	Carbon Monoxide [microgram/m3]	320	TTH/AAQM/08

Notes :-

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Sunil Kumar
Senior Analyst

Puran Mohan Yogi
Authorized Signatory
(Report No: TC502523400000494)



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TEST REPORT

Report No./ULR No. :	TC502523400000495	Date :	15-03-2023
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 / Discipline :	Fugitive Emission Quality Monitoring / Chemical	Date of Sample Collection/Monitoring :	11-02-2023
Point of Collection :	Near Loading point of Tilakhera Mine	Date of Receipt :	08-03-2023
Date of Test/Analysis :	08-03-2023 to 15-03-2023	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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]	390.4	IS 5182 (Part 4) : 1999 RA 2019
2	Sulphur Dioxide [microgram/m3]	3.17	IS 5182 (Part 2) : 2001 RA 2017
3	Oxides of Nitrogen [microgram/m3]	15.43	IS 5182 (Part 6) : 2006 Reaffirmed 2017
4	Carbon Monoxide [microgram/m3]	310	TTH/AAQM/08

Notes :-

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Senior Analyst
Sunil Kumar


Authorized Signatory
(Report No: TC502523400000495)



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

TEST REPORT

Report No./ULR No. :	TC502522100002138	Date :	23-11-2022
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 :	08-11-2022
Point of Collection :	Pit-Water (Surface Water)	Date of Receipt :	17-11-2022
Date of Test/Analysis :	17-11-2022 to 23-11-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr	Sample Collected By :	Rakesh Sharma
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]	15	IS 3025 (Part 4) : 1983 RA 2017	5.00	15.00
2	Odour	Agreeable	IS 3025 (Part 5) : 2018	Agreeable	-
3	Turbidity [NTU]	4.15	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]	163.46	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]	24.95	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	223	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Calcium [mg/l]	38.46	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	16.36	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00

Rajesh Chandra Chawari



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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]	0.55	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	26	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]	339	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	110	APHA : 2017, 2320 B	-	-
16	Total coliform [MPN/100ml]	Not Detected	IS 1622 : 1981	Shall not be detectable in 100ml Sample	-
17	E. Coli [MPN/100ml]	Not Detected	IS 5887 (Part 1) : 1976 RA 2018	Shall not be detectable in 100ml Sample	-

Notes :-

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Balram Agarwal
Senior Analyst

Rajesh Maheshwari
Authorized Signatory

(Report No: TC502522100002138)



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TEST REPORT

Report No./ULR No. :	TC502522100002139	Date :	23-11-2022
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 :	08-11-2022
Point of Collection :	Tube well- Ground water	Date of Receipt :	17-11-2022
Date of Test/Analysis :	17-11-2022 to 23-11-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr	Sample Collected By :	Rakesh Sharma
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	7.46	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	298.08	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]	83.17	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	444	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Calcium [mg/l]	69.23	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	30.37	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00

Rajesh Rajwani



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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]	0.62	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
12	Suspended Solids [mg/l]	8	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]	716	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	196	APHA : 2017, 2320 B	-	-
16	E. Coli [MPN/100ml]	Not Detected	IS 5887 (Part 1) : 1976 RA 2018	Shall not be detectable in 100ml Sample	-
17	Total coliform [MPN/100ml]	Not Detected	IS 1622 : 1981	Shall not be detectable in 100ml Sample	-

Notes :-

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Balram Agarwal
Senior Analyst

Rajesh Maheshwari
Authorized Signatory

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TEST REPORT

Report No./ULR No. :	TC502522100002140	Date :	23-11-2022
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 :	08-11-2022
Point of Collection :	Hand Pump-Shahbad-(Ground water)	Date of Receipt :	17-11-2022
Date of Test/Analysis :	17-11-2022 to 23-11-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr	Sample Collected By :	Rakesh Sharma
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	7.59	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	317.31	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]	83.17	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	482	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Calcium [mg/l]	88.46	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	23.36	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00

Rajesh Maheshwari



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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]	0.68	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]	792	APHA 2017 : 2510 B	-	-
15	M - Alkalinity [mg/l]	210	APHA : 2017, 2320 B	-	-
16	E. Coli [MPN/100ml]	Not Detected	IS 5887 (Part 1) : 1976 RA 2018	Shall not be detectable in 100ml Sample	-
17	Total coliform [MPN/100ml]	Not Detected	IS 1622 : 1981	Shall not be detectable in 100ml Sample	-

Notes :-

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Senior Analyst

Rajesh Maheshwari
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TEST REPORT

Report No./ULR No. :	TC502523100000030	Date :	13-01-2023
Issued To :	M/S Mangrol - Tilakhera Limestone Mine JK Cement Works, Nimbahera, Chittorgarh (Rajasthan),	Type of Unit :	Mines
Type of sample / Discipline :	Water / Chemical	Date of Sample Collection/Monitoring :	06-01-2023 14:31 to 06-01-2023 14:31
Point of Collection :	Pit Water (Surface Water)..	Date of Receipt :	07-01-2023
Date of Test/Analysis :	07-01-2023 to 13-01-2023	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Prahlad yogi
Unit's representative :	Mr Sunil Kumar 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	Agreeable
3	Turbidity [NTU]	0.8	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.78	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
5	Hardness (total) [mg/l]	225.24	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]	43.05	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	432	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Fluoride [mg/l]	0.54	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
10	Suspended Solids [mg/l]	4	IS 3025 (Part 17) : 1984 RA 2017	-	-
11	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
12	Conductivity [micromho/cm]	600	APHA 2017 : 2510 B	-	-
13	Calcium Hardness [mg/l]	213.59	IS 3025 (Part 40) : 1991 RA 2019	-	-



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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
14	Magnesium Hardness [mg/l]	11.65	IS 3025 (Part 46) : 1994 RA 2019	-	-
15	M - Alkalinity [mg/l]	135.1	IS 3025 (Part 23) : 1986 RA 2019	-	-

Notes :-

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TEST REPORT

Report No./ULR No. :	TC502523100000031	Date :	13-01-2023
Issued To :	M/S Mangrol - Tilakhera Limestone Mine JK Cement Works, Nimbahera, Chittorgarh (Rajasthan),	Type of Unit :	Mines
Type of sample / Discipline :	Ground Water / Chemical	Date of Sample Collection/Monitoring :	06-01-2023 14:32 to 06-01-2023 14:32
Point of Collection :	Tube Well Water	Date of Receipt :	07-01-2023
Date of Test/Analysis :	07-01-2023 to 13-01-2023	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Prahlad yogi
Unit's representative :	Mr Sunil Kumar 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 Limit in the absence of alternative Source 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]	0.8	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
4	pH	7.68	IS 3025 (Part 11) : 1983 RA 2017	6.5 to 8.5	No relaxation
5	Hardness (total) [mg/l]	205.83	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]	43.05	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	458	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Fluoride [mg/l]	0.52	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
10	Conductivity [micromho/cm]	601	APHA 2017 : 2510 B	-	-
11	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
12	Total Suspended Solids [mg/l]	4	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Calcium Hardness [mg/l]	174.75	IS 3025 (Part 40) : 1991 RA 2019	-	-



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S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible Limit in the absence of alternative Source as per IS 10500 : 2012
14	M - Alkalinity [mg/l]	127.38	IS 3025 (Part 23) : 1986 RA 2019	-	-
15	Magnesium Hardness [mg/l]	31.06	APHA:2017 : 3500-Mg-B	-	-

Notes :-

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Balram
Balram Agarwal
Senior Analyst

Rajesh
Rajesh Maheshwari
Authorized Signatory
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TEST REPORT

Report No./ULR No. :	TC502523100000032	Date :	13-01-2023
Issued To :	M/S Mangrol - Tilakhera Limestone Mine JK Cement Works, Nimbahera, Chittorgarh (Rajasthan),	Type of Unit :	Mines
Type of sample / Discipline :	Ground Water / Chemical	Date of Sample Collection/Monitoring :	06-01-2023 14:33 to 06-01-2023 14:33
Point of Collection :	Hand Pump (Shahbad)..	Date of Receipt :	07-01-2023
Date of Test/Analysis :	07-01-2023 to 13-01-2023	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Prahlad yogi
Unit's representative :	Mr Sunil Kumar 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 Limit in the absence of alternative Source 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	6.96	IS 3025 (Part 11) : 1983 RA 2017	6.5 to 8.5	No relaxation
5	Hardness (total) [mg/l]	419.42	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]	56.75	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
8	Total Dissolved Solids [mg/l]	634	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
9	Fluoride [mg/l]	0.45	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
10	Conductivity [micromho/cm]	915	APHA 2017 : 2510 B	-	-
11	Oil and Grease [mg/l]	Less than 1	IS 3025 (Part 39) : 1991 RA 2019	-	-
12	Total Suspended Solids [mg/l]	2	IS 3025 (Part 17) : 1984 RA 2017	-	-
13	Calcium Hardness [mg/l]	388.34	IS 3025 (Part 40) : 1991 RA 2019	-	-



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S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible Limit in the absence of alternative Source as per IS 10500 : 2012
14	M - Alkalinity [mg/l]	289.5	IS 3025 (Part 23) : 1986 RA 2019	-	-
15	Magnesium Hardness [mg/l]	31.06	APHA:2017 : 3500-Mg-B	-	-

Notes :-

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Balram Agarwal
Senior Analyst


Rajesh Maheshwari
Authorized Signatory
(Report No: TC502523100000032)



Event Report

Date/Time Vert at 14:09:37 January 14, 2023
 Trigger Source Geo: 0.500 mm/s
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 2048 sps
 Operator/Setup: Operator/ATKM.MMB

Serial Number UM19522 V 10-90GC Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration September 7, 2022 by UES New Delhi
 File Name UM19522_20230114140937.IDFW
 Scaled Distance N/A

Notes

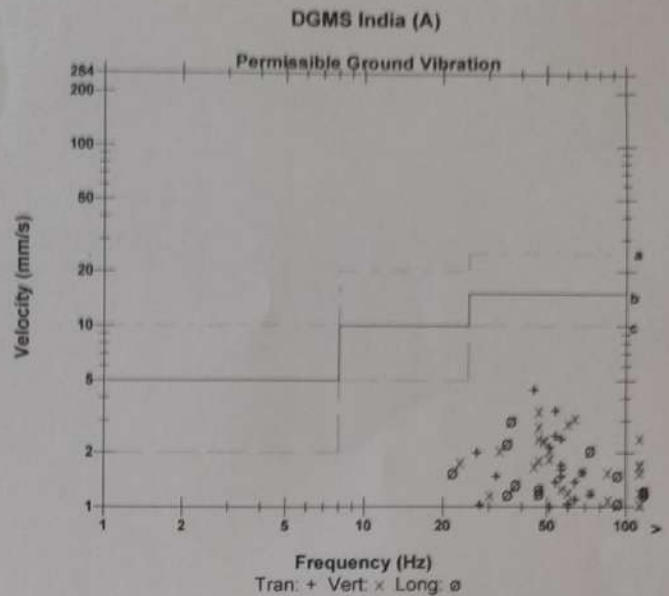
Location: NORTH PIT
 Client: AMAL TILAKHERA MINE
 User Name: J K CEMENT WORKS MANGROL
 General: LIMESTONE MINE

Post Event Notes
 BID= 6-89, Bench-V N-Pit, 8 holes, C/D= 25 KG
 Distance from back Side of Blasting Face=150 Mtr.

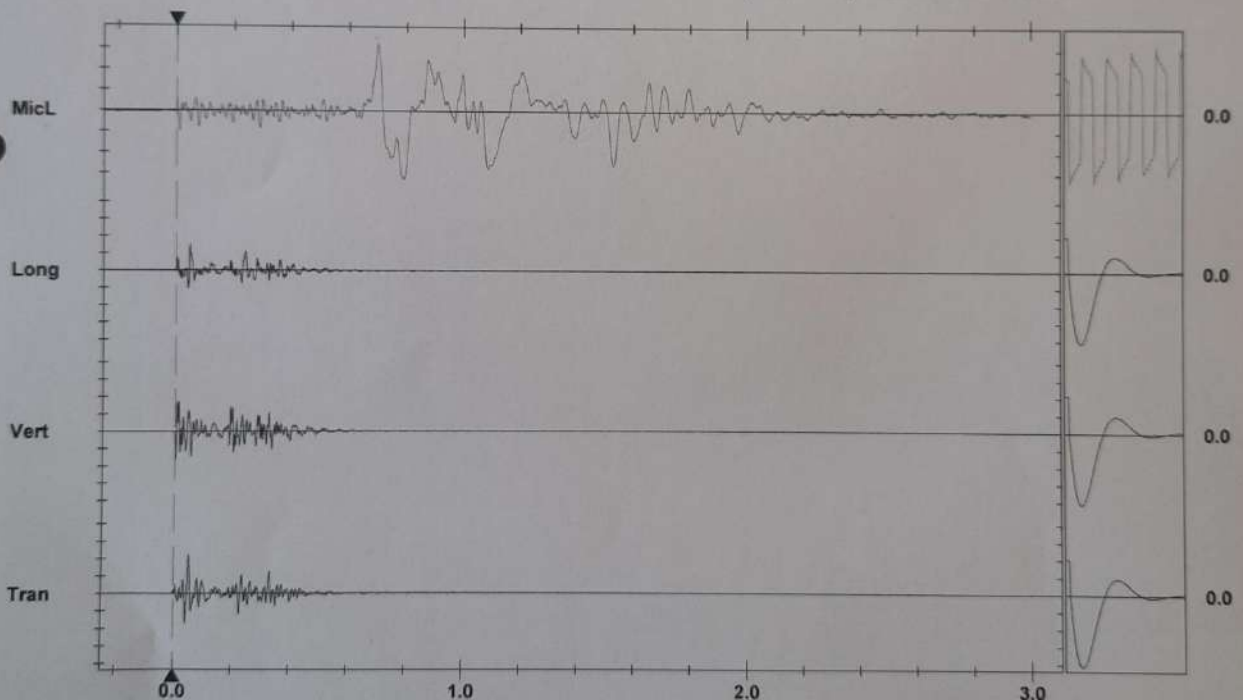
Microphone Linear Weighting
 PSPL 104.3 dB(L) at 0.698 sec
 ZC Freq 7.1 Hz
 Channel Test Passed (Freq = 20.5 Hz Amp = 1327 mv)

	Tran	Vert	Long	
PPV	4.430	3.413	3.011	mm/s
ZC Freq	45	47	37	Hz
Time (Rel. to Trig)	0.053	0.013	0.047	sec
Peak Acceleration	0.122	0.239	0.166	g
Peak Displacement	0.014	0.011	0.011	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.3	4.2	4.4	

Peak Vector Sum 4.985 mm/s at 0.054 sec



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



Raj

Time Scale: 0.20 sec/div
 Trigger =

Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div

Sensor Check

J.K. Cement WORKS, NIMBAHERA (RAJ)
TILAKHERA LIMESTONE MINE
MONTHLY AMBIENT NOISE MONITORING REPORT

Annexure-05

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

Month	Near Mine Office		Near Ravana Office	
	DAY	NIGHT	DAY	NIGHT
Oct-22	64.3	47.6	61.1	44.6
Nov-22	58.8	46.2	55.9	47.4
Dec-22	60.1	49.5	61.3	51.4
Jan-23	64.1	50.6	65.1	52.2
Feb-23	69.4	52.5	61.9	55.4
Mar-23	62.3	55.3	60.9	52.3



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

TEST REPORT

Report No./ULR No. :	TC502522600002350	Date :	01-12-2022
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 :	25-11-2022
Point of Collection :	Near Ravana Office Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	TTH/NOISE/01
Quantity of Sample :	-	Sample Collected By :	Krashtra 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)]	63.7	IS 9989	75
2	Noise Level (Night Time) : Leq [dB(A)]	50.1	IS 9989	65

Notes :-

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Senior Analyst Pankaj Mal Yogi

Authorized Signatory
(Report No: TC502522600002350)



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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502522600002353	Date :	01-12-2022
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 :	25-11-2022
Point of Collection :	Near Mine office, Tilakhera Mine	Date of Receipt :	28-11-2022
Date of Test/Analysis :	28-11-2022 to 01-12-2022	Sampling Plan :	TTH/NOISE/01
Quantity of Sample :	-	Sample Collected By :	Krashna 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)]	63.2	IS 9989	75
2	Noise Level (Night Time) : Leq [dB(A)]	49.6	IS 9989	65

Notes :-

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Senior Analyst

Puran Mal Yogi

Authorized Signatory

(Report No: TC502522600002353)



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Email : marketlab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502523600000379	Date :	15-03-2023
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 / Discipline :	Ambient Noise Level Monitoring / Chemical	Date of Sample Collection/Monitoring :	10-02-2023 15:02 to 11-02-2023 15:02
Point of Collection :	Near Mine office, Tilakhera Mine	Date of Receipt :	04-03-2023
Date of Test/Analysis :	04-03-2023 to 15-03-2023	Sampling Plan :	TTH/NOISE/01
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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)]	59.5	IS 9989	75
2	Noise Level (Night Time) : Leq [dB(A)]	50.4	IS 9989	65

Notes :-

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Senior Analyst
Sunil Kumar


Authorized Signatory
(Report No: TC502523600000379)



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

TEST REPORT

Report No./ULR No. :	TC502523600000380	Date :	15-03-2023
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 / Discipline :	Ambient Noise Level Monitoring / Chemical	Date of Sample Collection/Monitoring :	09-02-2023 15:03 to 10-02-2023 15:03
Point of Collection :	Near Ravana Office Tilakhera Mine	Date of Receipt :	04-03-2023
Date of Test/Analysis :	04-03-2023 to 15-03-2023	Sampling Plan :	TTH/NOISE/01
Quantity of Sample :	-	Sample Collected By :	Prahlad yogi
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)]	61.4	IS 9989	75
2	Noise Level (Night Time) : Leq [dB(A)]	51.5	IS 9989	65

Notes :-

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Sunil
Senior Analyst
Sunil Kumar

Puran Mal Yogi
Authorized Signatory
(Report No: TC502523600000380)